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CHALLENGES AND OPPORTUNITIES OF INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTs) IN BINGA DISTRICT, ZIMBABWE

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ABSTRACT

The study examined the challenges and opportunities of information and communication technology in rural Binga and its implication on community development. The paper adopted qualitative approach using observations and in-depth interview guides to collect data from 20 participants. The findings revealed that the community members travelled long distances to access the networks amid the dangerous wild animals. They also, lacked access to basic information like weather forecasts and early warning of disasters. Despite the challenges, this study revealed some opportunities which can be exploited such as information gathering and dissemination both in local and global communication, creating a virtually paperless working environment, communication industry sustainability, availability of network boosters that enables to improve network access in rural areas. The study concluded that the rural communities need to have signal boosters installed in order to advance the rural communities development, technology industries and provide access to networks that will enable ease of communication. The study recommends the need for communication network companies to provide network to the marginalised communities to improve accessibility and spearhead rural sustainability.

KEY TERMS: *Information Communication Technology (ICT); community development; communication network; Binga; Zimbabwe*

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INTRODUCTION

This study examined the challenges and exploring opportunities of Information and Communication Technologies (ICT) in Luunga ward of Binga District, Zimbabwe. Luunga community has no access to communication networks due to lack of communication infrastructure such as cellphone signal boosters (amplifier) also known as cellular repeater. These signal boosters, amplifiers and cellular repeaters are generally known as boosters and will be used interchangeable. Lack of access to networks in the community has affected the dissemination of information necessary for community development. Thus, this study emphasised on the need to have cellular repeaters installed in rural areas of Zimbabwe particularly Luunga Ward. The effectiveness of the ICTs in the community was confirmed by previous studies that the creation of ICTs amongst the societies allow access to enhanced communication and information (Basilwizi, 2018). Also, the support by Best and Maclay (n.d) that technologies empowers and enable the poor communities to voice their concerns to the responsible authorities, denotes the importance of communication among the communities as they interact and deliberate on developmental matters. It is in this vein that there is need to create an environment and mechanisms essential for communication networks accessibility in the rural areas of Zimbabwe.

In addition, the study is underpinned by the view that the penetration of ICTs in the rural areas plays an important role in addressing underdevelopment challenges and enhancing the sustainability of the rural communities. Besides, the study is motivated by Kumar and Singh (2012), Mago and Mago (2015), Kundishora (n.d), who maintain that the ICTs proffer opportunities to introduce new activities, services and applications into rural areas or enhance existing services, combat rural and urban poverty and foster sustainable development through creating information rich societies which can support livelihoods. It cannot be disregarded that ICTs are powerful tools of economic, social and political empowerment which the rural communities endavour to be supported with. It can therefore, be argumented that the sustainability of rural communities can be enhanced through the installation of signal boosters that provide the communication networks needed to promote community development.

The rate at which ICTs has been received leave no dents to appreciate that it is a new tool for rural development. Proper usage of ICTs can be of great benefit to expedite strategies of rural development as the communities' central focus is on poverty reduction, sustained livelihood opportunities and infrastructure facilities through innovative programmes. Hence, ICTs and development in any society are intertwined and are inseparable. This study seeks to enlighten the need to invest in ICTs in order to reduce development gaps which exist between rural and urban areas in Zimbabwe. Thus, it draws attention to focus on the challenges and opportunities of ICTs in rural areas of Binga District in the endeavor to close the gap that has not been addressed by other scholars in the area.

BACKGROUND OF THE STUDY

The people of Luunga communities are in dearth of information due to inaccessible communication networks making them fail to receive and disseminate the real time messages to their friends and relatives in different geographical locations. Lack of cellphone signal boosters also known as amplifier or cellular repeater, a type of bi-directional amplifier used to "improve" cellphone reception or an electronic device used to "increase" the magnitude of an information carrying signal (www.thefreedictionary.com), has created information disparity. The importance of communication in human life evolutionalised the Information and Communication Technologies (ICTs) which facilitate the easy spread of knowledge, information and formation of relationships among communities. Information and Communication Technologies can be defined as technologies that are used for communication such as cellphones, internet and wireless networks (Young, 2012). Rahman (2008) opines that ICTs create important development opportunities as they are capable to override barriers of social, economic and geographical isolation by increasing access to information and support the rural people to participate in decisions that affect their lives. Hence, it can be ascertained that installation of signal boosters at Luunga Community can promote development and sustain livelihood.

In Bangladesh, ICTs prove to effectively provide the nation with unique development opportunities in basic healthcare, poverty reduction and education (Rahman, 2008). Boateng (2012) advances that in Ghana, the exchange of information through electronic means complement the conventional agricultural extension techniques in rural areas by providing information, education and decision-making assistance to agricultural producers. Although in Zimbabwe ICTs have assisted the convergence of communities and facilitated easier communication and necessitated rural development, the residents of Luunga ward are in dearth of information needed for the sustainability of the community. It can therefore, be premised that, the availability of communication networks in underprivileged communities is fundamental to advance sustainable projects necessary for rural development possible through sharing of socio-economic information.

Zimbabwe and world over has exposed the rural majority to treacherous scenarios as they embark on long, hilly and dangerous wild animal infested journeys to access network. Despite the highlighted challenges, the

growth of ICTs in Zimbabwe has introduced a plethora of opportunities for development in every conceivable area. The study by Balit (2013) has proved that information and knowledge are important for rural development since they promote social and economic change. In Zimbabwe, just like anywhere in Africa, the information systems have created the virtual world and a paperless generation and a village that today almost everyone is competing to be part either consciously or unconsciously. In addition, the technologies have become a solution for glitches that impede the development process of countryside zones giving the ICTs great relevance in today's digital world. Therefore, it is premised that failure to install the signal boosters can increase the communication gap between the urban and the rural populace forming economically and technologically backward societies.

Luunga Ward is a fish hive community, located just adjacent to Nsengwa River which stand as a border between Mashonaland West and Matabeleland North province. The ward is located one hundred and forty two (142) kilometers from Binga District and forty two (42) kilometers from Siabuwa community, the areas privileged with networks from both Econet and Netone service providers. The proximity of Luunga community to Siabuwa community should have technologically enabled wider accessibility of networks which however, has not been the case. Thus, Luunga community to be able to access the available communication networks, Econet and Netone service providers are supposed to install two or three more signal boosters that can complement to the ones available. However, the failure to access communication networks owing to lack of cellular repeaters in Luunga ward has prompted great information dissemination disparity between the rural and the urban populace. Despite the community embracing the ICTs such as mobile phones, laptops, radios, television, they have been agonized from lack of communication networks as they have gone for years without reliable networks. Like other members at Siabuwa and world over, Luunga community stands a better chance of equipping the community with relevant information and knowledge necessary in education, health, agriculture and the communication sector, if they can be availed with sustained communication networks. Therefore, there is need to carry out this study at the identified area in order to realign the marginalised communities and empower them by bringing to afore such issues that are pertinent and derail the development in the rural areas.

Despite the fact that development and sustainability of communities through availing technologies remain debatable, it is argued that the installation of boosters would alleviate the communication challenges thereby boosting the communication industry into lucrative business. Digitalisation of communities enhances convergence of ideas that stimulate business despite geographical frontiers. Thus, interventions by either government or the communication service providers is necessary in order to provide the rural communities with the networks to easily integrate with the corporate world and other societies.

Lack of cellular repeaters that necessitate the provision of communication network services are the major cause of information disparities in the rural areas as they impact on the sustainability of rural projects. The communication impasse has resulted in the sidelining of rural people from accessing crucial information necessary for community development. The efforts by the government of Zimbabwe to develop the ICTs as a major pillar of socio-economic development and growth (National ICT Policy, 2015) and the Zimbabwe Agenda for Sustainable Socio-Economic Transformation (ZIMASSET), engineered transformation of some rural communities. Besides, ICTs enable of all other sectors to leap frog in their development. Thus, the adoption of the information communication technology policy provides a platform where rural areas would equally develop technologically.

Lack of communication boosters in Luunga ward has generated great information dissemination gap between the rural and the urban counterparts. Also, the fact that Econet and Netone service providers installed boosters in some parts of rural Binga, the accessibility of networks by the people of Luunga ward remain as a cause of concern. Thus, the study was premised on rectifying the challenges of communication networks and marginalisation from viable projects and articulate the opportunities of accessing and disseminate the information to different locations with special focus to Luunga community in Binga District of Zimbabwe.

RESEARCH METHODOLOGY

The study adopted qualitative approach and a descriptive design in order to provide rich descriptions of complex phenomena, track unique events, illuminate the experience and to offer a voice to Luunga community as their views were rarely heard. In this study 20 participants were sampled purposively from a population of 200 households to provide comprehensive information and an in-depth understanding of the phenomenon being studied. Observation and interview guides were used to gather data from the participants and the collected data was analysed using descriptive analysis. Before administering the interview guides to the participants, the researcher spelt the need of confidentiality, informed consent and respect for dignity of participants. Observations were engaged by visiting the place where people accessed networks and made calls and gave an experience of seeing, feeling and knowledge of the encounters met by the community when accessing the network. Interview guides were administered to ten (10) youth and five (5) teachers to probe further deeper into respondents' beliefs, attitudes and experiences and provided an extra edge in obtaining information that was not got through observation. The sample interviewed and observed were believed to be representing the communities of Luunga

ward and are affected by lack of networks that has created the information gaps within the society that has necessitated this study.

RESULTS AND DISCUSSIONS

Rural societies and information and communication technologies

The results of the study indicated that the majority of the community members possessed mobile phones, laptops and radios that they used to convey messages and listening to, as they diverted their attention from the old forms of communication such as drums. Osterwalder (n.d) agrees that the manner in which these technologies are advancing have changed the way people communicate and conduct their business operations. One of the participants articulated that;

> *"What could be the reason to carry around the heavy wood to announce the occurrence of activities when we have the world in our pocket?" There is need for connectivity to be abreast with what happens around the globe."*

While some participants showed the relevance of the communication technologies in this 21st century as they indicated that;

> *"A number of our relatives are now spaced and the distance between us need elastic communication tools that can reach them at a press of a button or at simple shout. The cellphones have enabled us to inform those in the urban areas of anything that happens back their rural homes. The phone assists in case of emergency."*

The study established that people adopted the modernised technologies to encode messages to people in different places. Although it was discovered that the people had mobile phones, the old systems of relaying information like drums remained important means of communication in the society. This was indicated by one educationist who said;

> *"Appreciating change is important but we should not forget where we came from. As you have observed, there is no network connectivity, how do you communicate with someone in Sinakatenge or Jongola? In a nutshell, these communities you know will not easily parted ways with their drums soon."*

However, if the modern communication networks were available could facilitate ease of communication and override the old communication systems used by villagers to alert others of informative information such as mishaps, beer drinking sprees, and other social functions taking place in the community. Regardless of owning the electronic gadgets, lack of networks were observed as technological barrier to effective communication which can be reduced by installing signal boosters by network service providers such as Econet, Netone, and Telecel. Therefore, it can be ascertained that if the rural communities were equipped with information and communication technologies, they could be updated of crucial information necessary for rural development similar to other rural communities across the nation and world over.

Network availability and accessibility in the rural communities

From the interviews conducted, the results showed that Econet and Netone networks were sparsely accessible while Telecel network was not available, hence not accessible. It was established that the networks which were accessible were as a result of being installed on high or hilly grounds Also, it was observed that the placement of Netone signal booster on plateau, gave the Netone network better accessibility in the plains and along the banks of *Nsengwa* river as compared to Econet and Telecel which were not accessible at all. Worth noting is that the dominance of Netone network was as a result of the boosters located near *Nsengwa* Mine and at *Tundazi* Hill in Siabuwa that gave partial network coverage to Luunga ward. Despite, the partial coverage the majority of population feel sidelined as they cannot walk to the places where the gadgets could connect to the networks. It was however, observed that most people climbed the tree tops, built *Ngazi,* and even travelled long distances to receive and disseminate information. Therefore, it can be opined that there is need to mount cellular repeaters at Luunga community to enable networks accessibility and easy dissemination of essential information necessary for community development.

Challenges encountered by rural communities in accessing communication networks

The study findings showed that people in Luunga travelled long distances of about seven to ten kilometers and climbed hill tops to access the communication networks exposing them to dangerous animals such as elephants and lions. One of the youths highlighted that;

> *"Noyanda kwaambula anzubo zyako ulayinka luzutu nikulampa. Pesi kuti wabula wakujatana awe inzila, inga nkuchebuka akaambo kabanyama." "In as much as you want to talk to your relatives, no matter the distance you, have to go. But if you don't have a companion to go with, you continue to look all round for dangerous animals."*

> *"It is scary to travel such distance when one knocks off from work in the evening. For one to communicate to their spouses, has to schedule the movement on a weekend." One teacher echoed.*

The study further found that the distance travelled gave chance for women and girls to be exposed to abuse as indicated by one young girl who said;

> *"Fortunately no incident of abuse has happened, but the journey is not peaceful for women to go alone. The chances of sexual abuse are high. Thus before one embarks on the journey has to find a friend to travel with. However, some courageous girls do go solo."*

The results ascertains that the major challenge was lack of network boosters that caused delays in conveyance of messages between the rural and urban populace thereby affecting planning and course of action. As observed, poor communication coupled with poor road networks could be delaying service delivery on community health systems that led to death of patients before the arrival of the ambulance from Binga District Hospital, about 140 kilometres away. Another teacher opined that;

> *"The services in health sector are dependable when there are roads and communication networks that are reliable. It is unfortunate that this situation has remained unattended to for a long time. It is possible to lose life due to poor roads and communication."*

The findings highlight the extent to which absence of communication networks has caused Luunga community to be marginalised and sidelined in this digitalized world where many rural areas have access to communication networks. Besides, it was also perceived that non availability of electricity was a major blow not only to communication but also to the education sector as learners could not go on internet to conduct their researches. One of the respondents complained that;

> *"Imagine, I was supposed to have returned to college but I missed the appointment. In fact, the information reached my ears lately after my brother relayed the message to someone who was coming home."*

Despite the above, it was discovered that the politicians campaigned and won the electorate and took advantage of dearth of communication networks to pile promise after promise without rectifying this problem. It was also understood that lack of access to basic information like weather forecasts, early warning of disasters caused many people in the area to fall prey. However, the findings from this study contrast with studies conducted elsewhere that farmers were well informed through their mobile phones (Nyamba and Mlozi, 2012; Chhachhar and Hassan, 2013; Tadesse and Bahiigwa, 2015) that enabled them to be equipped on weather information and made decisions timeously.

> *"Farmers rarely access information about the modernised farming techniques unless the few that are privileged toown radios but still there is poor supply of radio and television waves."*

Despite that Rangan and Sengul, (2009) support that ICTs expedite the transfer of knowledge globally, it can be argued that non-availability of communication networks is a blow to community development hence misplacing the provisions of National ICT Policy (2015) that stipulates that rural communities need to be technologically empowered. It is therefore, imperative the network service providers need to ensure the rural communities have access to communication networks to reduce the dilemma of misinformation and misplaced facts that lead to community impoverishment.

Opportunities of signal booster (amplifier) installation and network accessibility

The communication industry enhances the opportunities for business and employment for the community based population. There are great opportunities for opening up space for vast employment and business opportunities for Luunga communities in as much as the boosters are installed by the network service providers. Luunga community has a population of at least 200 households (Mutale, 2016) that can utilise the communication network including those from other geographical location as they come for fish business. Due to booming fish business in

the society, the local leaders such as councilors, village heads and chiefs can lobby for the provision of communication network.

In Zimbabwe, both the government and the civil societies have been at the centre of socio-economic transformation (Schwab, 2013). Hence, the availability of many civic society groups can be embraced to lobby for the installation of boosters that will enhance network accessibility.

The other opportunities are that many people own mobile phones, testifying that there is a niche market to invest in communication industry. Since Luunga community is a hub for fish business, the fruition of fish business provided the fisherman opportunities to connect with potential customers and vice-versa. Access to network could enable easy transacted trade between the fisherman and the traders as they will engage into electronic money transfers such as eco cash, telecash, and one wallet and Ecocash banking. As highlighted by Musingafi and Zebron (2014), the study found that the youth and the entire community can begin entrepreneurship by opening up businesses such as selling cellphones, cellphone accessories and airtime and even repairing the damaged cellphones.

Also, there can be vibrant agents for Ecocash, Telecash and One wallet. In addition, the general populace could find it easy to send money to their relatives in the rural community. Deb (2014) supports that the development of electronic business has made it possible for buyers to select the product online and arrange for payments. However, the online transactions cannot be possible without viable and reliable connectivity. Therefore, it is ascertained that the rural communities need to have the boosters installed in order to advance the rural communities development, technology industries and provide access to networks that will enable easy of communication.

RECOMMENDATIONS

It is recommended that:

- Rural societies be provisioned with the information and communication technologies vital for reception and dissemination of information in order to sustain the rural communities.
- The network service providers need to ensure that the rural communities have access to communication networks so as to reduce the dilemma of misinformation and misplaced facts that lead to community impoverishment.
- The government of Zimbabwe needs to establish support systems that would oversee the total implementation of the National Information and Communication Technology Policy through spearheading the network coverage in rural areas.
- Stakeholders such as Econet, Netone and Telecel need to actively provide the local communities with entrepreneurship opportunities necessary for self-sustenance and community development which can be achieved through extending their communication services to the remotes community.

The local leadership needs to get involvement in the development matters affecting their constituencies so as to provide the correct information about such problems faced and to lure the investors to develop the communication industries and curb information deficiency and poverty which is prevalent in the study area and Binga District at large.

CONCLUSION

Through the improved networks accessibility, Luunga community has the potential to enjoy connectivity and be part of the growing global village. It was established that sustainability in communication services is important for community development which would only be achieved through the installation of cellphone signal boosters that provide communication networks to the rural communities. Although Luunga communities lack wider network coverage, it was observed that most people provided initiatives and endured the long walk to receive and disseminate information. From the results, a conclusion can be made that patrons such as Econet, Netone and Telecel have to actively get involved in providing the local community with entrepreneurship avenues necessary for self-sustenance and community growth through opening up Ecocash, One wallet and Telecash services to the community. It was noted that the local leaders need to have a paradigm shift and start to view fish industry as a viable opportunity for income generation that can assist to sustain the rural communities. The study highlighted that rural communities need to have boosters installed in order to advance the rural communities development, technology industries and provide access to networks that will enable easy of communication. The study concluded that the ICTs and development cannot be divorced from each other as separating the two greatly impact on community development and sustainability hence leading to impoverishment.

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