

Telecommunication Centres (Tele-centres) – Innovative Development and Evaluation: A Case Study of Tombo village, Eastern Cape

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Abstract: Telecommunication means in South Africa are not equally accessible to all. There are still disparities in terms of access to electronic telecommunication by people in the rural areas compared to those who live in urban areas. This situation has created a huge information gap between the rural and urban dwellers. As part of trying to bridge this information gap, the South African government has vigorously promoted the installation of telecommunication centres (telecentres, as they are known) in rural parts of the country. However, most of these telecentres are not achieving the envisaged aims and objectives. This research undertakes an evaluation of a telecentre in Tombo village of Port St. Johns in the Eastern Cape Province with the aim of establishing some of the success factors for the sustainability of a telecentre.

Semi-structured interviews and observations were used to gather data and a qualitative analysis of the data elucidated some of the challenges in sustaining the telecentre as a viable operation. The recommendations include: That an entrepreneurial or innovative approach must be used in order to make telecentres sustainable; vigorous means of awareness and training about the telecentre services are needed; and, the need for serious consideration of all relevant categories of stakeholders coupled with addressing socio-economic and political issues within the community must not be overlooked.

Keywords: Telecommunication, telecentres, sustainability, entrepreneurship, innovation.

1. Introduction

We live in an information era but this can only be realized when this information is accessed by means of technology. Once accessed this information has to be understood for it to add value. To understand it, appropriate education and training are needed. For education and training to take place, some resources, such as skilled people and money, are needed. In the Eastern Cape Province (ECP), these resources are extremely scarce because of poverty, especially in the rural areas, which constitute the great majority of the province. Concerning the necessity for instant access to information the former Vice-President of the United States of America, Al Gore[1], states:

...we have promoted universal service to basic telecommunication services, because the ability to pick up a phone or hook up a

computer and have instant access to your village, your nation and your world is one of the most liberating and empowering forces in human history, and it should be available to all people. (ITU News, 1998)[1].

In the 1999 research report on Living Standards in the ECP in South Africa, the Department of Economic Affairs, Environment and Tourism (DEAET), states that the new democratic government counted people in 1996 and the results reflected that the ECP was the third highest populated province in the country. The report further states that the ECP had 6,3 million inhabitants in 1996, that of these only 2,3 million (37%) of the people lived in the urban areas and that its unemployment rate was the highest in South Africa.

Moodly (1996)[2], in the research on the socioeconomic, demographic and geographical situation of the Border/Kei region within the ECP, quoting from Erasmus (1996:1-4)[2], reported that the Eastern Cape, though spatially the second largest province in South Africa, is also one of the poorest. It is situated in the southeast of the country and encompasses the former Eastern Province, Border and North-Eastern Cape areas, as well as the former "homelands" of Transkei and Ciskei. In this report it is stated that the population in 1994 was 7,1 million, making it the third largest province. Furthermore, according to this report, approximately 85 percent of the population is Xhosa-speaking, living in a largely rural area. It should be noted, however, that people in these regions are not all economically active. The size of the economically active population is small.

Table 1 shows the report by Statistics South Africa (SSA)[3] in 1998 of the size of the economically active population by districts in the Wild Coast regions of the Eastern Cape. The case study discussed in this paper is based on the telecentre in Tombo village in the Port St. Johns (PSJ) district.

According to Table 1, 64 percent of the population is unemployed. PSJ has the lowest population of people between the ages of 15 and 64 years among the Wild Coast regions shown in Table 1. Of the 20 088 people between the ages of 15 and 64 years, 7 329 are employable. This means that there are 12 759 people between 15 and 64 years of age, but not employable.

This study did not look into the reasons why these people are not employable. The inclusion of other Wild Coast districts in Table 1 indicates where PSJ stands in terms of the size of its economically active population. Most people go to Umtata to look for work and they end up staying there to avoid travelling every day. Umtata is a

larger district compared to others shown in Table 1. The size of Umtata is also indicated by the number of people between the ages of 15 and 64 years, as shown in Table 1.

Table 1 Size of economically active population by districts (Source: Statistics South Africa (SSA) 1998) [3]

District	Total 15 – 64 yrs	Economically active	% E	% U
Bizana	71 441	15 508	22	78
Kentani	36 976	9 982	27	73
Willowvale	44 632	8 462	19	81
Butterworth	37 369	17 829	48	52
Idutywa	39 511	9 243	23	77
Mt. Frere	51 228	10 617	21	79
Libode	43 056	10 764	25	75
Lusikisiki	79 112	30 303	38	62
Mt. Ayliff	31 205	7 046	23	77
Mqanduli	57 018	12 938	23	77
Nggeleni	49 940	16 544	33	67
Qumbu	43 872	10 312	24	76
Flagstaff	33 875	8 073	24	76
Tabankulu	43 063	8 759	20	80
Tsolo	36 559	7 233	20	80
Umtata	137 191	58 561	43	57
Port St. Johns	20 088	7 329	36	64
Elliotdale	25 878	8 196	32	68

%E = percentage of Employed people between the ages of 15 and 64 years

%U = percentage of Unemployed people between the ages of 15 and 64 years

What stands out from this discussion is that when planning for the introduction and implementation of new technologies especially in rural areas, many factors must be considered. These factors include social factors, economic factors and infrastructure problems. Premkumar and Roberts (1999)[4] state: “New information technologies have opened up many new opportunities for small businesses in rural communities as well as exposed them to additional risks”.

This research is based on an evaluation study of telecentres within the MultiPurpose Community Centres (MPCCs) with the aim of establishing the critical success factors for a sustainable telecentre. In concluding the background information about this research, the authors wish to state that research on the evaluation of telecentres is relatively new and as such needs to be given appropriate attention before there are serious problems in this area of exploration. Gomez, Hunt and Lamoureux (1999)[5], in their global perspective on Telecentre Evaluation, agree with the fact that telecentre development and research is a relatively new endeavour. Harris (1999)[6], quoted by Gomez *et al.* (1999)[5], states that baseline studies in Africa are used to:

...establish yardsticks for key indicators of the community-related variables which we expect to influence. These include; community socio-economic factors, awareness of information technology among the community and among teachers and pupils, and cultural factors relating to the world-view of the community as well as its relationship with information.

The economic viability, social acceptability and technical suitability of telecentres in the ECP are uncertain at the

moment. Furthermore, these telecentres lack an effective rigorous business (entrepreneurial) and technologically innovate approach for their functionality and sustainability. So far, the preliminary investigation shows that the telecentres are not functioning properly.

1.1 Goals of the Research

The main goal of this research was to establish critical success factors for a sustainable telecentre within an MPCC, considering the socioeconomic and technological challenges in an Eastern Cape rural community. This was done by evaluating the present situation of all the relevant stakeholders identified in the stakeholder analysis exercise. The context of the research was predominantly South African and the case study on the evaluation of a telecentre was based on a rural area called Tombo Village in the Port St. Johns district within the Eastern Cape. It was intended that the information that would be gathered in this research could be used to analyse similar situations elsewhere. An in-depth investigation on a particular case in order to yield insights into the realities of the telecentres, was conducted. If the Tombo case proves to be representative of other telecentres, then it is sensible to suppose that one can learn a great deal about general operating principles from this single example. It is for this reason that a case study approach was used.

The following sub-goals were used in pursuing the main goal of the research:

- Establishment of the current practices in the telecentre within an MPCC.
- Identification of the key stakeholders using a stakeholder analysis technique and the Critical Systems Heuristic approach (Ulrich, 1983,1996)[7],[8].
- Establishment of the perception of the people about the telecentres.
- Establishment of the views of the community.

1.2 Research Methodology

There are many different types of research as can be seen in the discussion that follows. The material presented in this paper is an evaluation research that focusses on the effectiveness of a particular programme treatment for the purpose of establishing how the stakeholders feel the programme is working. The purpose of evaluation research is to bring about an improvement in the delivery of products and services. If one is to try and categorize it further, it can then be stated that this particular research is both summative and formative. On one hand it is summative because it focusses on the current practices in the telecentre by assessing its effectiveness and usability. On the other hand it is formative, in that it focusses on diagnosing areas of the telecentre programme that are weak and makes recommendations for improvement. finally, this research falls within the category of qualitative research in that it involves the quality of things by exploring how the stakeholders feel about and react to their experiences with the telecentre programme. This research involved data that was not explicitly quantifiable, but could nevertheless be evaluated.

Data collection, analysis of data, interpretation of collected data, testing of the validity of collected data and final findings were pursued using the following methods:

- Observations were used over a certain period to monitor the use of the telecentre and current practices at the centre.
- The Integrated Model of Programme Evaluation (IMPE) adopted from De Vos (1990) and McKendrick (1989)[9] was used.
- The stakeholders were identified by using the boundary questions of Critical Systems Heuristics (CSH)[8].
- In order to understand the perception of the people about the telecentres CSH was used.
- Individual and joint face-to-face interviews were used to establish current practices. Telephone interviews were also used on a smaller scale.

1.4 Importance of this Research

Telecentres are a relatively new concept. Telecentres were first established in the early 1980s in Denmark to promote the use of advanced information and communications technology (Cronberg *et al.*, 1991)[11]. Thereafter, a few more organisations embraced this concept and started doing research about it. In the late 1990s the first telecentres were set up in South Africa. Research, indicates that robustness in the design of these centres has not yet been achieved. South Africa, as well as the rest of Africa, is still struggling to ensure that in these centres there is profitability, sustainability, socio-economic relevance, usability and other factors highlighted in this research paper. Currently, the government of South Africa is spending a great deal of money to support the establishment of these centres. Whyte (1999)[12], in a paper based on another report (the Acacia Research Guidelines for Assessing Community Telecentres), states: “ the ‘telecentre’ horse is out of the gate and is in danger of running ahead of any adequate assessment of how to ensure its financial sustainability or to maximise its benefits”.

In order to contribute towards the success of the telecentres, it is important that continuous research is done in this area of work. This calls for some evaluation techniques so as to monitor progress, identify problem areas and recommend possible solutions.

Finally, this research not only contributes to societal development but also to the field of rural telecommunications at large. At the moment there is a big gap between the information ‘haves’ and ‘have nots’ for reasons that will be clear as a result of this case study. Evaluation research contributes to the development of a system for bridging that gap.

Finally this paper offers a critical review of the research with some recommendations for future practice.

2. The Tombo Village Case Study

This section provides an in-depth account of the case study that took place in Tombo Village in Port St. Johns. From now on, more emphasis will be placed on the process that has taken place with regard to Tombo Village. The first part of this section discusses the preliminary work performed by the authors to become

familiar with the environment, as well as other general issues concerning Tombo Village. The second part describes the interactions between the authors and the stakeholders and the analysis of these interactions.

2.1 A brief demographic profile of Port St. Johns

Port St. Johns is situated along the Wild Coast in the Pondo region of the former Transkei region of the Eastern Cape Province in South Africa, with a total population of 68 137 people. Table 2.1 shows the population in terms of Port St. Johns racial groups.

Table 2.1 Port St. Johns (PSJ) population by racial groups (Source: SSA 1998)[3]

District	African	Col.	Ind.	Whi.	Un	Total
PSJ	67361	384	24	115	253	68 137

Ind = Indian, Col = Coloured, Whi = White, Un = Unspecified

According to Table 2.2, most of the people are women. It should be noted that most of the people in the rural areas are Black (African) women.

Table 2.2 Population of Port St. Johns by gender (Source: SSA: Bisho Office 1998)[5]

District	Male	Female	Total
PSJ	30,796	37,343	68,139

Port St Johns is made up of mainly three forms of settlement (SSA, 1996)[13]. They are:-

- Urban informal settlements (about 1 641)
- There are also commercial farms (about 2 001)
- Tribal authorities (about 63 140)

The telecentre used for the case study here is in the tribal authority. According to Moodly (1996)[3], 92.4 percent of the Port St. Johns area is non-urban. There is also an indication that the level of literacy in Port St. Johns is quite low.

2.2 Brief Profile of the Tombo MPCC

This MPCC is located in the O. R. Tambo District Municipality and was launched in 1999 by the Minister of Public Works, Ms. Stella Sigcau. Within this MPCC there are a few activities that take place, such as:

- A telecentre established by the USA.
- A medical clinic.
- An arts and culture centre.
- Department of Home Affairs (Some services).
- Tombo Entrepreneurship Development Centre (TEDC -Community Based Organization).
- Partnerships with NGOs and Community based groups.
- Welfare services in partnership with Umtata Child Abuse Resource Centre (UCARC).
- Department of Agriculture.

- Post office services (now within the telecentre).
- And numerous activities offered by GCIS.

The Tombo telecentre offers the types and qualities of services listed in Table 2.3:

Table 2.3 Services provided at the Tombo telecentre

Service provided	Duration	Charge in Rands
• Faxing	–	50c/ page
• Typing	–	varies
• Internet	1 hour 15 minutes	R30,00 R7,50
• Postal service	–	Free so far
• Photocopying	–	50c per page

GCIS has been involved in the process of establishing the MPCC and continues to be involved in terms of valuable assistance to the centre. GCIS's regional office is in East London, approximately 380 kilometres away from Port St. Johns. According to the GCIS (2000)[13] business plan document, in 1996 the Cabinet approved the Comtask Report which mandated GCIS to promote and accelerate development of Multi-Purpose Information Service/Centres.

It should be kept in mind that all three categories of stakeholders were included in this research and they were (adopted from the work of Banville *et al* (1998)[15] by Andrew (2001)[16]:

“*Fiduciary Stakeholders* – those persons who act on behalf of clients, representing them. They participate in the process of formulation and resolution of the problem, but are not directly affected by the solution”.

“*Silent Stakeholders* – those persons who neither participate in the process nor have any control over the resources or uncertainties that are relevant for resolution of the problem, but are affected by the problem. Silent stakeholders need not necessarily exist at the time of the problem or its resolution”.

Also according to Banville *et al.* (1998)[15], silent stakeholders include those who do not have the means to make their voices heard.

3. How the data was collected

At first, a workshop was conducted with the people from the community. The aim was to discuss the questions that seek to find results and answers to the questions that form the objectives of this study. It was believed that the workshop would result in the facilitator and the participants coming up with a unanimous agreement on the rich picture (Checkland, 1981)[14] that depicts the

situation about the telecentres. Another method was going to be to use questionnaires with those who are literate and oral interviews with the illiterate but asking them the same questions in both of these techniques. During the first formal visit to Tombo to do a preliminary survey, it was clear that the representativity, attendance, level and kind of participation was not going to be entirely good, free and unbiased due to certain political factors that were prevailing as a result of party politics. This situation led to the replanning of the approach. It was decided to use only semi-structured and random interviews and observations. These interviews were targeted at all the identified stakeholders but more in an informal way in some cases. The researchers had to use varying styles of questioning, depending on the calibre and level of understanding about the telecentre concept by the interviewee.

Before the researchers could go around the community conducting the research they had to first meet with the chief of Tombo. In this meeting the chief was casually interviewed to determine his view and also what his perceptions were on the views of the community regarding the MPCC and the telecentre within it. The responses to the questions asked during the interviews with all identified stakeholders are summarised in the sections that follow.

A local language which is a dialect of Xhosa was used during all these interviews so as to eliminate the language barrier when the participants were expressing themselves during the interviews.

Observations were conducted from morning until late at night, by the authors for one day. An unidentified person was asked to do observations over a period of four months to monitor the use of the centre while the staff and users of the centre were unaware of these observations.

In the summary of the findings the outcome of these observations is also discussed. These observations were done both outside and inside the centre. Inside the centre permission was sought from the telecentre co-ordinator to do observations and have a casual talk with the people (users of the centre) who were visiting periodically. In this case only the telecentre co-ordinator was aware of the observations. The reason for doing the observations in this research was to make sure that first-hand information was gathered about social processes in their naturally occurring context. This information helped the researchers to establish what people were doing at the telecentre rather than what they thought they were doing. By combining both the interviews and observations it was possible to compare what people were saying happens at the centre with what was actually happening.

The results of the observations are presented by reporting in a chronological presentation of what was observed over time. This report of the observations will not be given in isolation but it informed the researchers about certain issues that were investigated.

4. Presentation and Analysis of Collected Data

As can be seen in Table 4, not all the participants knew what was exactly happening in the telecentre. Some people from the community only knew about the post office services that were taking place at the telecentre and very few others also knew about the faxing services and the fact that there are computers as well. It should be noted, however, that the researchers tended to concentrate more on the silent and standard stakeholders and not so much on the fiduciary stakeholders. The reason was that in this research the aim was to assess the impact and implications of the telecentre in the community, rather than getting the opinions of those who were directly involved in the process from the beginning and who would have given subjective answers.

Of the thirty one (31) participants who were interviewed, 23 were from the community and eight (8) had either a direct or indirect involvement in the telecentre. Of the 23 participants some were interviewed in groups (jointly). Before asking about the perception of the people with regards to the telecentre, the researchers had to first find out if the participants knew about the telecentre. Efforts were made to clarify the questions so that the participants could understand what was being asked. A very high percentage of the participants (especially the youth at the school-going age) did not even know what is meant by Internet and e-mail, let alone its availability in the centre. They were asked also if internet and e-mail were at least available in the telecentre and they all did not know. Table 4 gives a summary of the findings.

Table 4 Tabulation of the findings

Number of participants from community	Knowledge about the centre	Knowledge about the availability of Internet/e-mail at the centre
23 (15 –65 years of age ,males and females)	8 FP 4P 1F Total = 13	5

F – knowledge about the faxing services
P – knowledge about the postal services
FP- knowledge about both F and P

Table 4 shows that more people know about the telecentre and the two services, namely faxing and postal services, than they know about the computers and internet. Some people did not know anything. Hence, only 18 gave answers.

Here are two possible reasons for this:

- When the MPCC was launched in 1999 the Internet was not functioning until around March 2002. Some indicated that they did not know that Internet was now working, as they last heard that it was not working.
- In the telecentre the room with computers is separate from the one where there is a fax machine and where the postal services are provided. Unless one goes to the other room, one will not know about its existence. Although

there are signs on the wall about the availability of computers for word processing, Internet and e-mail, it could be that people do not notice them.

Some participants complained that the unavailability of electricity was one of the de-motivating factors. There was an indication that some children do not get financial support from their parents to use the facilities of the centre because of political reasons. The authors did not have time to test the validity of such statements. There was a complaint about corruption in the centre and the lack of security in the village. Once again, these statements could not be proved as to whether or not they were valid because of time and financial constraints.

A different set of questions was used with the participants that were either directly or indirectly involved in the telecentre. The researchers felt that it was not going to make sense to ask them questions like, “Do you know about the telecentre and what it is used for?” The purpose was to confirm some of the views and understanding by the community members. Another purpose was to ask the questions that could not be answered by the general members of the community. Finally, the authors also wanted to find out about the thinking of those involved in the telecentre in terms of the role they see the telecentre playing in the near future as well other views that they might have about the impacts and implications of telecentres. As already indicated, a small sample size was deliberately selected because of time and budget constraints and most importantly because this research was aimed at establishing and seeing the impact and implications of the telecentre through the eyes of the community members rather than those of the people who are involved in the day-to-day running of the centre.

5. Conclusion and recommendations

The lesson learned from this case study is that when a telecentre is situated at a place where there are businesses that can support it in terms of making use of its services such as photocopying machines and Internet services, it will most likely be successful. This is clearly seen at the stand-alone telecentre like the one in Ndevana. This telecentre is situated next to a clinic, but this did not ensure enough publicity about this telecentre, because many people even within a one kilometre radius did not know about it. Also, a clinic itself cannot bring much support to a telecentre other than make it known to those who use the clinic. A stand-alone telecentre has a problem of being unknown by its potential users, who are usually quite a distance away from it. In the case of the Tombo telecentre that served as a case study, the telecentre is situated within the MPCC. The MPCC has things like, a community hall that attracts people. While the people are at the MPCC, they get to know about the telecentre. As already indicated, the people from other organisations within the MPCC make use of the services of the MPCC.

Another thing, is that when the Tombo telecentre was not fully functional, the Tombo Entrepreneurial Development Centre (TEDC) assisted it (the telecentre) by employing an entrepreneurial approach. The conclusion here is that

when there is no element of entrepreneurship and innovation, the sustainability of a telecentre is in jeopardy. This statement is supported by the literature that was reviewed and the investigations done in this research.

Not enough people know about the Tombo telecentre. Any organisation that is not well advertised and that is unknown to its clients is bound to have problems with respect to being sustainable. It is therefore clear that it was not going to be easy for the members of the community to be entrepreneurial and innovative when they did not even know about the telecentre and its potential. Therefore the Tombo telecentre did not deploy enough publicity about the telecentre and all its functions. On a practical level, not all the relevant stakeholders were involved in the planning for the deployment of the telecentre. If the members of the community as stakeholders did not know about the telecentre, as the findings indicate, it would not have been possible for them to dedicate themselves to using and sustaining the telecentre.

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