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## Information Communication Technology for Community Development: A Case Study of Hatcliffe High Density Residential Area in Harare, Zimbabwe

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### Abstract:

*The purpose of the study was to establish the use of Information Communication Technologies (ICT) for development in the high density suburbs of Zimbabwe. The study was carried out in Hatcliffe, a high density suburb of Harare the capital city of Zimbabwe. Three main areas guided the study firstly it sought to establish the nature of ICT that are prevalent in the area. Secondly Challenges that are faced by the people of Hatcliffe in the use of ICT were established. Lastly, the study sought to suggest ways of improving the use of ICT for development in the High density suburbs. A cross sectional descriptive survey research design was used in which a sample population of one hundred (100) people took part. A semi structured questionnaire was used. Face to face interviews were also held with a part of the sample population to augment data from the questionnaire. The results from the study show that there is a high prevalence of ICT in the high density suburbs, mainly in the form of cell phones (99%). However the equipment is used for basic activities of communication that is one on one conversation. Other ICT equipment, (computers, televisions, radios, and landlines) was found to be available in decreasing numbers. Major challenges in using ICT for development were lack of awareness and lack of capacity to use available resources. There was no training available to capacity build on the use of available ICT. The study recommends that ICT education should be addressed at policy level to ensure that it becomes a core component of the curriculum. Intervention training is required for the out of school population to increase ICT literacy if the country is to benefit from the high prevalence of ICT in the communities.*

**Key words:** Information Communication Technology, Community Development

### 1. Introduction

Technology is playing a decisive role in humanity's progress. Throughout history, it has not only strengthened economic development but has become a powerful tool in all aspects of human development. Nevertheless, the positive impact technology has on human development is tainted by the risks it entails. Left adrift, the technological tools may become dangerous and wicked instruments. They may give rise to social exclusion, economic inequality, tension and growth of violence. That is why it governments are designing development policies that are relevant in the information and knowledge society. Mulira (2006) asserts that as a common adage today without the usage of ICTs, a society will fall behind in the path of development. Concerted efforts in ICTs by governments, international community, the business sector and civil society are necessary to ensure that the activities outlined in the WSIS Geneva Plan of Action are fully implemented (Kundishora, 2007). Developing countries can seize opportunities and benefits offered by ICTs to step up economic developments and meet targets set up by the Millennium Development Goals. The following are 3 key strategies contained in the Geneva Action Plan which African Heads of States and Governments agreed to and signed WSIS in December 2003:

- To connect villages with ICTs and community access points;
- To ensure that the world's population has access to television and radio services;
- To ensure that more than half the world's inhabitants have access to ICTs within their reach.(Kundishora, 2007).

Mulira (2006) is of the position that the World over, there has been a remarkable significance in using ICTs in facilitating and accelerating the process of development and as a way of reducing poverty across the globe. Since independence in 1980, Zimbabwe has recorded significant progress in the development and application of ICTs in all sectors of the economy (Ministry of Science and Technology, 2006).

However, the progress has been sub-optimal, primarily due to lack of coordination both at the policy, programme and project design level on one hand and implementation on the other. Accordingly the Zimbabwe Government embarked on the development of a comprehensive policy and strategy document for the effective harnessing of ICTs for sustainable national development (National Information and Communication Technology Policy Framework, 2005). The principles that underpin the role of ICT in community development were derived from the Zimbabwe National Information and Communication Technology (MICT) Policy Framework of 2005.

According to Zimbabwe Vision 2020, the country should emerge a united, strong, democratic, prosperous and egalitarian nation with a high quality of life for all by the year 2020. The sustainable livelihoods approach provides a useful framework for thinking about the potential contributions of ICT to enhancing livelihoods and combating poverty since it serves as an important reminder of the complexity of high density poverty and of the equally complex strategies that the high density poor deploy to address their daily challenges. By focusing on the high density poor and their needs and challenges rather than on ICT per se, the discussion is directed to the specific needs and priorities of the high density poor. ICTs are then viewed not as an end in themselves but as tools to facilitate a range of information, communication and transaction services. These should then contribute to improving high density livelihoods. ICTs can also be viewed as a tool to strengthen the effectiveness, transparency and responsiveness of a range of institutions that serve the needs of the high density poor.

Efforts by the Zimbabwe Government to ensure that all towns and cities are connected to the undersea internet cable have produced good results as most centres are now connected. This has greatly reduced the cost of accessing these facilities. It is also now possible to access internet on some types of mobile phones. While these developments are welcome, what is of concern is whether communities are benefitting from these facilities. How far are the communities aware of the opportunities that are available to them through the available internet connectivity? There is concern that the development of infrastructure may end up a white elephant if the communities are not benefitting from that infrastructure. The Zimbabwe high density suburbs accommodate the majority of the working populations in the towns and cities. It is therefore prudent to have a clear picture of how these communities are responding to the ever improving accessibility of ICTs and the economic benefits that follow.

This study sought to establish the use of ICTs for development in urban high density communities of Zimbabwe. Mobile networks is very powerful in this area. Wi-Fi connectivity is also very good with a few free networks available. These characteristics make Hatcliffe a good area to study on how suburban communities may benefit from the availability of ICTs.

## 2. Research objectives

The study sought to:

- Establish the nature of Information and Communication Technologies in Hatcliffe, Harare.
- Explore challenges faced by residents of Hatcliffe high density suburb in Harare in utilizing the ICTs.
- Determine ways of improving the benefits of ICT to the residents of Hatcliffe high density suburb, Harare.

## 3. Review of Related Literature

The advances in digital technologies and widespread diffusion of Information and Communication Technologies have been recognized as a formidable force that has accelerated competitiveness in many countries (MICT Policy Framework, 2005). The relevance of traditional factors of production such as labour, land and capital are being undermined by the increasing role of ICTs in determining the pace of socioeconomic development (MICT Policy Framework, 2005). The Science and Technology Policy seeks to strengthen capacity development in Science, Technology and Innovation, learn and utilize emerging technologies for development (Science, Technology and Innovation Policy, 2012). Zimbabwe has, to a significant extent, succeeded in implementing the Millennium Development Goals adopted by Heads of States and Governments at the fifty-fifth session of the United Nations General Assembly in September 2000.

The Zimbabwe Millennium Development Goals Report of 2005 recognises the role of Information and Communication Technologies as tools that add value and contribute significantly to the socio-economic development of people (UNDP, 2010). Access to new technologies is increasing. The penetration rate for mobile phones now stands at 40% and the number of internet users has risen to 14.2 per 100 people (UNDP, 2010). In cooperation with the private sector, Zimbabwe had to make available the benefits of new technologies; especially those related to information and communication. The observed trend by 2010 was 65 personal computers per 1000 people.

It is considered that ICT has the potential to provide practical and effective enhancement of the economic and social well-being of residents of high density suburbs. ICT-mediated interventions may deliver information on, for example, basic health practices, environmental awareness, access to market pricing, education or training (Anwer, 2007). According to Heeks (2005), the 'I' in ICT for Development, is related with 'library and information sciences', the 'C' is associated with 'communication studies', the 'T' is

linked with ‘information systems’, and the D for ‘development studies’. It is aimed at bridging the digital divide and aid economic development by fostering equitable access to modern communications technologies. In most Information Communication Technology for Development (ICT4D) endeavors the assumption is that there are generally two groups of people involved: those in need of development (the developing) and the outsider “doing” the development i.e. the developed (Krauss, 2012). It is often a subconscious assumption that emancipation, empowerment and innovation occur primarily within the developing group, making them the primary focus of development efforts and research (Krauss, 2012).

Viewed from the perspective of a livelihoods approach, greater benefits for the poor may be derived from ICTs if they are applied to strengthen a broader range of social and political assets and if they are able to assist in building more effective structures and processes that favor the poor (InfoDev, 2005). The livelihoods approach is therefore able to identify ICTs as only one part of a much broader development picture, and it avoids the overemphasis on technology. In most developing countries ICT applications based on digital technologies still face considerable constraints. Apulu, Latham and Moreton (2009) argue that the geographic location of a country can advantage or disadvantage it in terms of ICT adoption because broadband and ICT infrastructure can be very expensive if a country is situated at peripheral regions.

The poor are not just deprived of basic resources. They lack access to information that is vital to their lives and livelihoods: information about market prices for the goods they produce, about health, about the structure and services of public institutions, and about their rights (Adam and Wood, 1999). They lack political visibility and voice in the institutions and power relations that shape their lives. They lack access to knowledge, education and skills development that could improve their livelihoods. They lack access to, and information about, income-earning opportunities (Blake and Garzon, 2010). Kabbar and Crump (2006) note that use of ICT can greatly be increased if people are provided with more knowledge about the ICT they get persuaded to use the same. The Zimbabwe ICT Report of 2010 indicates a 40% rise in ICT penetration rate or tele-density since 2007. The Zimbabwe Millennium Development Goals Status Report of 2010 noted an increase in personal computers in Zimbabwe from 620,000 in 2003 to 895,000 in 2009 although the availability of PC has remained low because of the term year period of domestic crisis (UNDP, 2010). This study sought to establish how high density suburban communities are benefiting from the ICTs that are accessible in their areas.

#### 4. Methodology

The research used the descriptive survey research design because it was concerned with conditions as they exist. The cross sectional descriptive survey was preferred because of the investigative nature of inquiry it allows. Leedy and Ormond (2013) states that studies involving surveys account for a substantial proportion of the research done. According to Cohen and Manion (2007), “... surveys, gather data at a particular point in time until the intention of describing the nature of existing conditions or, identifying standards against which existing conditions can be compared and determining the relationship that exists between specific events.” In view of the above, the study got directly what the subjects thought, felt and suggested about the use of ICTs in community development.

The study obtained data from residents of Hatcliffe high density suburb in the northern suburbs of Harare. In this research study, simple random sampling was used to select 100 residents using a table of random and a grid references on the residential map.

The data for this research were collected from the whole sample using a semi structured questionnaire. Questionnaires were administered in person to ensure that all questions were completed and improve response rate. Twenty face to face in-depth interviews were conducted to augment data from questionnaires. Data collected were analysed using descriptive statistics using Statistical Package for Social Sciences (SPSS) version 17.0. The study made a careful evaluation of the legal implications and ethical acceptability of the study in order to put in place stringent safeguards that insured that the rights of participants were not infringed. Participation in this survey to a very large extent was voluntary and to a lesser extent through persuasion. Information obtained, pertaining to individual research participants, was treated with strict confidence.

#### 5. Results and Discussion

Valid responses were obtained from 55 female and 45 male residents. A majority of these participants (58%) had completed secondary education 34% of them having gone further and held higher education qualifications. Almost all respondents, (99%) were in the economically active 16-54 age group. The residents of Hatcliffe high density suburb have access to a variety of ICTs; mobile phones, computers, land lines, radios and television.

ICT equipment	Frequency	Percentage
Mobile phone	99	99%
Computer	37	37%
Television	74	74%
Radio	67	67%
Land line	4	4%
ATM card	32	32%
IPad	3	3%

Table 1: Prevalence of ICT equipment in Hatcliffe high density suburb

Table 1 above shows that 99% of the residents were in possession of a mobile phone which differed in model and complexity and only 4% had landline telephone. Again, 74% of the residents owned a television set and a radio, 76% owned just a radio set. A few residents were in the position of a computer (37%) or iPod (3.0%). Very few residents (32%) said that they had an ATM card.

Most of the respondents (71%) ranked the mobile phone as their best ICT equipment, 14% ranked it as second while 1% of the respondents ranked it 6<sup>th</sup> and 3% ranked it 7<sup>th</sup>. The results show that more people prefer a mobile phone ahead of any other ICT equipment. Residents justified this observation by ease with which they could acquire a mobile phone which they said was available from many outlets including the streets and that mobile phones were affordable in terms of cost. Residents preferred the mobile to the landline which they said was often out of order and or expensive to maintain. They use the mobile when they have a need and they did not have to pay fixed monthly charges which at the time of the study was equal to USD5.00, an amount they said could be used to communicate for two weeks. This means that landline telephones are being replaced by new ICT technology which offers more competitive advantages of the fixed line.

The study revealed that although almost everyone has a mobile phone, they used these for making voice calls. Interviews carried out with participants, revealed that most residents (75%) only knew how to phone and send text messages. Interviews with three residents revealed that they did not know how to use other facilities. Those residents with smart phones indicated that they were not sure of how to use social sites like Facebook, Twitter. They were unable to use e-mail facility on the mobile phones. Only 14% of the residents ranked computer as their favourite ICT equipment. Respondents attributed the low preference rate of computers to the high cost of the computers or lack of computer skills.

Only 3% of the residents ranked radio and television respectively as their favourite. Sixteen percent of the respondents had access to the internet and used the internet as a source of information. Only 8% said that they get information from the radio or television (18%). Although a radio and a television can transmit information, arguing that these only transmit information in one direction as they had very little chances of participating in an interactive way as they did with mobile phones. Again residents did not value the use of Automated Teller Machine Card (ATM card); they were not aware of the benefits associated with the use of an ATM card. Of the 74% who had used e-wallet, 72% used Eco-cash. This study showed that 26% of the residents were not benefiting from e-banking and electronic funds transfer facilities on offer.

## 6. Discussion and Conclusion

The results from the survey revealed that the majority of the populations of the high density suburb (99%) relied on mobile phone technology. The study confirms that having access to technology is not sufficient to make effective use of the equipment for example 71% of the people who possessed mobile phones mainly used them for phoning at the expense of other effective internet ways such as what's up, Twitter, Facebook and e-mails. Effectiveness of computers, on the other hand was limited to less than 40% that.

The study has shown that a range of ICT equipment is accessible to the residents of Hatcliffe. From the above, it can be seen that 34% of the respondents did not use ICTs to get information about types of products, quality of products and prices, but instead they visited the service providers physically. The digital divide is not only a matter of access, but also a matter of being able to use the information technologies and having the skills to make the most of accessed information (Blake and Garzon, 2010). A number of factors make up the pattern of ICT use, including differences in service availability, awareness to use ICTs, opportunity to learn and use new data, mastering of technologies, experience, skills, support, attitudes, content, cultural attributes, disability, linguistic, gender and empowerment of civil society (Blake and Garzon, 2010). This was evidenced by 71% of respondents who ranked voice call or phoning as their favourite at the expense of other effective ways such as internet surfing.

Asked to suggest ways of improving beneficitation from ICTs, 33% suggested that residents needed to be trained in the use of ICT, 29% suggested that there is need to reduce tariffs and 26% suggested that accessibility should be improved in order to realize the benefits of ICT. Other ways suggested by residents for improving the use of ICT are providing access centres such as internet cafes (3%). The suggestions from the respondents are in line with WSIS (2013) who suggested that there is need to provide e-literacy skills for all, for example designing and offering courses by established local ICT training centres with the cooperation of all stake holders.

A major finding of the study is that the high density suburbs are quite active in the use of Information Communication and Technology devices although at a superficial level. This conclusion further informs business people that there is great potential for economic activities that could be initiated through ICTs in these communities.

The study also established that despite a high penetration rate of ICTs in the suburb very little contribution to development is realised by this density of ICTs. It was further established that the community was eager to benefit from the facilities if there was basic skills development in the use of ICTs.

## 7. Recommendations

The study makes the following recommendations to improve the benefits that accrue from accessing ICTs following recommendations are made for policy formulation:

- Develop domestic policies to ensure that ICTs are fully integrated in education and training at all levels, including in curriculum development, teacher training, and in support of the concept of lifelong learning. In the context of national educational policies, and taking into account the need to eradicate adult illiteracy, ensure that young people are equipped with knowledge and skills to use ICTs, including the capacity to analyse and treat information in creative and innovative ways, share their expertise and participate fully in the Information Society.

- Programmes to eradicate illiteracy using ICTs at provincial and national levels should be promoted. Promote e-literacy skills for all, for example by designing and offering courses by establishing local ICT training centres with the cooperation of all stakeholders.
- Work on removing the gender barriers to ICT education and training and promoting equal training opportunities in ICT-related fields for women and girls. Early intervention programmes in science and technology should target young girls with the aim of increasing the number of women in ICT careers.
- Promote the exchange of best practices on the integration of gender perspectives in ICT education.
- Further studies could be carried out to find out:
  - ICT readiness, reflecting the level of networked infrastructure and access to ICT,
  - ICT impact, reflecting the result of efficient and effective ICT use.
- The study of the role of ICT for community development, which focused on technological inequality and was concerned with the physical access to computers, networks and other technologies, should shift to studying the importance of improving the capabilities and skills of who will use the technology, with the aim of maximizing the impact of the provision of new technologies.

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