

## **Role of Information and Communication Technologies in Rural Community Development: Implications for Community-based Education in Nigeria**

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**Abstract:** Due to the poor usage of Information and Communication Technologies (ICTs) in rural areas, rural community development is at a very slow rate. Information and communication technologies are developing day by day but are less applicable in rural areas due to such reasons as a lack of communication facilities and resources in rural areas. The problems in Nigerian rural communities are heightened by unstable electricity, poor communication, network and lack of knowledge about new technologies and how to use them. In this study, we tried to establish the conceptual and beneficial relationships among community development, community-based education and ICTs. We also looked at how community-based education can be fostered as a result of this relationship. Finally, we argued that the role, of ICTs in promoting community-based education cannot be overemphasized as it goes a long way in facilitating both teaching and learning processes in rural communities.

**Key words:** Communication, community-based education, ICT, information, rural development, technologies

### **INTRODUCTION**

Information and communication technologies include a number of technologies, such as mobile technology, email, two-way instant messaging such as chat rooms, blogs and personal web pages, online shopping rating systems, download of images, audio and video as well as video games. According to Leye (2007) information and communication technologies is the diverse set of technological tools and resources used to transmit, store, create, share or exchange information. These technological tools and resources include computers, the internet such as websites, blogs and emails, live broadcasting technologies such as radio, television and webcasting, recorded broadcasting technologies which includes podcasting, audio and video players and storage devices and telephony such as fixed or mobile, satellite, video-conferencing. ICTs can also be seen as a term that describes the general processing and communication of information through technology.

Community development is a process where community members come together to take collective action and generate solutions to common problems Phillips and Pittman (2014). The wellbeing of a community economically, socially, environmentally and culturally

often evolves from this type of collective action being taken at a grassroots level. In the view of Chambers (2014), community development ranges from small initiatives within a small group to large initiatives that involve the broader community. It recognizes that some people, some groups and some communities are excluded and oppressed by the way society and structures are organized. Community development seeks to challenge this and ensure fairness for all citizens. Community development is fundamentally based on the values of human rights, social justice, equality and respect for diversity.

Community-based education according to Howe (2001) refers to a wide variety of instructional methods and programs that educators use to connect what is being taught in schools to their surrounding communities, including local institutions, history, literature, cultural heritage and natural environments. Community-based education is also motivated by the belief that all communities have intrinsic educational assets and resources that educators can use to enhance learning experiences for students. Synonyms include community-based learning, place-based learning and place-based education, among other terms (Biesta, 2015). Villani and Atkins (2000) argued that community-based

education is centred on the student's ability to recognize and support the needs of the surrounding community. In this way, students become accountable for providing values which stem from their freedom to express, develop and solve the inherent problems or concerns they have for their community. In this study, therefore, we tried to establish the conceptual and beneficial relationships among community development, community-based education and ICTs. We also looked at how community-based education can be fostered as a result of this relationship. Finally, we argued that the role of ICTs in promoting community-based education cannot be overemphasized as it goes a long way in facilitating both teaching and learning processes in rural communities.

## **MATERIALS AND METHODS**

This study is a short perspective. In this study, related literature was sourced for and used to build information about the role of information and communication technologies in rural community development and the implications for community-based education. The next section focused on the outcome of the literature search and discussion.

## **RESULTS AND DISCUSSION**

**ICTs as key for rural community-based education and rural community development:** Technology plays an important role in developing rural areas (Mengistu *et al.*, 2015). We can say that, the economic growth of rural communities to a large extent depends upon the information and communication technology. By the use of modern technologies, farmers or people become aware of all the things and productivity increases. If the productivity increases then the economic growth is increased at a high rate. Everybody in the rural areas will know about the instruments, materials and price of the product by the use of technology. If people are aware of all the technology, they get maximum profit by using them, hence, the growth of rural development increases rapidly. Technology helps in manufacturing new goods and with the use of new and latest technologies, one can make good and attractive infrastructure. Hollis is of the view that now a day, technology changes day by day and its use plays an important role to improve the living and mental status of people (Hollis *et al.*, 2015).

The role of ICTs in promoting community-based education cannot be overemphasized as it goes a long way in facilitating both teaching and learning processes. Some of the benefits of internet services in rural community-based education will include.

**e-Learning:** This is the convergence of learning and the internet done at a computer, usually connected to a network, giving us the opportunity to learn almost anytime, anywhere. It is the use of network technology to design, deliver, select, administer and extend learning as visual aided devices like projectors, televisions, power points, digital speakers and other public address systems are used in passing information to a group of people at a particular time. e-Learning provides faster learning at reduced costs, increased access to learning and clear accountability for all participants in the learning process. It is not unlike any other form of education and it is widely accepted that e-Learning can be as rich and as valuable as the classroom experience or even more so. With its unique features e-Learning is an experience that leads to comprehension and mastery of new skills and knowledge, just like its traditional counterpart. e-Learning is a valuable part of a well-planned and properly supported rural community-based education and training environment (Li *et al.*, 2012).

**Virtual classroom:** Milosevic *et al.* (2015) opines that a virtual classroom is a web-based environment that allows you to participate in live training events without the need to travel. You listen to lectures, participate in lab exercises, ask questions and receive feedback just as you would do in a conventional classroom. You do it from the convenience of your desktop, laptop or anywhere you have an internet and phone connection.

**Distance education:** The scope could also be extended to also establish distance community-based education programs in the state, so that, schools in rural areas could evolve their own non-formal educational program. How do we reach out to people with no or very poor internet connection? We can consider other means such as mobile phone network, cable television network or offline access using DVDs, Flash memories, ScanDisk. To address the bandwidth constraints, we should make the same multimedia content available in multiple formats such as audio only, low-quality video and high-quality video.

**Email service:** Provides an avenue which ensures that the user is able to send email to a local server. The user is not asked to wait to come back when the "internet is back again". The user would also be allowed to type, send an email and ask questions.

**Market price information:** The buyer and seller in the community setting could receive customized market facts to allow them to make informed decisions (Roztock and Weistroffer, 2015).

**Local content:** Local content will be stored in a distributed architecture making it accessible to all kiosks in the area irrespective of problems with the leased lines.

Since ICT has so far been identified to be strategic in community development processes, we now begin to consider the fate it holds for community development experts as they work towards developing rural communities through community education.

For ICT to be effectively applied in community development processes using community-based education, Livingstone (2012) believes that community development experts must first equip themselves with relevant skills in the operation of ICT hardware and software. In so doing, community-based education can strongly be delivered to community members using ICT for the purpose of community development.

Community education should include information and ideas being conveyed to target community members using such ICT medium as digital stories. In this, there is a blending of photos, images and artwork with sound bites and video clips. The digital storyteller, in these case community development experts, multiplies the effect of each medium as a form of self-expression. These short films not only describe the individual's experience but also attempt to convey their voice emotions and perspective (Lambert, 2013). Using this, community members make a vicarious entry into the world as seen through the eyes of the community development expert.

Routine training on the use of ICT gadgets should be incorporated into community education programs. This will help in bringing rural community members up to speed in the use of modern technologies required for harnessing ICT potentials for rural community development.

It is obvious that community members, community-based education and community development experts are highly indispensable towards community development shows the conceptual relationship among these variables. Figure 1 shows that community development experts can harness the power of ICTs to deliver community-based education to community members. In turn, the community members who benefited from such education would become enlightened and equipped with relevant knowledge/information necessary for building a developed community. During the education process, community members are also able to acquire and use ICT skills for the development of their community. Such ICT skills can facilitate the engagement of community members in community development programs or projects designed to better their lives.

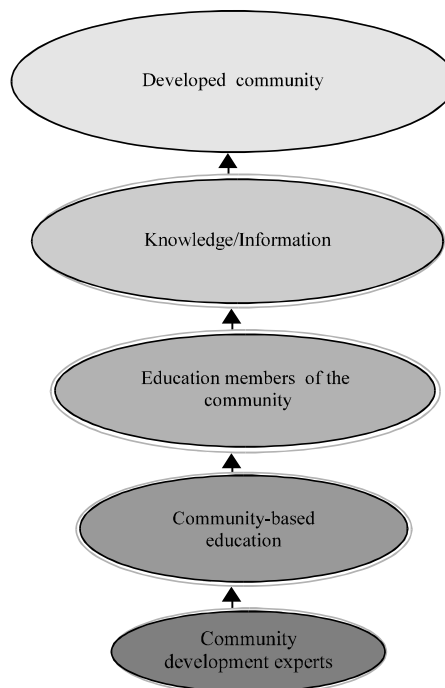


Fig. 1: The conceptual relationship

**Community-based education as a key for community development:** Community-based education has a lot in common with the development of rural communities. Community development experts can link up with schools and other organizations within the community in a variety of ways in providing for the community members rural community-based education. This will help them become active members who can contribute meaningfully in the developmental processes of their society. Synergizing with other institutions may depend on the experiences, focus and capacity of these institutions (Chauhan and Pillai, 2013). Through community-based education, rural communities can be exposed to such developments as:

**Economic development of rural communities:** According to Shortall (2004), schools are often the largest institutions and employers in a neighbourhood, making them an invaluable partner in economic development efforts. Rural community development experts can educate and facilitate community members on how to harness this economic influence by linking schools with the local business community and labour force. Some communities are also partnering with schools to provide job-training and trade school classes for community members.

**Affordable housing development within rural communities:** Developers of affordable housing can

boost the long-term viability of their projects by investing in the quality of nearby schools. Similarly, community development experts can educate community members on the need to make neighbourhood improvements near public schools in order to attract families and qualified teachers to a neighbourhood. Improving schools and the surrounding area can particularly be a useful strategy in supporting the success of mixed-income housing projects. O'Connor is of the opinion that a high-quality school in the neighbourhood can entice home buyers to purchase market-rate units in mixed-income development (O'Connor, 2013). Additionally, informed community members can work with schools to develop workforce housing for teachers, enabling school staff to live in the communities they serve.

**Developing transportation within rural communities:**

Community development specialists can educate members of the community who will work with public school districts to alleviate neighbourhood traffic concerns. Many community development specialists are advocating the placement of schools within walking distance of residential areas and transit stops. These transportation strategies not only reduce school traffic in neighbourhoods but also help to address childhood obesity by encouraging children to walk to school.

**Rural community development through joint uses:**

Community groups who have been well informed by community development agents can also promote the shared use of facilities between schools and other community entities. The joint use of a library or a park, for instance, offers an effective solution in areas where land for new community facilities is not readily available. In rural areas, shared use projects can make economic sense for communities that must concentrate their resources, so, as to achieve the required development.

**Public school facility development:** As a result of community education, community members can use their real estate and development knowledge with the assistance of community development experts to support a school district's efforts to build more neighbourhood-oriented school facilities. Some community groups have worked to bring new public schools to their neighbourhoods by developing and leasing properties like land and buildings to school districts. Community groups can also use their development expertise to assist in the rehabilitation and enhancement of existing facilities within the community (Chabbott, 2013).

**CONCLUSION**

There is a beneficial and conceptual relationship among rural community development, community-based education and ICTs. Information and communication technologies are indispensable in rural community development. Community-based education would go a long way in paving the way for rural community development and can do more, if propelled by ICTs. For us, community development experts have a lot to do with ICTs if they must efficiently deliver community-based education in view of community development.

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