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INVOLVEMENT OF THE LOCAL COMMUNITIES FOR THE DEVELOPMENT OF INFORMATION AND COMMUNICATION TECHNOLOGY IN KATSINA STATE

Sa'idu Sani[1], Abdulrahman Abba Hudu[2], Maryam Sabo Nalado[3]

[1,2,3]Department of Computer Studies, College of Science and Technology, Hassan Usman Katsina Polytechnic P.M.B. 2052Katsina, Katsina State Nigeria.

Corresponding Email: saidusani34@gmail.com

ABSTRACT

At the turn of the millennium, information and communication technologies (ICTs) continued to be the most ubiquitous technology made by humans. On the other hand, it is easy to question how unobtainable "electronic inventions" are in Katsina State's rural districts. As a result, the study looks at the shortcomings of ICTs in rural Nigerian communities when they were first introduced, as well as the implications for growth. To accomplish the stated goals, the research would use qualitative methods. The study was able to explain how the availability of ICTs or lack thereof—has come to be used as a proxy for a society's degree of progress. Additionally, a person's socioeconomic. The report makes the urgent recommendation that the Nigerian government, along with other key stakeholders like the organized private sector, the unorganized sector, and community representatives, establish a process of collective engagement that will enable Katsina State's rural areas to be integrated into the process of development through ICT-enhanced systems. Additionally, a person's socioeconomic standing is impacted by the appropriate level and kind of exposure to and use of ICTs.

Keywords: ICT Facilities, Local Communities, Development, Community.

1. INTRODUCTION

In Nigeria, among other areas, information and communication technology, or ICT, has emerged as a crucial instrument for socioeconomic growth. We may benefit from a number of opportunities brought forth by the ICT revolution, including e-commerce, digitization, and internet connectivity. However, implementing and utilizing ICT services and infrastructure in Nigeria's rural areas presents several obstacles. This essay examines the main obstacles to and possibilities for ICT adoption in rural areas in Nigeria. Nath, H. K., & Liu, L. (2017).

In a nation that is developing quickly like Nigeria, information and communication technology is becoming an indispensable foundation for survival and national growth. Therefore, Nigeria, one of the world's developing nations, has painstakingly developed bold and courageous initiatives to address a variety of crucial social and economic issues, such as dependable infrastructure, open government administration, and skilled labor, from which such investment is expected to reap future benefits. These days, businesses spend money on information and communication technology to expand into new markets, establish channels for knowledge sharing, and disseminate information. (Malaarachchi, et al., 2016).

In the adoption employing computer systems, database management systems, and network system development, organizations generate, store, maintain, secure, and utilize information for efficient decision making. (Sani, 2015). The ICT facilities referenced by the aforementioned researcher were not as readily available in rural areas as they were in metropolitan areas. The residents of the villages would not be able to fully utilize or manage those facilities, even if they were available. It is anticipated that this research will reveal why the amenities are not completely accessible in the surrounding villages and why local residents are unable to make use of them. Lastly, it is anticipated that the research will show that if those facilities are sufficiently accessible in their local communities and are fully utilized, then they will compete with their metropolitan counterparts in terms of the contributions made to the advancement of technology

ICT and Local Community

Information and communications technology, or ICT, refers to the components and infrastructure that make modern computing possible. The phrase is widely used to refer to any hardware, networking elements, software, and systems that work together to enable communication between individuals and businesses online. ICT tools can be utilized to establish new commercial structures and provide basic human needs to underprivileged and marginalized groups in rural and remote places. Almost every industry, bank, education, health, oil and gas, politics, and governance in Nigeria has embraced ICTs.

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1. Problems of ICT Adoption in Local Communities

Inadequate ICT Infrastructure

The absence of suitable ICT infrastructure is one of the main obstacles to ICT adoption in Nigeria's rural areas. Reliable internet connectivity, telecommunications networks, and energy are all unavailable in many remote towns. The construction and operation of ICT services are hampered by the lack of these fundamental infrastructural elements, making it challenging for rural populations to connect and make efficient use of digital technology.

Inadequate Digital Literacy

Nigerian rural communities continue to have poor levels of digital literacy, or the capacity to use and navigate digital technologies. Many locals lack the abilities and know-how needed to properly use computers, smartphones, and other electronic gadgets. The adoption of ICT tools and services is hampered by low digital literacy because rural populations find it difficult to comprehend and take advantage of the advantages that technology provides.

Accessibility and Affordability

For people who live in rural areas, where income levels are frequently lower than in metropolitan areas, ICT gear, such as laptops, smartphones, and internet connections, can be costly. One major obstacle to adoption is the high cost of purchasing and maintaining ICT infrastructure. Accessibility is further hindered in rural areas by the scarcity of ICT service providers, which makes it difficult for locals to obtain reasonably priced and dependable ICT services.

Sustainability and Infrastructure

Even when ICT infrastructure has been installed in rural regions, it may deteriorate quickly due to a lack of sustainability and maintenance. Inadequate financial resources, a lack of technical know-how, and an inadequate support network can all contribute to poor infrastructure maintenance. Rural communities struggle to regularly access and utilize ICT services in the absence of sustainable infrastructure.

Language and Content Localization

Another issue with ICT adoption in rural regions is the localization of language and content. The majority of digital services and technology are created and provided in English or other major languages, ignoring Nigeria's linguistic variety. For rural communities that might not speak these languages well, this language barrier may restrict the accessibility and usability of ICT tools and content.

2. Benefits of Adopting ICT in Rural Areas

Although implementing and reaping the benefits of information and communication technology (ICT) in Nigeria's rural areas presents a number of obstacles, embracing ICT infrastructure and services also presents important potential. They are:

Knowledge and Information Access

Adoption of ICT in rural regions presents a significant chance to close the knowledge and information gap between rural and urban societies. Rural populations have access to a wealth of information, instructional materials, and online learning platforms through digital devices and internet connectivity. People who have access to information are more equipped, have more skills, and have more chances for education and personal growth.

The Transformation of Agriculture

In rural Nigeria, agriculture is a crucial industry, and ICT adoption may greatly aid in its development. Farmers can access real-time information on weather patterns, market pricing, and farming practices through ICT tools like remote sensing devices, weather forecasting systems, and mobile apps. With the use of these technology, farmers may increase crop yields, decrease post-harvest losses, access markets, make better decisions, and boost agricultural output overall.

3. ICT as a global tools for innovation

Innovation in Product/Process Development Supported by ICT The use of information and communication technology (ICT) tools is closely related to the development of new products and processes. One may argue that ICT plays a crucial role in fostering innovation in the creation of contemporary processes inside an Extended Enterprise (EE). ICT tools can help innovation in the development of products and processes in a variety of ways, such as by assisting:

• Particular process/product design (design tools devoted to particular subjects

• Innovation in product/process development • Knowledge management required for product/process development • EE's innovation processes

• Cooperation in the process of invention

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ICT as a key tools for community development

The new instruments that science and technology have created are essential to the advancement of human society. Information and communication technology, or ICT, is a common new tool in the information era. It has two stages of development: the primary stage and the advanced stage.

The primary ICT tool facilitates the easy exchange of information between individuals, which would boost social productivity by facilitating better matching across various societal sectors. By supporting the highest levels of efficiency and creativity in social productivity and giving everyone the opportunity to use it, the Advanced ICT Tool will gradually close the numerous gaps that currently exist in society.

2. RESEARCH QUESTIONS

- Why local communities are not fully involved in the uses of ICT facilities?
- How local communities can be motivated to fully engage in the use of ICT facilities?
- What are the impact of local communities in fully adopting the uses of ICT facilities

3. OBJECTIVES OF THE RESEARCH

- To investigate the problems associated with inadequate involvement of the local communities in the development of information and communication in some areas of katsina State.
- To provide possible solutions that will encourage rural communities to adopt the technology and pay their contribution in the development of the area
- To identify the impacts of adopting information and communication technology facilities by the local communities in Katina states

Research Hypotheses

A hypothesis is generated by the researcher and was tested in this study:

H0: The relationship between local communities and ICT's facilities is weak

4. RELATED LITERATURE

Rural communities have been struggling to keep up with developments in digital connectivity (Velaga et al., 2012). At the end of the twentieth century, a great deal of governmental and market effort was expended in advanced western societies in order to upgrade rural telephone networks for use by the Internet (Salemink, K., Strijker, D., & Bosworth, G. (2017).).

Today, accessing the Internet through telephone lines is only one of several technologies available. Cable Internet, fiber optics, and mobile broadband are now all widely available, except in rural areas (Park, S. (2017).

More recent technologies which go beyond telephone lines have not (yet) been regarded as utilities, so governments have not been able to promote their universal provision in the same way, and considerable investments are needed if this is to change (Ragoobar et al., 2011).

Poverty is especially severe in rural areas, where social services and infrastructure are limited or non-existent. Majorities of those who live in rural areas are poor and depend on agriculture for food and income Piontak, J. R., & Schulman, M. D. (2014).

Many of the challenges that rural communities faces in their contribution for the development of ict is insecurity which they are experiencing. Their main concern is how to save their lives and care for their families. Nowadays government initiatives cannot reach locations' Cordero-Ahiman, O. V., Vanegas, J. L., Beltrán-Romero, P., & Quinde-Lituma, M. E. (2020).

5. METHODOLOGY

The main goal of the research is to test the stated objectives with regard to inadequate involvement rural communities for ict development in Katsina State of Nigeria. The chapter was arranged into the sections below: Study area, Study population, Sampling technique, classification of intensity, and Instrumentation

Study Area

The study was carried out in Batsari, Safana, Jibia and Danmusa local government areas of katsina states.

Study population

The study population is five hundred (500) members each from Dadin kowa, Shirgi, and zamfarawa villages of Batsari Lacal Government, four hundred (400) each from Zakka, Runka, and Babban Duhu of Safana Local Government, five hundred (500) members each from three (3) villages of Jibia and four hundred (400) each from three villages of Danmusa Local Government in Katsina State making the study population total of five thousand four hundred (5,400) members.

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Sampling Technique

The target population of the research was ten (10) member from each of the three (3) villages in Batsari, safana, jibia and danmusa lacal government of katsina state Nigeria. The stratified random sampling would be utilized in this research so that it will provide a proportional sample of the people. The sample size will be one hundred and twenty (120) from the study population

Statistical Analysis

Descriptive statistics were performed to characterize the local community's ICT usage trends, ICT facility availability, and other characteristics using statistical software (SPSS version 23). Regression analysis and other inferential statistics are used in the study to investigate the connections between ICT facility availability and local community utilization. To find patterns and in-depth awareness, qualitative data from interviews was subjected to theme analysis.

6. RESULT AND DISCUSSION

One hundred and twenty (120) questionnaires were administered within the communities, 115 questionnairewas able to recover which is (96.2%). Gender, Age and Educational level of the students that are selected for the research are analysed below.

Table 1. Profile of the respondents

Gender	Frequency	Percentage
Male	75	65.0%
Female	40	35.0%
Total	115	100%
Age of the respondents		
18 - 30	50	43.5%
31 - 40	40	34.8%
40-Above	25	21.7%
Total	115	100%
Education level		
Primary School Certificate	35	30.5%
Secondary School Certificate	45	39.1%
ND/NCE	20	17.4%
HND/Degree and Above	15	13.0%
Total	115	100%

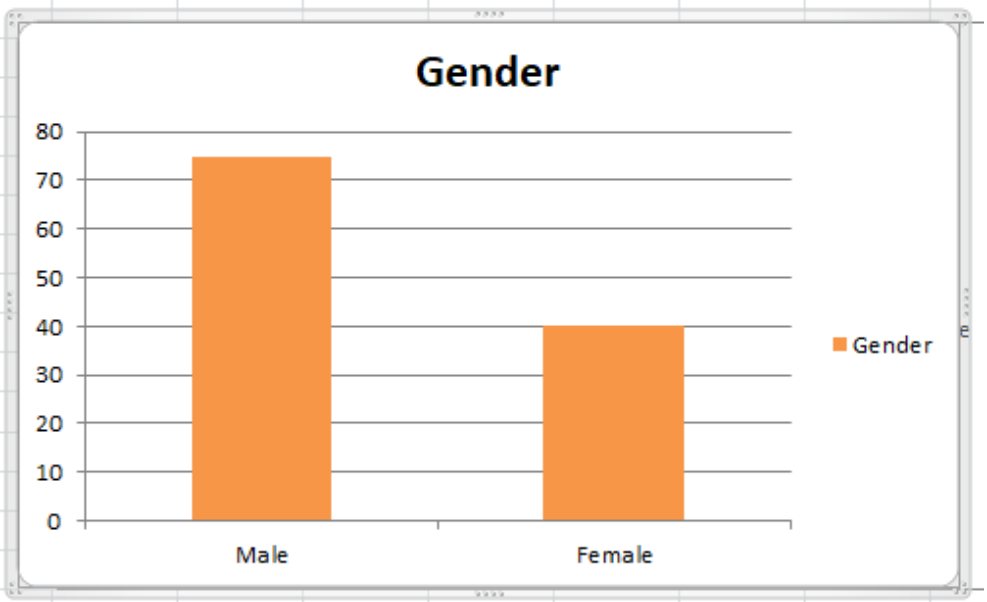

Figure1: Gender of the respondents

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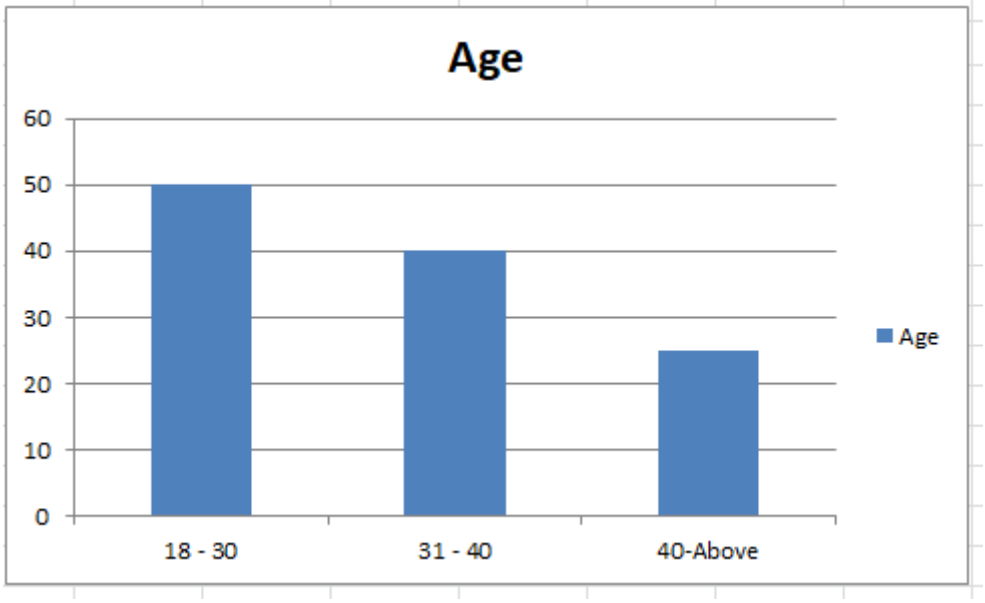

Figure2: Age of the respondents

Interesting patterns can be seen in the sample's figures 1–2 and table 1 presentation. There is a noticeable disparity in the gender distribution of the sample, with male respondents accounting for 65% and female respondents for 35%. Given that opinions and experiences might vary between genders, this gender imbalance may have an effect on how broadly the results can be applied. Researchers ought to think about

In terms of the age distribution, 43.5% of the sample's respondents are between the ages of 18 and 30. This implies that the study primarily documents the attitudes and actions of young people in the neighborhood. The availability of ICT facilities is often rather poor. This suggests that the study includes viewpoints from participants at various ages.

The accessibility of ICT facilities among respondents in local communities from selected villages in Katsina State

Research question 1: Why local communities are not fully involved in the uses of ICT facilities?

Table 2. Accessibility to ICT facilities

	Frequency	Percent
Not at all	20	17.4
Long interval of time	80	69.6
Every time	15	13.0
Total	115	100.0

Inaccessibility of ICT facilities among respondents from Table 2 indicatesthat local communities did not have access to ICT facilities in their areas. The majority (69.6%) reported that they can only have access to ICT facilities with long interval of time, while an additional 17.4% stated that they did not have access to ICT facilities at all. This high frequency indicates that the lack of ICT facilities plays a central role in the involvement of local communities for the development of the communities, with only 13% indicated their availability to access ICT facilities.

Research question 2: How local communities can be motivated to fully engage in the use of ICT facilities?

Table 3. Availability of ICT facilities

	Frequency	Percent
Not at all	30	26.1
Not available	80	69.6
Available	5	4.3
Total	115	100.0

The above table of the respondents indicated that ICT facilities are generally not available in the local areas. 26.1% of the respondents state the there is no ICT facilities in the area at all, while 69’6% stated that the facilities in the area are very few in the sense that only few people in the can even be able to see the facilities. 4.3% of the respondents stated

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that there is available facilities. This indicate that there is need to provide the facilities by the authorities concern in other for the communities to be able to compete with their urban counterparts

Table 4. Availability of electricity in the area

	Frequency	Percent
Not at all	80	69.6
Not available	30	26.1
Available	5	4.3
Total	115	100.0

This table of respondents indicated that electricity are generally not available in the local areas. 69.6% of the respondents state the there is no electricity in the area at all, while 26.1% stated that the electricity in the area are very few in the sense that only few hours in a week you can even be able to see the electricity in the area. 4.3% of the respondents stated that there is available electricity in the area. This indicate that the provision of electricity and ICT facilities by the authorities concern in the area will no doubt encourage and motivate local communities to involved in the uses of the ICT

Research question 3: What is the impact of local communities in fully adopting the uses of ICT facilities?

Table 5. ICT impacts in the development of local area

	Frequency	Percent
No	2	1.7
Less	18	15.7
High	95	82.6
Total	115	100.0

The above table indicated ICT has a great impact in the development of local communities as 82.6% of the respondents stated that ICT has a high impact in the development of local communities, while 15.7% stated that ICT has less impact, only 1.7% stated that ICT facilities has no impact in the development of local communities.

The correlation between local communities and ICT facilities

Table 5. Why ICT facilities are not available in the area?

	Frequency	Percent
Insecurity reason	40	.34.8
Poverty	40	34.8
Government carelessness	35	30.4
Total	115	100.0

The above table of the respondents indicates that insecurity and poverty plays a significant role in the involvement of local communities for the development of ICT in their area with 34.8% each stated that the influenced of insecurity and poverty contribute a lot in the setback of ICT in the area, while 30.4% also stated there is government carelessness in the area which is one of the major contribution in involvement of local communities in the area.

Table 6. Will ICT facilities be uses if available in the area?

	Frequency	Percent
Fully uses	75	65.2
partially uses	35	30.4
Not be uses	5	4.4
Total	115	100.0

This table indicated that if ICT facilities provided in the local communities, the communities will take advantages and make uses of the facilities. As indicated 65,2% of the respondents shows their readiness to adopt the uses of the facilities if available, while 30.4% are ready adopt the uses of the from time to time and only 4.4% are not ready to make uses of the facilities even if provided do to some personnel reasons.

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Regression Analysis

Table 7. Model Summary for Regression Analysis

Model 1	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.143[a]	.020	.012	.643

a. Predictors: Do you believe that your accessibility to ICT facilities have positively influenced to the development of the area?

Table 8. ANOVA of the regression analysis

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.107	2	1.054	2.652	.080[b]
	Residual	101.749	247	.412		
	Total	103.856	249			

a. Dependent Variable: How would you rate the development of the area when adopting the uses of ICT facilities

b. Predictors: (Constant), Do you believe that your accessibility to ICT facilities have positively influenced to the development of the area?

Table 9. Coefficients of the regression analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.168	.329		12.936	.000
	On average, how frequent do you have access to ICT facilities	.502	.083	.078	1.239	.317
	Do you believe that your accessibility to ICT facilities have positively influenced to the development of the area?	.447	.247	-.112	-1.767	.078

a. Dependent Variable: How would you rate the development of the area when adopting the uses of ICT facilities

7. CONCLUSIONC

With the dependent variable "How would you rate the development of the area when adopting the uses of ICT facilities?" the regression analysis looks at the relationship between two predictor variables: "Do you believe that your accessibility to ICT facilities has positively influenced to the development of the area?" and "How frequently do you have access to ICT facilities?" With an F-statistic of 2.652 and a corresponding p-value of 0.080, the model as a whole is statistically significant, albeit only slightly. However, the model's R-squared value of 0.020 indicates that the predictors included in the model can only account for 3% of the variance in the area's development. The predictor variable "Do you believe that your accessibility to ICT facilities has positively influenced to the development of the area?" was examined when looking at the coefficients indicates a marginally significant positive correlation between the belief in the beneficial impact of ICT facility availability on local community development, with a positive coefficient of 0.447 and a p-value of 0.078. However, as indicated by its coefficient of 0.502 and p-value of 0.317, the predictor variable "how frequently do you have access to ICT facilities?" has shown a significant link with the growth of local communities. Although the analysis indicates a positive correlation between the belief in the beneficial impact of ICT facilities and local community development, the model's limited explanatory power and the marginally significant results underscore the necessity of additional research and consideration of other factors that may impact Katsina State's local communities.

8. RECOMMENDATION

- There is need to provide the ICT facilities by the authorities concern in local communities to be able to compete with their urban counterparts
- There is need to provide adequate security in the local communities in katsina state
- Government should initiate some empowerment which can serve as a source of income for communities to reduce poverty level

- Government should show its consideration on local communities by regularly visiting the areas
- People of the local communities should help government in maintaining and properly of the ICT facilities in their areas.
- Government should also provide the ways to educate people in the communities on how to use ICT facilities

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