

PROMOTING INNOVATIONS FROM INDIGENOUS KNOWLEDGE IN SELECTED COMMUNITIES IN ZIMBABWE

Lantern Rangarirai FUSIRE¹ and Similo NGWENYA²

¹Lecturer. Department of Library and Information Science, NUST, Bulawayo, Zimbabwe
Email:lantern.fusire@nust.ac.zw; fusirelantern@gmail.com

²Research Fellow. Department of Library and Information Science, NUST, Zimbabwe
Email:similo.ngwenya@nust.ac.zw; simingwe@webmail.co.za

Abstract

This study sought to identify indigenous innovations among selected communities in Zimbabwe. The study assessed acceptability of these innovations in the context of the Diffusion of Innovations Theory and established how the innovations can be promoted for improvement and permanency. To accomplish the purpose of the study, the interpretive paradigm was used as the methodological theory. The study used a multiple case study approach. The population of the study was based on the participation of members in a given innovation or project. Interviews, focus group discussions, and observations were used to gather data. Major conclusion proved the existence of a variety of innovations in the selected communities. Recommendations were that libraries should play a more active role in promoting such and other similar innovations.

Keywords: Indigenous Knowledge; Innovation; Information and Communication Technologies

1. Introduction

Studies have shown that there is a great correlation between Indigenous Knowledge (IK) and sustainable development. A number of authors, Malhotra 2001; Gorjestani 2000, Grenier 2000; and Lalonde acknowledge that IK is a critical factor for sustainable development. It is a key element of the social capital of the poor and it constitutes their main asset in their efforts to gain control of their own lives. It contributes positively to the innovation process. However, until recently, little attention has been given to “local innovation” stemming from traditional knowledge as well as management practices and institutions developed by communities and local actors (Torri and Laplante 2009). There used to be widespread tendency to regard traditional knowledge as a treasure to store and document for posterity before it is lost. Research has since shown that IK, like any other knowledge, needs to be integrated into development impact (Gorjastani 2000), and it needs to be channeled into mainstream knowledge systems through appropriate knowledge management frameworks.

This study identifies indigenous innovations that have emerged in Zimbabwe. It assesses the value of indigenous innovations to the Zimbabwean society. The key questions addressed in this study revolve around understanding how communities and local actors in the country build on their social and cultural traditions and practices to create and adapt their knowledge in order to favour innovation; how their capacity to learn and innovate can be recognized and facilitate to contribute to local development; and how local capacity is built to facilitate continuous learning that sustains innovation.

This study is informed by Rogers’ diffusion of innovations theory. According to the theory, diffusion is defined as, “the process by which an innovation is communicated through certain channels over time among the members of a social system” (Rogers, 2003,p. 7 cited in Ashley, 2009:36). An innovation process consists of putting knowledge into use, whether it is new, accumulated or simply used in a creative manner in response to market opportunities or other social needs (Parellada 2001). This process is characterized by the presence of diverse agents and complex interactions between them (Spielman 2005). Innovations are seen as social constructs and, as such, reflect and result from the interplay of different degrees of economic, social and political power (Oyeyinka 2005).

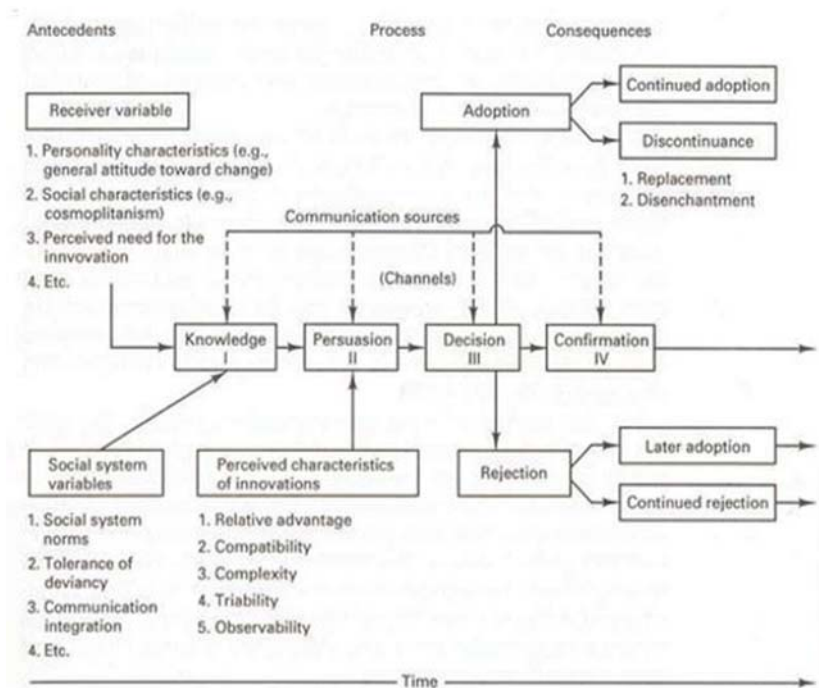


Figure 1: Diffusion of innovations model
 Source: Rogers (1995)

It has been realized that indigenous communities thrive in the gradual adoption of innovations and the context in which such innovations are accepted strongly depends on a number of the social system variables. However, most of innovations that get adopted in indigenous communities are based on trial and error as the innovations get tested in a practical context of survival. Such innovations are derived in the context of social obligation to contribute to the sustenance of the whole community. These manifest in a wide range of areas such as agriculture, health, economics, education, social networks and other contexts. Indigenous people are generally conservative in nature and much of what they develop is mostly from their worldview and their strong belief in spirituality. In fact, innovations in indigenous communities are not individually owned but are part of some revelation from the spiritual realm and are meant for the survival of the community rather than individuals. While this collective ownership of innovations may be beneficial to the whole community, the disadvantage is lack of patenting or copyright because no

one can stand up to claim ownership. This results in lack of permanency and perpetuation of the innovations and the eventual disappearance of such noble developments. This study sought to identify such innovations among selected communities, assess their acceptability in the context of the Diffusion of Innovations Theory and how they can be promoted for improvement and permanency.

2. Statement of the problem

Modern society has its established way of recognizing innovations and promoting their recognition through recordal systems and through intellectual property rights. However, while indigenous communities are engaged in various ingenious innovations, these are mostly community-based and collectively owned such that no one can claim ownership outright ownership of an innovation. This results in manipulation of innovations by people with influence and power or the disappearance of indigenous innovations. The study raised the following question, what innovations are being realized in selected indigenous communities in Gwanda in Matabeleland South, Mateta in Midlands and Majiji area in Bubi. How can libraries promote such innovations and permanency?.

3. Research Objectives

The following were the objectives of the study:

- To identify innovations that are being realized in selected communities.
- To examine the value of such innovations.
- To establish how such innovations are diffused into acceptance by the community.
- To analyse the context of diffusion for acceptance and permanency and the oral nature in IK.
- To establish the context libraries can be used to promote such innovations.

4. Methodology

The interpretive paradigm was used as the methodological theory. The interpretive paradigm was adopted in this study to get an understanding underpinning the development of innovations in the selected communities, the process of diffusion and the value accorded to such innovations by modern society, and the role of libraries in promoting such innovations. The study used a multiple case study approach which provided a holistic view and a rounded picture given many sources of evidence used. Yin (2003) states that a multiple case study design enables the researcher to explore differences within and between cases. The goal is to replicate findings across cases. The researchers deliberately chose, 1 Gwanda rural area because of the practical support communities in this area were getting from the Edward Ndlovu Memorial Library in Gwanda, 2 Mateta area in Gokwe, Midlands because of accessibility and prevalence of products at the market place in Bulawayo, 3. Majiji because of the prevalent of market products from this area in the market place in Bulawayo. The population of the study was based on the participation of members in a given innovation or project. As a result the areas included in the study did not have the number of subjects. Gwanda had more participants because of the numbers of innovative projects which were happening there. Selection of the participants was based on the snowballing sampling technique. Majiji and Mateta had fewere participants because of the number of projects which were identified in these areas and again the snowballing sampling technique was used to identify participants in the identified projects. The study was done in a period of four months between the month of October 2015 and February 2016. The following table shows that number of participants within a project:

Area	Projects/Innovations	Participants
Gwanda	1. Micro-finance	9
	2. Poultry	6
	3. Nutritional gardens	21
	4. Goat rearing	8
	5. Soap making	6
	6. Craft	12
Mateta	1. Craft making	2
	2. Market gardening	8
	3. Produce marketing and selling	9
	4. Wild fruits/Orchards fruits selling	5
Majiji	1. Field crops marketing and selling	4
	2. Wild fruits harvesting and selling	4
	3. Market gardening	4

Table 1: Study sample

Edward Ndlovu Memorial library staff were also included as informants because of their link with Gwanda communities who were involved in the various innovations/projects. In Majiji, the Rural Library Resource Development Project (RLRDP) staff were also included as informants in as this organisation was involved in the promotion of projects in Matabeleland North in which Majiji area belonged.

The study used interviews, focus group discussions, and observation as instruments for gathering data. Interviews were meant to gather data from key persons in the projects or innovations. Ethical considerations were taken into account considering the conservative nature of indigenous communities and their wary of foreign intervention. Consent was sought before conducting the study and issues pertaining to confidentiality was guaranteed.

5. Findings

The following were the findings of the study:

5.1. Innovations/projects identified in the selected communities

The study identified a wide range of innovations which were done particularly by individuals with established groups of the communities within the selected areas. In Gwanda, the following projects were identified:

5.2. Micro-finance

Rural communities have financial challenges as most are not gainfully employed. As a way of stability of families and the projects they are involved in, micro-finance scheme were established where groups identified some funders such as the Edward Ndlovu Memorial Library. They would take their proposals to such organisation and seek for support financial. The loans would then be paid back once the projects they were engaged in started to yield profits. Such an innovation brought solutions to the financial quagmire bedeviling rural communities forcing communities to rely mostly on donations for survival.

5.3. Poultry

A case of the poultry project is in Gwanda North, where a group called Ndonsakusa comprising of six female members embarked on building fowl runs in every individual member's homestead in a bid to increase output and maintain a constant supply to a restaurant in Gwanda Town.



Figure 2: Poultry from Ndonsakusa study group

5.4. Nutritional gardens

In 2008 21 women formed the Sibambene nutrition garden project. They engaged in nutritional gardening projects with the aim of ridding themselves of poverty and being empowered economically



Figure 3: Women from Sibambene study circle harvesting vegetables

5.5. Goat rearing

These started in 2009. Members were used to the traditional way of keeping goats where they were released to roam the forest. Discussions and reading/studies increased the Groups' knowledge of rearing these small livestock animals.

5.6. Soap making

This group comprises of 5 women and 1 man. Members in the group make bath and laundry soaps and candles from jatropha oil. The soap is medicinal and can be used to cure sores such as ring worms. The soap and candles made from jatropha oil is sold to people in the community. Besides soap making, jatropha oil is also used to light lamps and the scent of the oil chases mosquitoes at night.



Figure 4: Jatropha beans grounded to make soap, Vaseline jelly and oil

5.7. Craft

This group specialises in craft making. The Craft groups added to their activities decorative art in their homes. At some instance, members in the group were introduced to a new form of craft which is decorating kitchens. This skill afforded individuals to be hired, thereby increasing their household income. One member went further and decorated her yard by planting shrubs and flowers, a good thing as this will reduce dust and bring in fresh air.



Figure 5: Craft made from sisal plants and a mud stove and pot

The following innovations were identified in Mateta, Gokwe South:

5.8. Craft

While there is no coordinated group work on craft in Mateta, it was evidenced that there exists ingenious skills in a variety of craft work. These include: mat making, basketry, stool making, iron smelting to make field tools such as hoes and parts of ploughs and musical instruments like mbira, decorative artwork depicting carefully crafted designs on huts showing an untapped intrinsic ethno-mathematics skills.

5.9. Market Gardening

Most families in the Mateta are thrive on market gardening. A variety of garden crops such as various types of vegetables, tomatoes, sugar cane, bananas, field crops like maize are planted throughout the seasons in accordance with suitability of the weather. These are used to sustain families as food and also for commercial purposes.

5.10 Produce marketing and selling

A number of indigenous families in Mateta rely on the expertise of family members to generate financial revenue through creating a syndicate or network which links these individual with colleagues at the markets in Bulawayo. Depending on what is available and demand they are able to supply a variety of their produce to the markets. The produce such as sorghum, millet,

and other types of small grains are transported from the rural areas and sold at market prices. Market prices and the produce on demand is communicated through networking of members of the syndicate.



Figure 6: Some millet being sold at the market place in Bulawayo

Some of the products which are brought to the market include dried vegetables of various types, wild and orchard fruits according to their seasons.



Figure 7: Some orchard and wild fruits sold at the market place in Bulawayo



Figure 8: Lady who is part of the marketing group selling dried vegetables

Supply of these various products has a number of advantages. The processing of most of these products retains the nutritious value and their availability in the market place promotes indigenous nutritious foods which are affordable to marginal population in urban areas. Commercialization of these products provides sustenance to the rural folk. It was found out that syndicates were also prevalent in the Majiji area In Budi district. The rural members of the syndicates would provide a constant supply of various field produce, wild fruits, and other products which were in demand at the market place. What was significant was the link they had with their counterparts at the market place. They were in constant contact with each other and would know the pricing ranges and the products that were in demand at any given time.

6. Value brought by indigenous innovations to communities

The following values were ascertained to be provided by the various innovations raised in the selected communities:

- Communities were able to provide for their families without relying on donations. It was realized that Gwanda is a semi-arid area which receives little rainfall resulting in persistent droughts. Available of alternative means of sustenance is a welcome development to the Gwanda people and acceptance of the said innovations improved people's livelihoods.
- New ideas brought about opportunities for development within the communities and provided hope for the future. Projects enabled families to send their children to school and move steps away from poverty.
- Innovations of the projects brought unity and networking and also facilitated assimilation of new knowledge. This exposure to new knowledge enhance the ability of indigenous communities to innovate.
- Innovations facilitated the infusion Information and Communication Technologies with indigenous innovations and practices.

6.1 Acceptability and diffusion of innovations in indigenous and modern communities

The Diffusion of Innovations model portrays a process which includes antecedents, process, and consequences. The process requires knowledge, persuasion, decision, and confirmation of any innovation to be either rejected or accepted. In the context of the results of the study, indigenous communities possessed requisite knowledge of their projects. Because these projects were recognised as beneficial to the sustenance of community members, there was little need for persuasion and decisions to take part in the innovation were obvious. The only resistance to support the projects was encountered in Mateta where community leaders were discouraging the wanton harvesting of wild fruits in large quantities. The infusion of indigenous knowledge and new ideas of supporting families provided concrete acceptance of the innovations as it was proved that families could survive from the rewards of being engaged in such innovations.

6.2 Role of libraries in promoting indigenous innovations

Community libraries serve many diverse functions. Besides being venues for the reading and lending of books, research by Herz and Spelling (2004); Shrestha (2013) and in the Mortenson Centre public lecture series (2013) has shown that community libraries are well placed to address issues of sustainability, empowerment and development of communities. Edward Ndlovu Memorial Library provides a perfect example of a framework of a community library that goes beyond its boundaries to provide a different kind of knowledge that empowers communities. The library has been active in the building and development of community initiatives in rural and remote areas in Gwanda. The library established 29 study circle programmes which provide support to group activities in different parts of Gwanda. Some of the activities include making soap through *Jatropha* beans, vegetable and nutritional gardening, poultry, goat rearing and craft making. These activities transformed the livelihoods of community members living in one of the poorest communities in the country. The library has also used modern information tools technology tools such as cellphones to facilitate communication within group members, funders and marketers.

7. Conclusions and Recommendations

The study confirmed the existence of a variety of innovations within the selected indigenous communities. These innovations were of value to members of the communities as the improved sustainability of their families. While there were mixed feelings particularly with projects to do with wild fruits harvesting, indigenous communities generally accepted the new innovations and also incorporated the use of modern technologies such as cell phones in facilitating communication. Libraries play an important role in encouraging and promoting such innovations as was the case of Edward Ndlovu Memorial library in Gwanda.

The study recommends that such innovations be identified and promoted to wider indigenous communities as they assist in the sustenance of livelihoods of not only rural communities, but also marginal urban families. Libraries should include the promotions of such innovations and others that go unrecorded due to the oral nature of indigenous people.

References

- Ashley, S. R. (2009). Innovation diffusion: Implications for evaluation. In J. M. Ottoson & P. Hawe (Eds.), *Knowledge utilization, diffusion, implementation, transfer, and translation: Implications for evaluation. New Directions for Evaluation* [Online] 124:35–45. Retrieved 13 November 2013 from: www.onlinelibrary.wiley.com/doi/10.1002/ev.312/pdf
- Gorjestani, (2000). Indigenous Knowledge for Development - World Bank [Online] available at www.worldbank.org/afr/ik/ikpaper_0102.pdf Accessed 20 January 2016
- Grenier (1998). Indigenous Knowledge Systems in South Africa: An overview [Online] available at <https://books.google.co.zw/books?isbn=0796921628> Accessed 21 January 2016
- Herz, B, and Sperling, G. (2004). What works in Girls' education: evidence and policies from the developing world. New york: council on foreign relations. [Online] available www.cfr.org/education/works-girls-education/p6947 Accessed 28/05/15
- Lalonde, A. (1991) African Indigenous Knowledge and its Relevance to Environmental and Developmental activities [online] available https://dlc.dlib.indiana.edu/.../African_Indigenous_Knowledge_and_its Accessed 22 January 2016
- Malhotra (2001). Traditional Knowledge Systems for Biodiversity Conservation [Online] available at www.infinityfoundation.com/mandala/t_es/t_es_pande_conserve.htm Accessed 20 January 2016
- Mortensoncenter Public Lecture Series (2013). Community libraries as platforms for sustainable development [Online] available www.library.illinois.edu/mortenson/.../Sept_17_READ_Lecture-1.pdf Accessed 28/05/15
- Nonaka and Takeuchi, H. (1995). The new Dynamism of the Knowledge-Creating Company [Online] available www.siteresources.worldbank.org/KFDLP/Resources/461197.../JKE2_ch01.pdf Accessed 20 January 20156
- Oyelaran-Oyeyinka B, (2005): Systems of innovation and underdevelopment: an institutional perspective. UNI-INTECH Discussion Paper No. 2005–1. Maastricht: United Nations University, Institute for New Technologies; 2005.

Parellada G:(2002). Public-private interactions and technology policy in innovation processes for zero tillage in Argentina. In *Agricultural Research Policy in an Era of Privatization*. Edited by: Byerlee D, Echeverria RG. Wallingford: CABI Publishing; 2002:137–154.

Rogers, E. M. (1995) *Diffusion of Innovations Theory* [Online] available at www.indiana.edu/~t581qual/Assignments/Diffusion_of_Innovations.pdf Accessed 20 January 2016

Shrestha (2013). The changing role of community libraries: Emerging centers for sustainable development. [online] available www.library.ifla.org/216/1/150-strestha-en.pdf Accessed 28/05/15

Spielman D, J. (2005): *Innovation systems perspectives on developing-country agriculture: A critical review*. In ISNAR Discussion Paper 2. Washington DC: IFPRI; 2005.

Torri, M, C. and Laplante, J. (2009). *Enhancing innovation between scientific and indigenous knowledge: pioneer NGOs in India*

Yin, R. (2002). *Case Study Methods* [online] available at www.cosmoscorp.com/Docs/AERAdraft.pdf Accessed 15 December 2015