12-10-2017

USAGE PATTERNS AND CHALLENGES OF MULTIPURPOSE COMMUNITY TELECENTRES IN MALAWI

Sellina Khumbo Kapondera
Mzuzu University, skapondera@gmail.com

Wallace Chigona
University of Cape Town, wallace.chigona@uct.ac.za

Follow this and additional works at: http://aisel.aisnet.org/globdev2017

USAGE PATTERNS AND CHALLENGES OF MULTIPURPOSE COMMUNITY TELECENTRES IN MALAWI

[1]Sellina Khumbo Kapondera*

Mzuzu University, Malawi; skapondera@gmail.com

[2]Wallace Chigona

University of Cape Town, South Africa; wallace.chigona@uct.ac.za

Abstract

Domestic digital divide denotes the divisions between the haves and the have-nots of Information and Communication Technologies (ICTs) within a country. To bridge the domestic digital divide, the government of Malawi has been establishing telecentres since the early 2000s. It is now two decades since the first telecentre was opened. However, three important questions persist: Who uses the telecentres in Malawi? How are the telecentre used? What are the challenges in the use of telecentres? Using data from users, telecentre management and within telecentres, the study shows that there is uneven access for multipurpose telecentres in the country, as users are predominantly male, young, relatively educated and belonging to low-income levels; that users mostly used photocopying, printing and library services; and that, at one telecentre, a good number of users accessed the internet and computer services. The main challenges that users experienced included inadequate books and computers, the high cost of some services, lack of information in local languages and lack of internet-searching skills. The multipurpose community telecentres experienced poor infrastructure, lack of technical expertise, bureaucratic delays and demand that the telecentres should be free to the communities they serve. The study shows that telecentres are failing to achieve the objective of bridging the digital divide.

Key words: Multipurpose community telecentres; rural areas; digital divide; Malawi

1. Introduction

The discrepancy in the access to Information and Communication Technologies (ICTs) between different groups of people within a country is commonly referred to as the domestic digital divide (Falch & Anyimadu, 2003; Mtega & Malekani, 2009). It mainly focuses on the

haves and have nots of ICTs such as telephones, computers and the internet (Salanje, 2007). To bridge the digital divide, developing countries have been engaging in various efforts to bring the benefits of ICTs to those with limited access. Some of the initiatives have been the establishment of telecentres. Telecentres are facilities where people access ICTs such as the internet, computers, photocopiers and printing services for socio-economic development (Bailur, 2006; Gómez, Delgadillo, Stoll & Castells, 2003). In most developing countries, telecentres are mainly established in rural areas where access to ICTs is limited (Oestmann & Dymond, 2001; van der Vyver & Intaratat, 2013). With access to and usage of telecentres, people in rural and marginalised communities are able to access information (Falch & Anyimadu, 2003; Mtega & Malekani, 2009); communicate with friends and relatives (Soriano, 2007; Chigona, Lekwane, Westcott & Chigona, 2011; Chawinga & Ngwira, 2015); and expand their businesses (Oestmann & Dymond, 2001).

However, provision of access to ICTs does not automatically lead to bridging the digital divide. Physical access to ICTs does not automatically translate to usage. People have to use the ICTs for the objective to be achieved. For the past few years, a number of studies have focused on how these facilities are used. Some have attempted to understand the factors that affect adoption of telecentres (Kumar & Best, 2007); some have analysed the usage patterns of telecentres (Mtega & Malekani, 2009); and some have examined the purposes of using the telecentres (Chigona et al., 2011).

The government of Malawi started establishing telecentres to extend the benefits of ICTs to rural and disadvantaged communities in the early 2000s (Chawinga & Ngwira, 2015). It is now two decades since the first telecentre was opened in Malawi. However, three important questions still persist:

- Who uses the multipurpose community telecentres in Malawi?
- How are the telecentres used?
- What challenges do multipurpose community telecentres face in Malawi?

Though studies have been done in other contexts, lessons learnt in other countries cannot be applied in Malawi because contexts differ. Therefore, this paper attempts to answer these questions by investigating the usage patterns of multipurpose community telecentres in Malawi and the challenges they face.

Malawi has low ICT penetration levels. Individual access to ICTs, especially in rural areas, is low. Establishing facilities such as telecentres in the rural areas would contribute to increasing access to ICTs in such communities. Despite the potential of telecentre services to bridge the digital divide, there are limited studies to understand how the telecentres and their services are used in Malawi. The study attempts to fill this research gap by investigating usage patterns of multipurpose community telecentres in Malawi. It also examines the challenges in the use of the telecentres. The paper adds to the body of knowledge on how telecentres bridge the digital divide. The findings of the study will help in understanding who uses the telecentres and what they use them for. It will also help telecentre implementers and operators to design programmes that would attract all groups of people in the communities and how to mitigate against the challenges.

2. Context

Malawi is located in Southern Africa. It is divided into 28 districts which are further divided into Traditional Authorities. Malawi is one of the world's poorest countries, ranking 170 of the 185 countries on the Human Development Index (2016). It has a population of approximately 17 million people with half of the population living below the income poverty line of below US$1.25 a day (Malawi, 2014c) The population of Malawi is youthful as two-thirds of the population is aged below 25 (Malawi, 2014c); and approximately 45% of the population are under the age of 15 (Countrymeters, 2017). The country suffers from high unemployment rates. In 2013, approximately 20% were unemployed; 14% for male and 26% for female; 28% in urban areas and 19% in rural areas (Malawi, 2014a).

The literacy levels in the country are also low. In 2015, only 65.8% were literate–females 75.2% and males 74.9% (Human Development Report, 2016).

About 84% of the country's population live in rural areas where access to electricity, good roads, and clean water is limited (Isaacs, 2007). People in the rural areas are unemployed or largely depend on subsistence farming to earn a living (International Fund for Agricultural Development (IFAD, 2014). Furthermore, the majority of people in the rural areas have limited access to ICTs such as mobile phones, computers and the internet. In 2015, only 2.9%

of the rural population had access to the internet; 13.9% had access to computers; and 30.6% had access to mobile phones.

The government of Malawi claims that the establishment of telecentres in the country is due to its recognition that access to ICTs is a basic right of the country's population (Malawi Ministry of Information 2002). Furthermore, National ICT Policy and the Malawi Growth Development Strategy could be said to have facilitated the establishment of telecentres in Malawi, as they both stipulate that the country can only develop if everyone in the country, including those in the rural areas, has access to ICTs. The telecentres in Malawi are being established by the government of Malawi through the Malawi Communications Regulatory Authority (MACRA), which establishes these facilities with funding from international organisations such as International Telecommunications Union. The first telecentre started operating in 2007. So far, there are more than 50 telecentres operating in different models (Kapondera & Chigona, 2017). The interest of this study is on multipurpose community telecentres which are facilities that integrate old and new ICTs, including televisions, videos, facsimile, telephone, computers connected to the internet, newspapers and books (Etta & Parvyn-Wamihau, 2003) to develop communities as a whole (Harris, 2001). Multipurpose community telecentres provide the services based on the needs of the rural and isolated communities they are serving (Ernberg, 1998, as cited in Ibrahim & Ainin, 2009).

3. Literature review
3.1. Usage patterns of telecentres

Literature on usage patterns of telecentres focuses on the demographic characteristics of people using telecentres; the services they use; and the frequency of using the telecentres (Mtega & Malekani, 2009; Chigona et al., 2011; Grunfeld, 2011). In many developing countries, males dominate usage of telecentres (McConnell, Richardson, Doehler & Wong, 2001; Rathgeber, 2002; Kumar & Best, 2007) due to a myriad of factors such as illiteracy and low income levels of women (Gcora, Gopeni, Tuswa, Lwoga & Chigona, 2015). Apart from gender, telecentres fail to attract all groups of people in the communities as users tend to be the youth, are relatively educated and are mostly studying (McConnell et al., 2001; Chigona et, al., 2011; Mbangala & Samzugi, 2014); and that telecentre users tend to have high income levels (Kumar & Best, 2007). The failure to attract all groups of people raises questions about

their main objective of bridging the digital divide, as the telecentres would be seen as helping to widen the already existing digital divide.

Telecentre users visit telecentres to access different services. In general, the usage of the services is determined by a number of factors such as literacy (Mbangala & Samzugi, 2014) and the costs of the services (Kirkman, Cornelius, Sachs & Schwab, 2002). Studies on telecentre access patterns reveal that users visit telecentres to participate in computer training programmes (Mtega & Malekani, 2009; Chikumba, 2011); to listen to radios (Mbangala & Samzugi, 2014); to access library services (Chikumba, 2011); and for printing and photocopying services. The purposes of using the services also vary within the communities. Some users visit telecentres for work-related purposes such as to improve work-related skills and to find employment (Ibrahim & Ainin, 2009; Chigona et al., 2011). Some use telecentres to keep in touch with and find new friends; to keep informed (Ibrahim & Ainin, 2009); and for academic purposes such as connecting with universities and colleges (Ibrahim & Ainin, 2009; Chigona et al., 2011).

3.2.   Challenges of using and running telecentres

Telecentres are bedevilled by numerous challenges. Most telecentres are not aware of the needs of their communities (Lwoga, 2010); as such they struggle to provide services that are relevant to communities. Telecentres in developing countries also suffer from inadequate human resources and poor connectivity which limit the provision of services to communities (Owen & Darkwa, 2000). Telecentres have an impact only when people use and have an interest in them. Literature shows that some community members lack interest in using the telecentres and their services (Johannson Hedberg, 2011). Another challenge facing the telecentres is financial sustainability. In most countries, telecentres are established by governments which provide the equipment for the telecentres to roll out. Thereafter, telecentres are expected to be self-sustaining (Masiero, 2011). However, some telecentres do not generate enough money to sustain themselves, especially when there are competitors within the communities they serve (Gcora, et al., 2015). Poor infrastructure is another challenge in the operation of telecentres in many developing countries. Specifically, many telecentres experience unreliable power supply (Roman & Colle, 2002; Kuriyan & Toyama, 2007), since they do not have alternative power to the national grid, and also experience the challenge of low bandwidth (Mtega & Malekani, 2009). Some other challenges include

shortage of staff (Gcora et al., 2015) and mistrust of telecentres by their communities (Kuriyan & Toyama, 2007).

Users and potential users also face numerous challenges when using the telecentres. In most telecentres, there is lack of content in indigenous languages (Roman & Colle, 2002; Kuriyan & Toyama, 2007). Limited financial resources are another challenge affecting users. Typically, telecentres charge for the services they offer. Since they are established in rural areas where income levels are often low and the majority of the population are unemployed, some are unable to access other services and some community members are unable to access the telecentres (Kuriyan & Toyama, 2007; Gcora, et al., 2015). In communities where telecentres offer services at no cost, the free access has encouraged the usage of telecentres (Chigona & Licker, 2008). Some other challenges include complexity of ICTs (Roman & Colle, 2002); technophobia (Roman & Colle, 2002); lack of privacy in using services and inadequate facilities (Chigona et al., 2011).

The above studies focus on similar objectives to our study, but there is limited focus on multipurpose telecentres in Malawi, which is the focus of this study. The other difference in our study from the previous studies is that our study collected data through a combination of quantitative and qualitative data, which helped to enrich the findings which were limited in most of the previous studies.

4. Research methodology

We targeted all three community-managed telecentres in the country. We adopted a mixed approach; we collected both quantitative and qualitative data to minimise the challenges that would occur with the use of only one method (Wiersma & Jurs, 2005; De Lisle, 2011). We collected data from users of the telecentres and telecentre managers. To determine the usage patterns of the multipurpose community telecentres in Malawi, we collected data on who uses the telecentres: their age, gender, highest qualification and income levels of users; the frequency of use; and the services they frequently use. To determine the challenges of using and running telecentres, we asked users about the challenges they faced when using the telecentres; aswell as asking the telecentres' management the challenges faced in operating the telecentres.

We distributed a questionnaire to each telecentre user. The questionnaire had a mixture of open- and closed-ended questions. The open-ended questions allowed us to get information that we could not have anticipated. Consequently, it allowed us to get answers from users based on their lived experiences and in their own words (Rahman, 2007). Interviews were conducted with the telecentre managers of each telecentre. The interview guides contained questions on the usage patterns of the telecentres and the challenges that telecentres face. Most of the questions were formulated based on the observations made within the telecentre and the responses from users on the questionnaire survey. Understanding usage patterns of the telecentres and the challenges faced required getting the responses from people on their lived experiences. It was deemed necessary to include telecentre managers in the study. Interviews also helped us understand the feelings of the telecentre managers.

Observations were conducted in all telecentres. Specifically, we made observations on the gender of the users, services frequently accessed; and the challenges experienced in the use of the telecentres. Observations helped us to record behaviours as they occurred (Connaway & Powell, 2010). The observations also helped to confirm the responses from the respondents, e.g., on the services that users mentioned that they frequently used.

We targeted every user who came to use the services in the telecentres during the data collection period. We spent two weeks at Lupaso Telecentre; one week at Vikwa telecentre in February 2016; and a week at Khudze Telecentre in June 2016. We distributed 130 questionnaires at Lupaso Telecentre; 46 questionnaires at Vikwa Telecentre; and 42 questionnaires at Khudze Telecentre.

The quantitative data were analysed using SPSS and Microsoft Excel. We used thematic analysis techniques to analyse the qualitative data. The recorded interviews were transcribed. The transcription helped to get close to the data and understand what respondents were saying (Chigona et al., 2011). The transcribed data were then read through to identify the themes that emerged from the transcripts. The same thing applied to qualitative data from open-ended questionnaires. This was done by identifying the statements that talked about one phenomenon and compiling a list of the main ones. The themes were then generated and named. The themes were also refined to avoid replicating (Braun & Clarke, 2006)

The user respondents were identified using codes. The codes contained the name of the Telecentre and the questionnaire (QR) number. For example, the code for respondent to questionnaire number for a user from Lupaso Telecentre was Lupaso QR1; Vikwa QR1 for the first user from Vikwa Telecentre; and Khudze QR1 for the first user from Khudze Telecentre.

5. Description of telecentres

Multipurpose community telecentres were established by MACRA. MACRA provides equipment and the local community provides land and consumables such as bricks. All three community telecentres are managed by committees. The committees are composed of people representing different groups in the communities. The telecentres provide the internet; computer tutorials; library services; binding; photocopying; scanning; lamination; and printing identity cards. Lupaso and Vikwa Telecentres also provide a kiosk (tuckshop). For computer tutorials, the charges vary. At Lupaso, it costs K4 500 (about US$6) per package for ten days while at Vikwa it is K2 500 (about US$3.45) for a week when users learn the basics on how to operate computers. Table 1 outlines the equipment that each telecentre has and their quantities.

Table 1: The equipment that each telecentre has and their quantities

	Lupaso Telecentre	Vikwa Telecentre	Khudze Telecentre
Computers	17	12	12
Colour printer	1	1	1
Black and white printer	1	2	1
Card printer	1	1	1
Photocopiers	1	2	1
Camera	1	1	1
Scanner	1	1	1
Binding machine	1	1	1
Laminating machine	1	1	1
Television	1		
Radio	1		

Lupaso Telecentre is located in Mwambanya village in Traditional Authority (TA) Kyungu in Karonga District, in the Northern Region. The Telecentre is 22km from Karonga Town. The community is characterised by limited means of transport from Karonga town, poor roads and limited access to electricity. There are nine villages in the catchment area of the telecentre. The population in the area is 7 880. The catchment area is surrounded by two secondary schools; twelve primary schools; one health centre; two under-five clinics; three youth groups and four community-based organisations. The telecentre has eight staff members. The Telecentre started operating in May 2012.

Vikwa Telecentre started operating in 2010. It is situated in Mphepo Village in TA Wimbe in Kasungu District, in the Central Region. The area is approximately 25km from Kasungu Town. People in the area have challenges in accessing clean water, electricity and poor roads. The catchment area consists of nine villages. The population for the area is
180 000 people. The people in the areas are engaged as subsistence farmers, mainly growing tobacco and maize. In the catchment area, there are over 30 primary schools, eight secondary schools and three healthcare centres. The Telecentre has five staff members.

Khudze Telecentre started operating in July 2010. It is situated in TA Kanduku, Mwanza District in the Southern Region. It is approximately five kilometres from Mwanza Town and about seven kilometres to the Mozambique border. There are nine villages in the catchment area. The population in the area is about 6 300. The people in the area are farmers, mainly growing tangerines, maize and pigeon peas. There are seven members of staff responsible for the operation on the centre.

Figure 1 shows the location of the telecentres on a map of Malawi.

Figure 1: Map of Malawi showing location of telecentres

6. Findings and discussions

6.1 Usage patterns

Who uses the telecentres?

Usage in all telecentres was dominated by the youth. At Vikwa Telecentre 95% of the respondents were below 35 years old. Observations at all telecentres showed that most people who were seen coming to access the telecentre services were in their 20s. The managers also confirmed that the telecentres were dominated by youth. This could be attributed to the fact that a large proportion of the population in Malawi is young. However, this could also be attributed to the fact that the facilities were perceived to be for students who are mostly young. One of the users from Khudze Telecentre commented:

> "*I think if they had located the telecentre at the Boma [District Centre], it could have benefited a lot of students. . . . it is located very far from schools with students to have been helped by the telecentre*" [Khudze QR16].

Another user from the same telecentre added that the students, who are usually young, use the telecentres because they are the ones who are literate:

> "*The centre is located at village where most people are illiterate that is why it is used with few people especially secondary school students*" [Khudze QR9].

One of the telecentre managers said: "*Most users are youth because they are mostly in school so they see services relevant to their school work*" [Telecentre Manager2].

The other reason the youth dominated the telecentres was that the elderly lacked skills to use the facilities. "*Most people who are in their 50s or 60s, if you give them a computer, they are unable to use it . . . lack of skills*" (Telecentre Manager 1). Similarly, previous studies in other countries have also found that youth dominate usage of telecentres (McConnell et al., 2001; Chigona et al., 2011).

The telecentres are mostly used by males. In all telecentres, more males than females accessed telecentres. Lupaso Telecentre registering the highest percentage of males (73%). The findings agree with several previous studies (McConnell et al., 2001; Rathgeber, 2002; Etta & Parvyn-Wamihau, 2003; Kumar & Best, 2007). Low percentages of women accessing telecentres could be attributed to several factors including cultural factors where women are expected to be taking care of their families (Food and Agriculture Organisation 2011; Kapondera & Chigona, 2017) which may limit time to go to telecentres. Another factor could be low literacy levels of females in the rural areas of Malawi. One of the managers indicated that females do not use telecentres because the majority are illiterate when compared to the men:

> "*Basically, the gender issue is very critical because we have been seeing that mostly, men not women come in large numbers . . . Say out of 50 users a day, females could be possibly 10 to 15 . . . because most of services here like internet require education to use . . . so most ladies are not educated*" [Telecentre Manager 2].

It is clear from Table 2 that the income levels of the users were low. The findings differ from the findings by Kumar and Best (2007) in India who found that kiosk users' income levels were high. The difference could be due to the fact that unemployment rates in rural Malawi are high (IFAD, 2014) and most people are subsistence farmers.

Table 2: Demographics of multipurpose community telecentres users

		Lupaso		Vikwa		Khudze		Total	
		f	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Age	10-15	4	3	5	12	4	10	13	6.3

	16-20	24	20	19	45	30	71	73	35.4
	21-35	71	58	16	38	5	12	92	46.7
	Over 35	23	19	2	5	3	7	28	13.6
Gender	Male	92	73	29	63	27	64	148	69.2
	Female	34	27	17	37	15	36	66	30.8
Highest qualification	Primary school qualification	36	27.7	3	7	2	5	41	18.8
	Junior secondary qualification	45	34.6	7	15	15	36	67	30.7
	Senior secondary qualification	43	33.1	31	67	20	47	94	43.1
	Tertiary education	5	3.8	4	9	5	12	14	6.4
	Adult education	1	0.7	1	2	0	0	2	0.9
Income levels (per month)	Below 5,000	84	65.6	21	52	23	54.8	128	61
	6,000-10,000	21	16.4	8	20	10	23.8	39	18.6
	11,000-25,000	4	3.1	5	13	4	9.5	13	6.2
	26000-50000	15	11.7	2	5	3	7.1	20	9.5
	Above 51,000	4	3.1	4	10	2	4.8	10	4.8

Frequency of Telecentre visit

Most of the users in all telecentres visited the telecentres at least once per day (see Figure 2). The same people visited the telecentres repeatedly and telecentres hardly received new users. This confirms the trend in the previous studies that telecentres seldom receive new people (Etta & Parvyn-Wamihau, 2003). Furthermore, our findings, especially for Lupaso Telecentre, show that a good number of people used the telecentre infrequently, mainly because they found some services difficult to use. A user said: *"I hardly come to the telecentre because I do not have skills of using the some of the services . . ."* [Lupaso QR20]. Telecentres in Malawi, as in many developing countries, are the first place people in rural areas encounter technologies such as computers and the internet. Therefore, the users may lack skills for using such services. Being in a poor country and being in rural areas, the general ICT skills are low. Technology efficacy is low and so are the factors which can generate or promote efficacy. Therefore, there is a need to deliberately work towards efficacy through training. Perhaps, there is a need to kickstart usage through training.
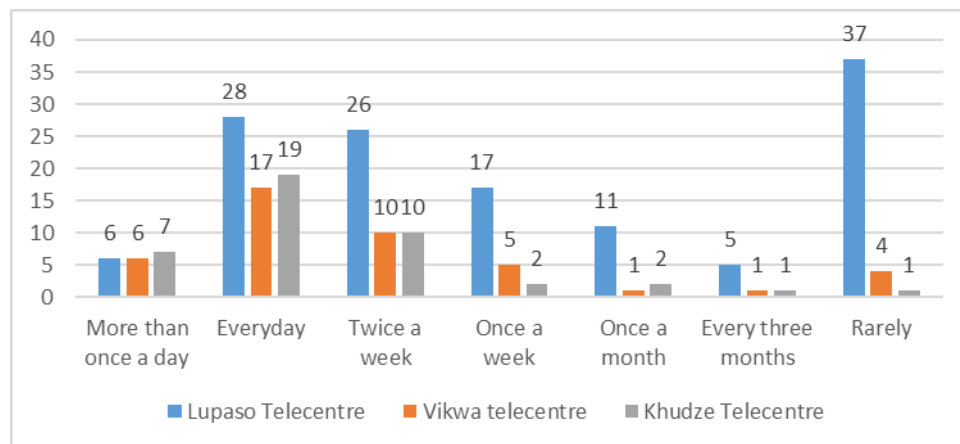

Figure 2: Frequency of Telecentre visit

Frequently used services

The users were asked to indicate the services they had accessed in the previous week or month to determine which were frequently used. Table 3 summarises the results. The frequently used services differed across the telecentres. The most accessed services were:

- Photocopying (64.6%), followed by borrowing books from the library (46.9%) for Luapso Telecentre;

- Printing (54.2%), borrowing books in the library (43.5%) for Vikwa Telecentre; and

- Printing (66.7%) and photocopying (64.1%) for Khudze Telecentre.

Table 3: Services frequently used in the three multipurpose community telecentres

Name of the Telecentre	Lupaso		Vikwa		Khudze	
Service	*f*	*%*	*f*	*%*	*f*	*%*
Binding	41	31.5	15	32.1	5	11.9
Borrowing books in the library	61	46.9	20	43.5	17	40.1
Computer and information tutorials	28	21.5	8	17.4	15	35.7
Email	18	13.8	2	4.3	0	0
Facebook and other social networking	20	15.4	2	4.3	0	0
Faxing	11	8.5	0		0	0
Internet	21	16.2	10	21.7	16	38.1
Lamination	23	17.7	3	6.5	1	2.4
Photocopying	84	64.6	15	32.1	27	64.1
Printing	49	37.7	24	54.2	28	66.7
Reading newspapers and magazines in the library	48	36.9	10	21.7	17	40.5
Scanning	9	6.9	3	6.5	0	0
Other services	29	22.3	0	0	0	0

The findings also indicate that at Vikwa and Lupaso telecentres, ICTs such as computer tutorials and the internet were used by a few people. On the other hand, a good number of people accessed these services at Khudze Telecentre; however, the majority of those attending the tutorials were from Mozambique. So, it could be different if we compared only users from Malawi: "*Since 2010 I have never seen a girl child or a boy child coming for computer lessons, but from some distant areas like Zobue in Mozambique. . .*" [Telecentre Manager 3]. So, it can be concluded that Malawians in rural areas are not using the ICTs offered in public access venues. Future research should explore the high demand from Mozambique which is as rural as Malawi.

The findings also suggest that the services frequently used in Malawian multipurpose telecentres are non-ICT services, and are the ICTs that do not require individual skills when using them.

6.2 Challenges that users face when using the telecentres

The findings indicate that multipurpose community telecentre users in Malawi face a myriad of challenges. The common challenges in all telecentres include the high cost of some services and inadequate physical facilities. Although users were not asked to indicate the services which they found expensive, their responses to an open-ended question which asked them to give any comment pertinent to the topic indicate that the high cost of the services was associated with accessing computers:

 "The use of computers is expensive" [Vikwa QR2].

"Computers are expensive" [Khudze QR34].

"Computer tutorials in the Telecentre are expensive. I cannot afford" [Lupaso QR10].

Users may have been experiencing the challenge of high cost of services because many users in all telecentres have a low income. A user from Khudze Telecentre agreed that "*. . . poor people cannot manage to attend computer lessons as they have no money to pay for it*" [Khuzde QR13]. In addition, the communities, as described above, mostly rely on subsistence farming which does not give them enough to use for accessing the telecentre services. Furthermore, most users at Vikwa and Khudze Telecentres were secondary-school students who do not earn any income and most likely rely on their families' income. In general, people in rural communities in Malawi live below the poverty line and spending money to access services like computers could be considered a luxury, hence the perception that services are expensive. This could make the users price-sensitive. Kuriyan and Toyama (2007) also found financial challenges to be a major factor in accessing telecentre services.

Further, although a few people were using the telecentres, the users perceived that books in the library and computers are inadequate. In an open-ended question, comments were:

"The number of computers not enough" [Lupaso QR30].

"We need more computers and books in the Telecentre" [Vikwa QR4].

"There is need for more computers and books in the library" [Khudze QR7].

'[The Telecentre] *should provide adequate materials like books and computers*"
[Khudze QR3].

This challenge could be attributed to the fact that, in Vikwa and Khudze Telecentres, the majority of users were students who required reading materials and that, in all the telecentres, less than ten computers were available to the users. Many schools in Malawi do not have libraries, hence the high demand for books in the telecentres. The lack of adequate materials had a negative impact on the usage of telecentres ". . . *because of lack of other materials like books, computers, students or even other people fail to use the telecentres*" [Khudze QR35]. Chigona et al. (2011) also found that limited resources in public ICT access venues deter potential users from trying out the services.

The findings further indicate that some challenges that the users faced were different for each telecentre. At Lupaso, users indicated lack of content in the local language as one of the main challenges in using the telecentre. This could be due to the fact that many people in this area speak Nkhonde (Kayambazinthu, 1998), while the materials in the library were either in English or Chichewa. This was not noted as a major challenge in Vikwa and Khudze because people in these areas speak Chichewa. English and Chichewa are the official languages and spoken by the majority in Malawi and therefore most content in the country is in these languages. Nkhondes, on the other hand, are a minority; consisting only of 0.1% of the population of Malawi and are likely only in the Karonga district (Ethnologue Languages of the World, 2017). Therefore, content in Nkhonde is less likely. This result extends what is known in literature about the importance of providing content in local languages (Roman & Colle, 2002; Kuriyan & Toyama, 2007). We note that while there is a growing pattern to provide content in local languages, this is often the language of the majority, while the minority languages are often ignored.

Lack of internet searching skills was also a major challenge for users at Lupaso Telecentre. This corresponds with the findings that only a few people accessed internet services at Lupaso Telecentre. As already alluded to, telecentres provide the first experience with ICTs for many people in rural communities in Malawi. They do not have prior or alternative access to ICTs such as cybercafés. This contributes to the lack of skills which could be overcome

with training. Chigona et al. (2011) noted limited ICT skills as a major challenge. Table 4 summarises the challenges the telecentre users were facing.

Table 4: Challenges that multipurpose community telecentre users faced

Name of the Telecentre	Lupaso		Vikwa		Khudze	
Challenge	f	%	f	%	f	%
High costs of some services	63	48	16	35	21	50
Inadequate physical facilities	55	42	22	48	21	50
Too crowded	17	13	12	26	8	19
Lack of information in local language	63	48	8	17	7	17
Lack of internet searching skills	67	52	10	22	8	19
Lack of privacy when accessing information on the internet	24	18	0	0	1	2
Lack of support when using the telecentre	27	21	7	15	7	17
Shortage of opening hours	20	15	5	11	6	14
Slow internet connection	0	0	18	39	20	48
Poor staff attitude	0	0	2	4	0	0
Other	18	14	1	2	0	0

6.3 Challenges facing telecentres

The telecentres faced a myriad of challenges which included poor infrastructure, beauracratic delays, high prices of consumables and misunderstandings about the telecentres by the community.

Poor infrastructure

The poor infrastructure was two-fold. Firstly, all telecentres experienced frequent electricity disruptions: *"The other problem has to do with power. We usually experience blackouts. We only rely on power provided by aah ESCOM"* [Telecentre Manager 3]. The Electricity Supply Corporation of Malawi (ESCOM) is the sole supplier of electricity in Malawi and is

17

unreliable. An alternative power supply such as micro-generated solar power could help the telecentres, because most of the services in the telecentres require availability of power and this unavailability interferes with effective service delivery (Mtega & Malekani, 2009).

Secondly, telecentres had poor internet connectivity. At Vikwa Telecentre, there was no internet connectivity during the data collection period. The Telecentre Manager indicated that this had been the situation for close to a year, despite reporting the problem to the service provider. The internet connectivity was provided by Malawi Telecommunications Limited.

Bureaucratic delays

Since the telecentres were established by MACRA, the telecentres could not make a decision on their own without consulting MACRA whose offices are located in Blantyre, the commercial capital in the Southern Region. When the equipment developed a fault, telecentres were expected to report to MACRA, which in turn makes a decision on how the equipment should be fixed. Sometimes it takes several months for the decision to be made. This negatively affects the delivery of services. During data collection, in some telecentres, the equipment which had developed faults had waited for six months before it was fixed.

High prices of consumables

Two of three telecentres experienced a challenge of high prices of consumables. In addition, telecentres are located in rural areas where ICT consumables are hardly found. At Lupaso, for example, the consumables can only found in the cities of Mzuzu or Lilongwe which are approximately 250km and 470km away respectively (see Figure 1).

> "*. . . as a business . . . need to have resources and being in the rural area, it is very hard for us to find consumables. So, need to travel to town thereby wasting a lot of money. And most of consumable here are expensive. In Malawi most consumables are expensive that it is very hard for us to purchase them and the prices*" [Telecentre Manager 2].

Misunderstanding about the telecentres by community

There was misunderstanding about ownership of the telecentres and its implications. In some communities people expected the services to be free. The facilities were established by

government and were managed by communities. This created an expectation that the services would be free as are other government services such as health clinics:

> "*Most of our users come from outside the catchment area. If one comes from Kanduku village or the catchment area, automatically that one is asking for a free service. This is so because they were told that a Telecentre is an institution run by the government and the government offers free services. They do think that we are stealing from them. That's the major problem. . . . Other problems are on the chiefs. The chiefs they have been using the facilities of the institution without paying a single Tambala[1] (it is our development) no need for the payment*" [Telecentre Manager 3].

7. Conclusion

The study aimed at examining the usage patterns of multipurpose community telecentres and the challenges in the use of multipurpose community telecentres in Malawi. The study shows that there is uneven access towards all multipurpose community telecentres in the country, as users are males, young, relatively educated and belong to low income levels. The usage patterns of the services offered within telecentres differ, as users mostly used photocopying, printing and library services, while at one telecentre, a good number of users accessed the internet and computer services.

The use of telecentres is also bedevilled by a number of challenges for both users and the telecentres. The main challenges that users experienced included inadequate books and computers, high cost of some services, lack of information in local languages and lack of internet searching skills. On the other hand, multipurpose community telecentres experienced poor infrastructure, lack of technical expertise, bureaucratic delays, and demands that the telecentres should be free of charge to the communities they serve. It can be concluded that bridging the digital divide between urban and rural areas is a challenge. Governments are investing a lot of effort in bringing the benefits of ICTs to rural areas but people are not using these ICTs.

It can also be concluded that the provision of telecentres in rural areas of Malawi is a complex problem. The people in the rural areas need the services but in most cases cannot

---

[1] Tambala is a lower denomination of the Malawi currency – 100Tambala = 1MK

afford to pay for them. It is difficult to have telecentres which can be economically sustainable. The government should consider providing access to telecentres as a free social good.

We recommend that the telecentres should an alternative power supply from the one provided by the national grid; technical expertise should be available in the telecentres; telecentres should stock information in local languages, taking into account the languages spoken in the areas where they are located; and that telecentres should add more resources in the telecentres depending on the needs of their users.

Future studies should look at the factors affecting the use of telecentres by women because one of the major findings of the study is that only a few women use the telecentres. Future studies should also examine the impact of the telecentres on the communities they serve.

References

Bailur, S. 2006. Using stakeholder theory to analyze telecenter projects. *Information Technologies & International Development*, *3*(3):61-80.

Braun, V. & Clarke V. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2):77-101.

Chawinga, W. & Ngwira, F. 2015. The role of the Mzuzu American Corner Information Technology and Communication Centre, Malawi. *Innovation: journal of appropriate librarianship and information work in Southern Africa*, *2015*(50), pp.20-43.

Chigona, W., Lekwane, O., Westcott, K. & Chigona, A. 2011. Uses, benefits and challenges of public access points in the face of growth of mobile technology. *The Electronic Journal of Information Systems in Developing Countries*, *49*(5):1-14.

Chigona, W. & Licker, P. 2008. Using diffusion of innovations framework to explain communal computing facilities adoption among the urban poor. *Information Technologies & International Development, 4*(3):57-73.

Chikumba, P. A. 2011. Utilization of ICTs in multipurpose community telecentres in rural Malawi. In R. Popescu-Zeletin, I.A. Rai, K. Jonas, & A. Villafiorita (Eds). *E-Infrastuctures and E-Services for Developing Countries* (pp. 93-101). New York: Springer.

Connaway, L. S. & Powell, R. R. 2010. *Basic research methods for librarians*. 5th ed.

California: ABC-CLIO.

Countrymeters 2017. Malawi population. [Online].

http://countrymeters.info/en/Malawi#population_2017. (Accessed 03 August 2017)

De Lisle, J. 2011. The benefits and challenges of mixing methods and methodologies:

Lessons learnt from implementing qualitatively led mixed methods research designs

in Trinidad and Tobago. *Caribbean Curriculum Vol. 18,* 2011, 87–120.

Ethnologue Languages of the World 2017. Malawi. [Online].

https://www.ethnologue.com/country/mw/languages. (Accessed 14 August 2017).

Etta, F. E. & Parvyn-Wamahiu, S. (Eds.). 2003. *Information and communication technologies*

for development, volume 2: the experience with community telecentre. Ottawa:

International Development Research Centre.

Falch, M. & Anyimadu, A. 2003. Tele-centres as a way of achieving universal access – the

case of Ghana. *Telecommunications Policy*, *27*(1):21-39.

Food and Agriculture Organisation, (2011). *Malawi country profile: Gender inequalities in rural*

employment in Malawi, an overview. Retrieved April 14, 2017, from

http://www.fao.org/docrep/016/ap092e/ap092e00.pdf

Gcora, N., Gopeni, A., Tuswa, M., Lwoga, E.T.& Chigona, W. 2015. The challenges rural

women face in using Telecentres: The case of the Eastern Cape Province. *9th IDIA*

conference. [Online].

https://www.researchgate.net/profile/Edda_Lwoga/publication/286454596_The_chall

enges_rural_women_face_in_using_Telecentres_The_case_of_the_Eastern_Cape_Pro

vince/links/566abd6608aea0892c4b4110.pdf. (Accessed 17 March 2017).

Gómez, R., Delgadillo, K., Stoll, K. and Castells, M., 2003. *Telecentres for What? Excerpts*

from Community Telecentres for Development. Canada: IDRC.

Grunfeld, H. 2011. *The contribution of information and communication technologies for*

development (ICT4D) projects to capabilities, empowerment and sustainability: a

case study of iREACH in Cambodia (Doctoral dissertation, Victoria University

Harris, R. 2001. Telecentres in rural Asia: Towards a success model. *Europe*, *40*(23.4):13-17.

Human Development Report. 2016. *Human development report 2016: human development*

for everyone.[Online].

http://hdr.undp.org/sites/default/files/hdr_2016_statistical_annex.pdf. (Accessed 10

May 2017).

Ibrahim, Z. & Ainin, S. 2009. The influence of Malaysian telecenters on community building. *Electronic Journal of e-Government*, 7(1):77-86.

IFAD. 2014. *Rural poverty portal: rural poverty in Malawi*. [Online]. http://www.ruralpovertyportal.org/web/rural-poverty-portal/country/home/tags/malawi (Accessed 28 March 2017).

Isaacs, S. 2007. *Survey of ICT and education in Africa: Malawi country report.* [Online]. http://www.infodev.org/infodeviles/resource/InfodevDocuments_414.pdf. (Accessed 7 April 2017).

Johansson Hedberg, L. 2011. Telecentre For Community Development: Evaluation of the Tunjang telecentre, Malaysia. *The Journal of Community Informatics*, *6*(2)

Kapondera, S.K., & Chigona, W. 2017). Domestication of telecentres by Malawian rural women. *International Journal of Information Communication Technologies and Human Development (IJICTHD)* (in press).

Kayambazinthu, E. (1998) The Language Planning Situation in Malawi. *Journal of Multilingual and Multicultural Development,* 19:5, 369-439.

Kirkman, G. S., Cornelius, P., Sachs, J. and Schwab, K. 2002. *Global information technology report, 2001-2002*. New York: Oxford University Press.

Kumar, R. & Best, M.L. 2007. Social impact and diffusion of telecentre use: A study from the sustainable access in rural India project. *The journal of community informatics*, *2*(3). [Online]. http://cijournal.net/index.php/ciej/article/view/328. (Accessed 10 April 2017)

Kuriyan, R. & Toyama, K. 2007. *Review of Research on Rural PC Kiosks.* [Online]. http://groups.csail.mit.edu/cag/ict4dev/papers/Kiosks%20Research.pdf. (Accessed 15 May 2017).

Lwoga, E.T. 2010. Bridging the agricultural knowledge and information divide: The case of selected telecenters and rural radio in Tanzania. *The Electronic Journal of Information Systems in Developing Countries*, *43*(6):1-14).

Malawi. 2012. *Integrated household survey 2010-2011: household socio-economic characteristics report.* [Online]. http://www.nsomalawi.mw/images/stories/data_on_line/economics/ihs/IHS3/IHS3_Report.pdf. (Accessed 20 February 2017).

Malawi. 2014a. *Malawi Labour Force Survey 2013: Key Findings Report.* Zomba: Malawi National Statistics Office.

Malawi (2014b). *2014 Millennium Development Goals report for Malawi.* [Online]. http://www.undp.org/content/dam/malawi/docs/general/Malawi_MDG_Report_2014.pdf. (Accessed March 15 2017).

Malawi (2014c). *Malawi youth data sheet.* [Online]. http://www.prb.org/pdf14/malawi-youth-datasheet-2014.pdf. (Accessed 10 August 2017)

Malawi Ministry of Information. 2002. *Rural telecommunications policy: an integral part of the national sector policy statement 1998*. Malawi: Government of Malawi.

Masiero, S. 2011. Financial vs. social sustainability of telecentres: mutual exclusion or mutual reinforcement? *The Electronic Journal of Information Systems in Developing Countries*, *45* (3):1-23.

Mbangala, B. & Samzugi, A. 2014. The role of telecentres in Tanzania's rural development. A case study of Sengerema District Council, Mwanza Region. *Library Philosophy and Practice*, p.0_1. [Online]. http://search.proquest.com/docview/1738007995/fulltextPDF/9BD28345B53443A3PQ/1?accountid=14500.. (Accessed 13 April 2017).

McConnell, S., Richardson, D., Doehler, M. and Wong, W. 2001. *Telecentres Around the World: Issues to be considered and lessons learned.* (Retrieved November, 7, p.2005.).

Mtega, W.P. & Malekani, A.W. 2009. Analyzing the usage patterns and challenges of telecenters among rural communities: experience from four selected telecenters in Tanzania. *International Journal of Education and Development using Information and Communication Technology*, *5*(2):68-87.

Oestmann, S. & Dymond, A.C. 2001. Telecentres–Experiences, lessons and trends. *Telecentres: Case studies and key issues*, p.1.

Owen Jr., W. & Darkwa, O. 2000. Role of multipurpose community telecentres in accelerating national development in Ghana. *First Monday*, *5*(1). [Online]. http://journals.uic.edu/ojs/index.php/fm/article/view/722/631. (Accessed 15 may 2017)

Rahman, A. (2007). Challenges and opportunities in developing a psychological intervention for perinatal depression in rural Pakistan – a multi-method study. *Archives of Women's Health*. 211-219.

Rathgeber, E., 2002, 'Gender and telecentres: what have we learned?', presentation at the *Gender and the Digital Divide Seminar*, 7 March

Roman, R. & Colle, R. D. 2002. *Themes and issues in telecentre sustainability*,*10*. Institute for Development Policy and Management: University of Manchester.

Salanje, G. 2006. The role of librarians in bridging the digital divide in developing countries: a case for Malawi. *Paper presented at the 32nd IAMSLIC Annual Conference Portland, Oregon, USA 9-12 October 2006.* [Online]. https://darchive.mblwhoilibrary.org/handle/1912/2140. (Accessed 10 May 2013)

Soriano, C. R. R. (2007). Exploring the ICT and rural poverty reduction link: Community telecenters and rural livelihoods in Wu'an, China. *EJISDC: The Electronic Journal on Information Systems in Developing Countries, 32* [Online] http://dialnet.unirioja.es/servlet/oaiart?codigo=3670241 (Accessed 20 August 2017)

Toyama, K., & Kuriyan, R. 2007. Review of research on rural PC kiosks. *Microsoft Research India*. [Online].

van der Vyver, A.G. & Intaratat, K. 2013. *An integrated approach towards ICT4D.* [Online]. http://www.developmentinformatics.org/conferences/2013/papers/VanDerVyver-Intatarat.pdf (Accessed 3 May 2017).

Wiersma, W. & Jurs, S. G. 2005. *Research methods in education: An introduction* (8th ed.). Boston: Pearson.