

**DIGITAL TECHNOLOGIES IN COMMUNITY DEVELOPMENT PRACTICE,  
PROSPECTS AND CHALLENGES****U. C OSU, Ph.D.**

Department of Adult Education

University of Ibadan, Ibadan, Nigeria

Email address: [charles1759@yahoo.co.uk](mailto:charles1759@yahoo.co.uk)**Abstract**

*Digital technology has taken over every aspect of human life: the economy and work. These are several sources through which information can be disseminated and interpreted. Information and Telecommunication Technologies (ICTs) are increasingly prevalent in developing world and as such are being used in variety of ways to promote development efforts, hence, in this paper, the prospects and challenges of digital technologies in community development practices in Nigeria are examined. It is the process of improving the quality of life and social ties among members of historical or cultural heritage communities in order to address their needs and aspirations. Realizing the utilitarian value of community development, this paper therefore, advocates for digital technology in its practice. It was concluded that for the dream of community development to see the light of the day in Nigeria, digital technologies are needed for the promotion of community development. There is the need for community development experts, agents and workers to ensure the adoption and utilisation of relevant technology for the promotion of community development practice in Nigeria.*

**Keywords:** Digital Technology, Community Development, Practice, Challenges, Prospects

**Introduction**

Technology becomes a catalyst for social transformation in any successful community development. The function of digital technology in community development is to offer people inside the wider ecosystem power and a voice. Information Communication Technology (ICT) and supporting technologies have a substantial impact on the socioeconomic development in various regions of the world, Sein, Thapa, Hatakka, & Saeb (2018). In today's world, ICT plays a vital role in improving people's lives. Even though technology has transformed every aspect of our lives, significant gaps remain. The importance of technology in promoting growth is demonstrated by straightforward solutions like informing the citizenry via Internet-connected gadgets. The accomplishment of these ideas will be increased when they are replicated with residents' active participation. It enhances quality of life when combined with developmental therapy. Hence, charitable organizations, government agencies and civic organizations must integrate technology into their developmental efforts.

The digital technologies as powerful tools drive societal transformation by empowering, enlightening and enriching people. They are continuous life-long learning modes committed to innovation and building of the core competence and competitive intelligence of the people across the globe, thereby leading to a sustainable development. Fajimi (2020) explains that digital technologies have revolutionized community development practices and transformed communities with the advent of the internet and low-cost information and communication technology. Hence, this calls for the retooling of community development practices in Nigeria. In today's world, technology is useful in every facet of the economy and work. Information in this age comes in multiple formats such that they help to understand or interpret certain information (Robinson, 2020). Digital technologies are increasingly prevalent in developing world and as such are being used in variety of ways to promote developmental efforts.

Oloruntoyin & Adeyanju (2013) report that over the past decade, new applications of ICT enhanced service delivery, information, and public access in Nigeria's development. ICT comprises a "diverse set of technological tools (Blurton, 2004). Although stronger economic growth is strongly tied to higher internet penetration, it has the potential to boost our economic status in the global economy (Ren, Conglin Huang, Ying Liu, & Jingjing Ren, 2017). Disruptive innovation technologies are crucial for addressing community needs in sectors such as healthcare and education. Therefore, it is critical to create technologies that solve community challenges in an acceptable way. By incorporating regular feedbacks from these technologies, disruptive ones can be designed for maximum acceptance. It is crucial that stakeholders in any educational system identify the need to incorporate technology into their practices.

Opportunities offered by technology that are both affordable and scalable may be swiftly expanded up across the country. India might be converted into a knowledge sanctuary by introducing new concepts that give people academic and active learning experiences. It is also possible for community development experts or agents to assist with the day-to-day activities of a community by using digital technology. Collaboration is the key to repurposing existing technology and utilizing it more effectively. The term ICT encompasses a wide range of communication devices, including radio, television, cell phones, computers, networks, satellite systems and so on, as well as all the services and applications related to them, such as video-conferencing, Zoom, and webinars. ICT technologies are used by skilled professionals like community development officers. Community development is a multifaceted process that is defined as a practice-based profession and academic subject concerned with the organisation, education, and empowerment of individuals in their communities (International Association for Community Development, n.d.). In other words, community development is the process through which individuals aim to improve a given issue in their communities (Gallardo, 2016).

According to Bede (2011) cited in Osu (2021), community development embodies two major ideas which are the conscious acceleration of economic, technological and social change (development) and a planned social change as a village, town or city. This is in

relation to projects that are significant which can be initiated and carried out by local people. Anikeze (2014), sees community development as any action in a locality by any agency with the primary intention of bringing some benefits to such locality. This implies that community development is a movement designed to promote better living for the whole community with active participation and on the initiative of the community.

Ugochukwu (2010) suggests that community development is a restructuring mechanism with economic and social goals that is set to provide rural people with what they need and encourage them to participate in development. This includes a variety of multi-sectoral initiatives, such as improving agriculture, promoting industries, developing infrastructure and social services, and establishing a decentralised framework to involve the people. One of the most fascinating advancements of the twenty-first century is the acceptance and use of digital technology tools for community development practice delivery. Literature shows the belief that the new technologies have the potentials to promote community development practices (Fu, 2013). Against this backdrop, the study seeks to examine digital technologies in community development practice prospects and challenges in Ibadan.

### **Research Questions**

This study was guided with the following research questions:

- 1) What are the various technology tools used in the practice of community development by community development officers?
- 2) What is the awareness level of the community development officers' ICT utilisation for community development practices?
- 3) Are there problems associated with the use of ICT utilisation for community development practices?

### **Methodology**

The descriptive survey research design was adopted for this study. This is because the design affords the researcher the opportunity to survey and sample the opinion of the respondents and prevents the researcher from manipulation. Therefore, the researcher collected the necessary data needed for the study in order to draw inferences about the independent variables (digital technologies) in association with the dependent variable (community development practice).

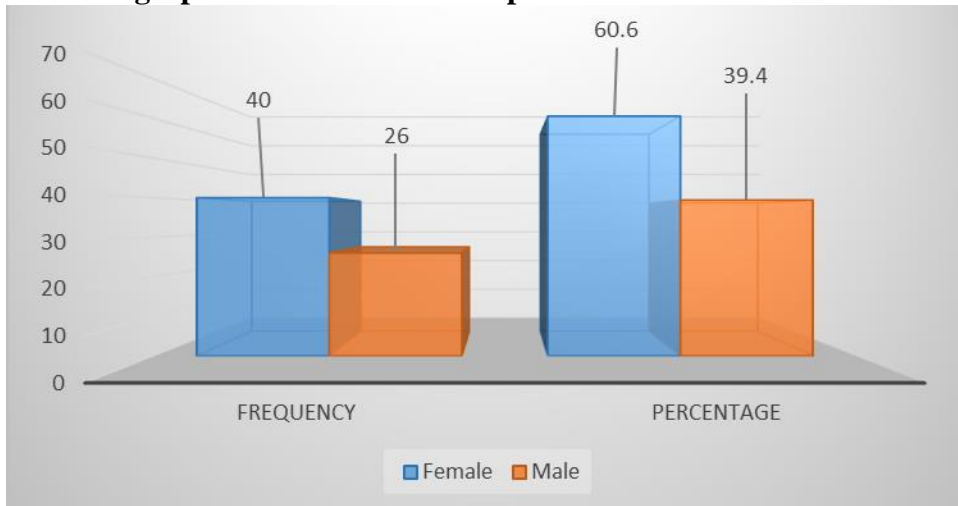
### **Population, Sample and Sampling Technique**

The population of this study comprised 342 registered community development practitioners with the association of Sustainable Development Community Integration of Nigeria. A simple random technique was adopted to select 20% of the total population of the respondents in Ibadan North Local Government Area, Oyo State, Nigeria to give a sample size of 68 respondents. A questionnaire tagged Digital Technologies in Community Development Practice, Prospects and Challenges Scale (DTICDPPCS) was

used for data collection and the reliability of instrument was determined through test-retest method within an interval of two weeks among the community development practitioners outside the study area with a reliability index of 0.91 significant level. About 66 of the total questionnaires were properly filled, valid and used for data analysis which is about 99.8% return rate. The data collected from the research questions were answered using statistical tools of frequency counts while simple percentages were used for analysing the data collected for this study.

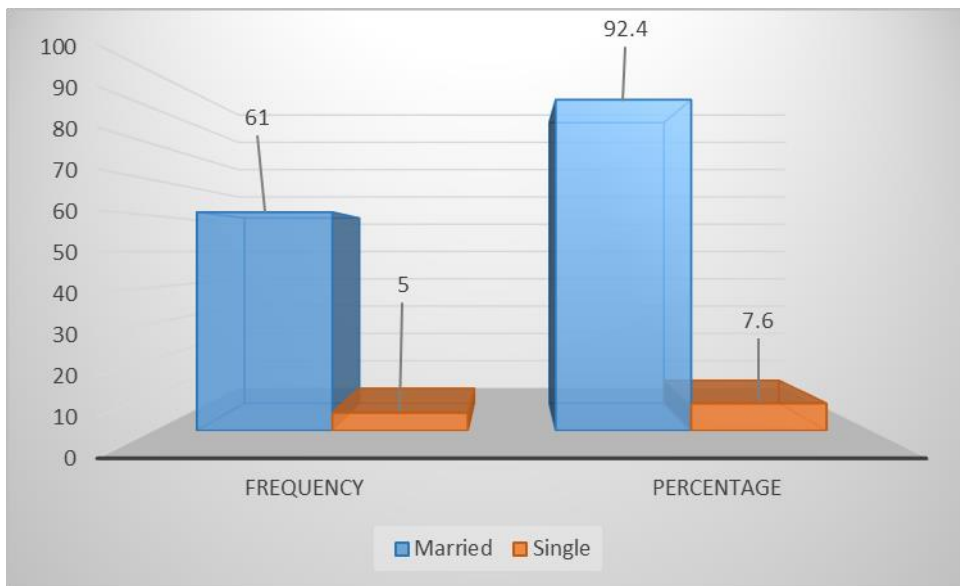
## **Results and Discussion**

### **1.1 Demographic Information of Respondents**



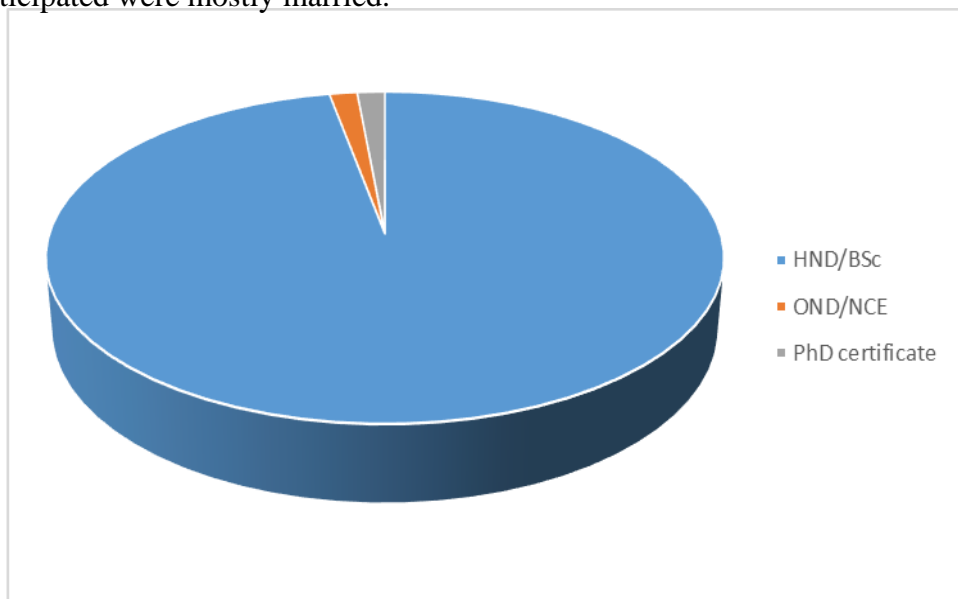
**Figure 1: Frequency and Percentage Distribution of Respondents by Sex**

The above bar chart highlights the distributions of the respondents by sex. 40 respondents representing 60.6 % were females while 26 representing 39.4% were males. The result shows that there were more female respondents than the males.



**Figure 2: Frequency and Percentage Distributions by Marital Status**

The figure above shows the marital distributions of the respondents. 92.4% were married while 7.6% were single. These results revealed that majority of the respondents who participated were mostly married.



**Figure 3: Frequency and Percentage Distributions of Respondents by Educational Qualification**

Figure 3 indicates that the majority of the respondents have HND/BSc certificates with 64 representing 97.0 per cent and 1 representing 1.5 per cent while 1.5 have OND/NCE and PhD certificates respectively.

**Research Question One:** What are the various technology tools used in the practice of community development by community development officers?

**Table 1: Descriptive Analysis of the Various Technology Tools Used in the Practice of CD by Community Development Officers**

S/N	ITEMS	SA	A	D	SD
1	WhatsApp is a device for sharing information.	42 63.6%	21 31.8%	3 4.6%	0 0.0%
2.	With the use of projector/slides, CD practice would be promoted.	3 4.6%	36 54.5%	23 34.8%	4 6.1%
3.	Video is used to facilitate learning in CD practice.	30 45.5%	9 13.6%	7 10.6%	20 30.3%
4.	Facebook has a wider coverage in CD practice.	38 57.6%	0 0.0%	13 19.7%	15 22.7%
5.	Telegram is very simple to operate and disseminate information in CD practice.	40 60.6%	10 15.2%	12 18.2%	4 6.0%
6.	Twitter is a type of ICT tool for community development information.	41 62.1%	0 0.0%	3 4.5%	22 33.4%
7.	Video conferencing/teleconferencing can be used for teaching in community development.	48 72.7%	0 0.0%	2 3.0%	16 24.3%
8.	Interactive whiteboard can be used in teaching.	38 57.6%	0 0.0%	3 4.5%	25 37.9%
<b>Weighted Mean</b>		<b>3.52</b>			

As shown in Table 1, 63 respondents or 95.4 per cent agreed that WhatsApp is a platform for sharing information whereas 3 respondents or 4.6 per cent disagreed. A projector and slides would be used and CD practice would be encouraged according to 40 respondents or 60.6 per cent while only 30 respondents or 45.5 per cent disagreed. Additionally, 27 people, or 37.9 per cent disagreed with the statement that video is used to aid learning in CD practice while 34 people or 54.5 per cent concurred. 28 people or 42.4 per cent disagreed with the statement that Facebook has a greater coverage in CD practice while 38 people or 57.6 per cent agreed with it. This result thus supports Osu's (2021) list of several materials typology relevant to community development practice, such as WhatsApp, Facebook, projector/slides and video forums. He further explains that the video forums could be utilized for information sharing in community development. Similarly, it could as well be employed for teaching of skills.

According to a qualitative analysis of the Facebook posting activities of 909 UK undergraduate students, Selwyn (2009) concludes that students' use of social networking

sites like Facebook has increasingly shaped their social and cultural experiences rather than necessarily improving their academic performance. ICT skills are regarded as one of the most reliable strategies for ensuring economic growth and a sustainable global economy in poor countries (World Economic Forum, 2009). One of the most common reasons for investing in information and communication technology in education today is to provide students with 21st-century skills that are in line with the demands of a knowledge economy (OECD, 2012). The availability of the internet, the rise in mobile phone use, social media and other ICT services have transformed how people interact, communicate, study and work in virtually every country (Laura2018). According to White (2007), today, millions of people participate in computer mediated social groups, exchange pleasantries, engage in intellectual discourse, conduct, commerce, knowledge sharing, emotional support, making plans and finding friends.

Furthermore, 40 representing 60.0 per cent agreed that Telegram is very simple to operate and in disseminating information in CD practice while 16 representing 39.4 per cent disagreed. 41 representing 62.1 per cent agreed that Twitter is a type of ICT tool for community development information but 22 representing 33.3 per cent disagreed. 48 representing 72.7 per cent agreed that Video conferencing/teleconferencing can be used for teaching in community development while 27 representing 24.2 per cent disagreed. ICT presents new chances to improve many facets of educational practices, as Bolstad (2004) notes, these technologies already have impacts on people and settings. Everything in today's communities, according to Kaplan and Haenlein (2010), revolve around social media. Some industry experts assert that you are no longer a part of cyberspace if you do not use Facebook, Telegram or YouTube.

Lastly, 38 representing 57.6 per cent agreed that interactive whiteboard can be used in teaching while 28 representing 42.4 per cent disagreed. In conclusion, items 1,2,3,5 and 8 are greater than the criterion mean of 3.52 which implies that with the use of projector/slides, CD practice would be promoted. Majority also accepted that WhatsApp is a device for sharing information and video conferencing/teleconferencing can be used for teaching in community development. For instance, the increased usage of mobile devices and the creation of new programmes like Uber for transportation, WhatsApp, Telegram, and others have increased job prospects and enhanced service delivery in the community development sectors (Degryse, 2016).

**Research Question Two:** What is the level of awareness of CD officer’s ICT utilisation for community development practice?

**Table 2: Descriptive Analysis Level of Awareness of CD Officer’s ICT Utilisation for Community Development Practice**

S/N	ITEMS	SD	A	D	SD
1	I am familiar with digital technology being used for community development.	44 66.7%	0 0.0%	8 12.1%	14 21.2%

2.	I use technology routinely without much consciousness.	38 57.6%	1 1.5%	20 33.3%	7 10.6%
3.	I use technology such as WhatsApp, Facebook on regular basis for CD practice.	38 57.6%	0 0.0%	3 4.5%	25 37.9%
4.	I aspire to acquire more knowledge about the use of technology for teaching CD.	1 1.5%	19 28.8%	28 42.4%	18 27.3%
5.	I do not know how to use ICT for teaching in CD.	0 0.0%	38 57.6%	12 18.2%	16 24.2%
6.	I am capable of using ICT tools for CD practice.	0 0.0%	18 27.2%	24 36.4%	24 36.4%
7.	I rarely go on Facebook to seek knowledge.	0 0.0%	24 36.4%	27 40.9%	15 22.7%
8.	I stay online for about 6 hours per day.	1 1.5%	29 44.0%	2 3.0%	34 51.5%
9.	I can access Facebook easily with my android phone.	0 0.0%	36 54.5%	4 6.1%	26 39.4%

**Weighted mean 3.58**

Table 2 presents the descriptive analysis on the level of awareness of CD officers on ICT utilization for community development with 44 representing 66.7 per cent who agreed that they are familiar with digital technology use for community development while 22 representing 33.3 per cent disagreed. 39 representing 59.1 per cent agreed that they use technology routinely without much consciousness while 27 representing 44.9 per cent disagreed. 38 representing 57.6 per cent use technology such as WhatsApp and Facebook among others on regular basis for CD practice while 28 representing 42.4 percent disagreed. 20 representing 30.3 per cent aspire to acquire more knowledge about the use of technology for teaching CD whereas 46 representing 69.7 per cent disagreed. 38 representing 57.6 per cent do not know how to use ICT for teaching in CD while 28 representing 42.4 per cent disagreed. 18 representing 29.3 per cent are capable of using ICT tools for CD practice while 48 representing 72.7 per cent disagreed. 24 representing 36.4 per cent rarely go on Facebook while 42 representing 63.6 per cent disagreed. Lastly, 36 representing 54.5 per cent can access Facebook easily with their android phones while 30 representing 45.5 per cent disagreed. In conclusion, items 1, 5,6 and 7 are greater than criterion mean of 3.58 which shows that the respondents are familiar with digital technology used for community development while some do not know how to use ICT for teaching in CD and rarely go on Facebook to seek knowledge. The bridging of the digital divide between rural and urban areas is dependent on increasing ICT awareness in rural areas (Bashir, Samah, Emby, Badsar, Shaffril, & Aliyu, 2011). By enhancing the living conditions of the rural communities, this technique aims to hasten the growth of rural communities. According to a 2012 research by the World Bank Group, raising community's understanding of ICT can be utilized to increase corporate efficiency, improve accountability, spur economic growth and also to help any society overcome



poverty. In line with the study of Hoq (2015), providing information and communication services to rural communities will lead to socio-economic development in such communities.

According to Masrek & Rashidi (2012), rural communities value ICT and see it as a useful tool. Also, to Hassan et al. (2011), a positive attitude towards ICT adoption in rural communities will help close the digital divide and advance the society as a whole. Ministries and other educational agencies have begun investing in the learning of technology skills in formal education and 21st century skills independently using different delivery models to ensure that their students are knowledgeable about and prepared for 21st century jobs and are successful in the job market. The use of 21st century talents should ideally be integrated into traditional educational methods. Technology has made it possible to teach in communities using a whiteboard and video conferencing/teleconferencing instead of just "chalk-and-talk" in the classrooms.

The sooner Nigeria realises that investing in education in science and technology will enable her to overcome poverty, the better (Egbogah, 2012). According to Animalu (2001) in Egbogah (2012), any geopolitical region that wishes to organise its people through devoted and selfless services can fill the technical power vacuum in Nigeria. In essence, technology is the main force behind economic expansion. The usage of ICT is a crucial and essential prerequisite for adding value to community members and raw materials without generating job opportunities and sourcing them.

**Research Question Three:** What are problems associated with the use of ICT utilisation for community development practice?

**Table 3: Descriptive Analysis of the Problems Associated with the Use of ICT Utilisation for CD Practice**

S/N	ITEMS	SA	A	D	SD
1	Difficulties in finding qualified personnel.	2 3.0%	28 42.4%	18 27.3%	18 27.3%
2.	Lack of information on new technologies.	35 53.0%	2 3.0%	21 31.9%	8 12.1%
3.	Inadequate telecommunications infrastructure.	44 66.6%	1 1.5%	10 1.52%	11 16.7%
4.	Inadequate access to electricity or frequent power shortages.	1 1.5%	39 59.1%	4 6.1%	22 33.3%
5.	Insufficient financial resources for technology integration.	46 69.7%	0 0.0%	3 4.5%	17 25.8%
6.	Poor technical and physical infrastructure for teaching.	44 66.7%	0 0.0%	2 3.0%	20 30.3%
7.	Problem of accessibility.	48 72.8%	0 0.0%	2 3.0%	16 24.2%

8.	Cost of procurement of ICT device for CD practice is on the high side.	38 57.6%	0 0.0%	3 4.5%	25 37.9%
<b>Weighted mean</b>		<b>3.43</b>			

Table 3 provides an analysis of the challenges related to ICT's use in community development with 30 respondents representing 47.4 per cent who agreed that it is difficulties in finding qualified personnel while 36 represent the 54.5 per cent who disagreed. 37 represent 56.3 percent who agreed that it was as a result of lack of information on new technologies while 29 represent the 43.9 per cent who disagreed. 44 represent 66.7 per cent who agreed that it was as a result of inadequate telecommunications infrastructure while 21 represent the 31.9 per cent who disagreed. 39 respondents represent the 51.9 per cent who agreed that it was as a result of inadequate access to electricity or frequent power shortages while 26 represent the 39.4 per cent who disagreed. Also, 46 represent the 69.7 per cent who agreed that it was as a result of insufficient financial resources for technology integration while 20 represent the 30.3 per cent who disagreed. 44 per cent of the sampled respondents represent the 66.7 per cent who agreed that it was as a result of poor technical and physical infrastructure for teaching while 22 respondents represent the 33.3 per cent who disagreed. 48 represent the 72.7 per cent who agreed that it was as a result of problem of accessibility and 38 represent the 57.6 per cent who agreed that it was as a result of the cost of procurement of ICT device, for CD practice is on the high side. Thus, this research is in line with that of O'Neal (2001) who reveals that lack of equipment funding from outside sources could prevent digital technology from being successfully adopted in community development.

According to the findings of Bala, Songan, Khairuddin, Hamid, Harris, & Khoo (2002), the use of digital technology in communities is hampered by a number of issues, including expensive infrastructure, connectivity, and use; the fact that many people in rural areas do not speak English, hence, trainers need to simplify and translate the manual into local languages; and there are no coordinated approaches or qualified resources available. Further, items 1,4, 5, 6, 7 and 8 are higher than the criterion mean of 3.43 which shows that the challenges associated with the use of ICT are difficulties in finding qualified personnel, inadequate access to electricity or frequent power shortages, insufficient financial resources for technology integration and the cost of procurement of ICT device for CD practice is on the high side. Fourie (2008) backs this up with the idea that human capital and lack of skills are important obstacles to development and the primary causes of project failure, rather than technology being the true difficulty facing people. The rural poor require ICTs to be available, accessible and affordable. Rapid and widespread change can be disruptive and it puts a burden on governments' meagre resources, which frequently lack the infrastructure and human talents to function well. Digital technologies provide a lot, but they also come with real, ongoing issues. Data privacy, cybercrime, and the spread of false information on digital platforms are just a

few of the new problems that are constantly emerging (Jones, Ramanau, Cross & Healing, 2010).

Through increasing energy use, supply chain (resource extraction, waste management), and increased or unsustainable consumption and production habits, ICT can potentially have unforeseen negative effects on climate change and local environments. With all its benefits such as connectivity, interactivity, exclusivity, alertness, and soon, social media also has drawbacks such as ethical disconnection, language pollution, unverifiable reports, disaffection, moral decay, fraud and lack of integrity. Odii (2013) captures both the challenges and prospects of social media's effects on digital natives.

### Conclusion and Recommendation

The paper examined the prospects and challenges of digital technologies in community development practices in Nigeria. The study has revealed that using digital technologies guarantee a wider access to information in community development practice and that technologies advance developmental activities in the life of the community, advance modern learning and education. Therefore, there is the need for community development experts to adopt and adapt relevant technologies in community development practices, also, government should introduce a workable ICT policy and liaise with other stakeholders in community development to ensure a visible improvement in community development practices.

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