THE ROLE OF TELECENTRES IN THE PROVISION OF AGRICULTURAL INFORMATION IN MALAWI

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Abstract

Information and Communication Technologies (ICTs) are powerful tools for development. In developing countries like Malawi where majority live in rural areas and rely on agriculture, ICTs are essential in providing access to agricultural information and agricultural. Therefore, establishment of telecentres which stock ICTs in rural areas offers potential to increase the access and provision agricultural information. The study reported in this paper aimed at investigating role of telecentres in the provision of agricultural information in Malawi. Specifically, the study examined: agricultural information needs of the communities that the telecentres serve; the types of agricultural information that the telecentres provide to the communities; and the challenges that the telecentres face when providing agricultural information to the communities they serve. The questions were explored by a means of one telecentre, Goliati Telecentre that was chosen purposively. Qualitative data were collected form users, nonusers and telecentre management. Observations were also conducted within the Telecentre and the library. The study reveals that communities surrounding the telecentre need information on pest and pesticides; available markets for agricultural produce and market prices; and good agricultural practices. The study further revealed the telecentre is not active in providing agricultural information as people only relied on other means such as interpersonal channels other than the telecentre. The telecentre faces different challenges ranging from infrastructural to misunderstanding of the communities. The paper recommends that the telecentre should take an active role in providing the agricultural information based on the needs of the

community. Furthermore, the telecentre has to address the challenges to be effective to the community in agricultural development.

Key words: *Information; Agricultural Information; Telecentres; Goliati Telecentre; Malawi.*

Introduction

Information and Communication Technologies (ICTs) are considered to be powerful tools for fostering development. ICTs have the potential to enable people easily access to educations services, healthcare, government information and other services; and furthering socioeconomic development of disadvantaged communities (Dangal 2011). In developing countries like Malawi where majority lives in rural communities and rely on agriculture (BBC News 2017), ICTs are a powerful tool for providing agricultural information and agricultural development. Therefore, establishment of telecentres which offer public access to ICTs (Rega 2010) in rural areas offers potential to increase the access and provision of agricultural information in rural communities (Mbangala & Samzugi 2014). For example, telecentres provide farmers with access to information on better farming methods and techniques; and market information (Buhigiro, 2012).

However, though telecentres exist in Malawi, limited research has been conducted to understand their role in provision of agricultural information. Therefore, this paper aimed at investigating the role of telecentres in the provision of agricultural information in Malawi. Specifically, the study examined: agricultural information needs of the communities that the telecentres serve; the types of agricultural information that the telecentres provide to the communities; and the challenges that the telecentres face when providing agricultural information to the communities they serve. The questions were explored by the means of one community telecentre, more details of which are provided in Section 3.

Brief Literature Review

Agricultural information needs of people surrounding telecentres

There is limited literature assessing the role of telecentres in providing agricultural information. However, the limited literature available on the agricultural information needs of rural dwellers indicate that people in rural communities need information on financial facilities that would help them in farming, agricultural marketing (Association for Progressive Communication 2010; Tumsifu & Silayo 2013; Abdulhamed 2017) and pest management (Abdulhamed 2017; Association for Progressive Communication 2010); fertiliser or harvesting (Association for Progressive Communication 2010).

Farmers in rural areas also need information on crop and livestock husbandry and value addition (Tumsifu & Silayo 2013).

The types of agricultural information that the telecentres provide to the communities

Telecentre help in meeting agricultural information needs of rural communities by improving access to markets for agricultural and other business products through radio programs adverts, allowing farmers to advertise their products through the local radio, communicate with their customers through telephones available within the telecentre; and provision of modern technology to sell products online (Mbangala & Samzugi 2014). Telecentres also provide weather information and prices for market to farmers (Buhigiro 2012).

Challenges that the telecentres face when providing agricultural information

Despite this potential of providing agricultural information, in some areas people still rely on other means of accessing information like interpersonal channels (Association for Progressive Communication 2010; Tumsifu & Silayo 2013). Furthermore, the contribution of telecentres towards the provision of agricultural information is limited by myriad challenges. Some of the challenges include: financial sustainability, perception that telecentres are for the youths (Hallberg, Kulecho, Kulecho & Okoth 2011), and under-utilization by the targeted communities (Association for Progressive Communication 2010; Kapondera & Hart 2016).

Research Design and Methodology

The study employed a case study approach of one telecentre- Goliati Telecentre in Thyolo District of Malawi. The Telecentre is located at Goliati Trading Centre about forty kilometers from Blantyre. It is surrounded by primary and secondary schools, selling point of milk from local farmers and a market. The catchment area is composed of six villages (Chikumba 2010). The Telecentre is located in a building of which the other side is a library operated by National Initiative for Civic Education (NICE). The library is operated by a volunteer and it is opened on Mondays, Wednesdays and Fridays from 9AM to 3PM. The services offered include: Airtel Money and TNM Mpamba (which allow people to send and receive money), typing and printing, photocopying, binding, lamination, computer tutorials and Internet services. However, during data collection in September 2017, the Telecentre had no Internet connection. The Telecentre had stayed for four years without Internet connection.

The Telecentre was chosen because it is the oldest Telecentre in the country that was opened in 2007 and officially launched in 2009 (Chikumba 2010). The respondents included the users, non-users and the Telecentre management (two

telecentre staff and the librarian). There were nine users and six non-users. Users were those who visited the Telecentre or Library while non-users were those who had never used the Telecentre. Convenient sampling technique was used to identify the users and non-users as they were those found within and close to the Telecentre. Qualitative data were collected through interviews. The interviews were chosen because they allowed to get responses even from those who were illiterate (Kajornboon, 2005). Interview guides contained open ended questions to allow participants provide rich and in-depth responses (Mamba & Isabirye 2015). The interviews with users, non-users and the librarian were in Chichewa while English was used to interview the Telecentre staff. We also conducted observations within the Telecentre and library.

Thematic analysis techniques were employed to analyse the data. The researchers transcribed the data, searched the themes, reviewed them and refined the themes to avoid duplicating the themes (Braun & Clarke 2006). Codes are used to identify respondents. Prefix US (followed by sequential number) is used for users. On the other hand, prefix UN is used for non-users. Prefix in either case is followed by sequential numbers to come up with the codes. For example, the code for user number 2 is US2; and NU2 represents non-user number.

Results and Discussion

As stated in section 3, we collected data from nine users (9), six non-users (6), the librarian and the Telecentre management. Table 1 summarises demographic characteristics of users and non-user. Users' age ranged from 18 to 59; while non-users were aged between 23 and 40. In terms of gender, there were more males (5) than females (4) on the users' side; while for non-users it was vice versa as there were more females (5). This is in line with the literature that majority of telecentre non-users tend to be females (Kapondera & Namusanya 2017; Neville, 2012). Users were more educated than nonusers as most users (6) had at least a junior secondary school qualification. On the other hand, of the 6 non-users 4 did not complete primary school education. The finding on users being more educated than non-users agrees with the previous studies in literature (for example, Kapondera & Hart 2016). This could be attributed to the fact that telecentres in many communities are perceived to be for the educated (Kapondera & Hart 2016). As for occupation, majority were farmers. These included those who engage in small scale farming to earn a living. A good number of respondents in both categories were involved in business. When asked on the type of business, all these indicated that they were small scale traders of agricultural produce.

Table 1: Demographic characteristics of users and non-users

		Number of respondents	
		Users	**Non-users**
Education	Did not complete primary school	2	4
	Primary school qualification	1	1
	Junior secondary school qualification	4	1
	Senior secondary school qualification	2	0
Occupation	Student	3	0
	Farmer	4	3
	Business	2	2
Gender	Males	5	1
	Female	4	5

Uses of the Telecentre

Many people coming to the Telecentre used the Telecentre for Airtel Money or TNM Mpamba services which allowed them to send or receive money. A good number of users also used library, printing and photocopying services.

Agricultural Information needs of people surrounding the Telecentre

Most of the respondents engage in small scale farming.

For example, some grow tomatoes and sell it while some grow maize. Both users and non-users were asked to indicate type if agricultural information that they need in their farming activity. The results, as descried bellow, indicate people surrounding the telecentre needed information on pest and pesticides, available markets for their farm produces and good agricultural practices that would help them harvest abundant yield.

Pests and pesticides: the most needed agricultural information was about pests and pesticides. This was especially common among those who grew tomatoes. One of the respondents, a user, said: "as for me, I need those people in agriculture providing us with information on the pests and best/appropriate pesticides for our crops" [US1]. Another respondent, a non-user, in agreement said that she needed information on pests and pesticides because lack of this knowledge made her family lose tomatoes to some pests. This is evident in the following:

> *"I really want to know especially concerning my farming activities is how to take care of tomatoes. Like recently we planted tomatoes but we lost all of them to some pests whose names I do not know*

bust they destroyed all the tomatoes we had. So, I want to know what exactly the problem is and what pesticides we can use and how we can find the pesticides…. It was a lot, like 3000 plants, but we lost all these including the fertilizer and the money we used to buy the pesticides…"[NU1].

Markets and market prices: being farmers and that they considered farming something that could help earn money for a living, they needed information on available markets and market prices for their agricultural produce. They believed that this information could help them make profits. A non-user who grows tomatoes and potatoes said "we also need information on markets where we can sell our crops. Like now I grow potatoes but we do not make profits because we just sell them locally. So, I need information especially on the right prices and where I can be selling them so that I make some profits, you know.." [NU5]. The finding is in line with the findings of previous studies that farmers need information on available markets and prices (Tumsifu & Silayo 2013; Abdulhamed 2017).

Good agricultural practices for bumper yield: In general, users needed information on good agricultural practices to have bumper yields as evident in the following comments:

"I basically need information on proper fertilizer and the proper soil for our crop for a good harvest' [US1]. "need information on proper farming practices like how to take care of the our crops, weeding and any other information that would make us harvest bumper yields" [US4]
"we need information concerning crops and other things that would help in farming" US2.

The type of agricultural information that Goliati Telecentre provides to the community

The results obtained from respondents showed the agricultural information is not available within the Telecentre. Observations also confirmed that there was no agricultural information within the Telecentre. As indicated above, there was no Internet connection which would help farmers obtain agricultural information online.

In addition, observation indicated that there was no agricultural information within the library except for one book which is on cotton farming yet people in the area are not involved in growing cotton. Interviews with the Telecentre Management indicated that they do not consider provision of agricultural information as one of the activities they should be involved in. One of the Telecentre staff said: "when it comes to agriculture, I need to be honest, we

have never taken part in providing agricultural information. I think we do not see it as one of the things that as a telecentre should be doing …" [Telecentre Management].

When users and non-users asked how they find the information needed, radios seemed to be the main source of the agricultural information. One user said "most of the times I find information on agriculture through radios" [US1]. Another users also echoed by saying that "mostly we do not find this [agricultural information] in the Telecentre. We find this information through radios aah yeah, radios," [US3]. Posters also acted as source of agricultural information in the community. One of the users also indicated that they find information through "posters that they paste on trees that contain information on say where we can find some particular seeds or fertilizer, they paste on trees or buildings and people access the information," [US2]. Interpersonal channels were also a means of obtaining agricultural information in the community. In this, people especially friends in the community and agricultural extension workers played a great role. One of the non-users said "I just hear from people who have been taught by those whom you call, aah, what is their name? Agricultural extension workers?...yeah. those who have been taught by the agricultural extension workers are the ones whom I get some agricultural information from. For example, on how to take care of tomatoes**," [**NU4].

The findings in this section agree with literature. According to Tumsifu and Silayo (2013), farmers rely on traditional means of communication including radios and interpersonal channels because of relevancy in the context and content.

Despite that the Telecentre was not active in providing agricultural information to the people in the community, it seems the uses of the Telecentre i.e. sending and receiving money through Airtel Money and TNM Mpamba; and photocopying and printing services to some extent helped the users in their agricultural activities. One of the users, who grows tomato indicated that the money they receive through Airtel Money and TNM Mpamba helped him in farming. He said "the money I receive [through Airtel money or TNM Mpamba] helps me in my farming activities like buying fertilizer and some pesticides" US7. Some users who used the Telecentre for printing and photocopying also indicated that this helped them in their farming activities. One of the users for example indicated that whenever he accesses agricultural information through other means like listening to the radio advert on the proper fertilizer, he writes the information down and comes to the Telecentre to photocopy such materials. The user said "whenever I have access to information on pesticides for tomatoes on radios I usually write information on a paper and come here to photocopy so I could have the information on multiple copies' US1.

Challenges that Goliati Telecentre faces in the provision of agricultural information

Observations and interviews with Telecentre Management indicated that the main challenges that the Telecentre faces include:

i. Poor Internet connectivity: the Telecentre had stayed for over four years without Internet connection;

ii. Misunderstanding of the communities: whenever there is poor network for Airtel Money and TNM Mpamba services customers are always angry especially that this means that cannot get the money at that particular time.

iii. Frequent blackouts: the Telecentre does not have alternative source of power to the one provided by Electricity Supply Cooperation of Malawi and can stay for the whole day without power.

Conclusion

The study investigated role of telecentres in the provision of agricultural information in Malawi targeting one telecentre, Goliati Telecentre. Specifically, the study examined: agricultural information needs of the communities that the telecentre serves; the types of agricultural information that the telecentre provides to the communities; and the challenges that the telecentre faces when providing agricultural information to the communities it serve. The community that Goliati Telecentre serves needs information on pest and pesticides; available markets for agricultural produce and market prices; and good agricultural practices. It can be concluded that the Telecentre is passive in providing agricultural information to the community it services as there was no information on agriculture and that people in the community it serves rely on radios, posters and interpersonal channels for agricultural information. The main challenges that Goliati Telecentre faces include poor Internet connectivity, misunderstanding of the communities whenever there is poor network for Airtel Money and TNM Mpamba and frequent power outages.

Recommendations

Based on the findings, the study recommends that Goliati Telecentre should be active in providing agricultural information; invest in alternative power supply and have Internet connectivity.

This study was limited to one telecentre. Therefore, the findings cannot be generalized. The study recommends a wider study on the same topic should be carried out.

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