

# Reasons of non-use: a study on Mozambican telecentres

Sara Vannini

[sara.vannini@usi.ch](mailto:sara.vannini@usi.ch)

*Università della Svizzera italiana, Lugano, Switzerland*

Isabella Rega

[isabella.rega@usi.ch](mailto:isabella.rega@usi.ch)

*Università della Svizzera italiana, Lugano, Switzerland*

Simone Sala

[simone.sala@usi.ch](mailto:simone.sala@usi.ch)

*Università della Svizzera italiana, Lugano, Switzerland*

and

*Columbia University Center for International Conflict Resolution, New York City, NY, USA*

Lorenzo Cantoni

[lorenzo.cantoni@usi.ch](mailto:lorenzo.cantoni@usi.ch)

*Università della Svizzera italiana, Lugano, Switzerland*

## Abstract

This paper presents an in-depth analysis of the reasons why people in Mozambique do not access the telecentre component of their local Community Multimedia Centers (CMCs). Based on 229 semi-structured interviews with different local stakeholders in 10 different provinces, and on 328 questionnaires, the analysis allows to depict four main reasons: two of them are related to the respondents: (i) distance, or lack of time and money, and (ii) relevance for them; the other two are related to the telecentre itself: (iii) its lack of competitiveness in front of other strategies to access ICTs and the Internet, and (iv) its limited services or service quality, including a lack of communication of its services to the community. An exploration of demographic attributes among non-users is presented, with specific regards to gender, age group and education level. Actions performed at CMC on behalf of respondents were also investigated, to characterize the linkages with local infomediaries. Furthermore, an in-depth analysis of reasons for non-use was elaborated, highlighting distribution rates of motivations for non-using telecentres' services. Finally, respondents were profiled in terms of access to technology and the Internet, including the identification of their preferred channels of access.

## Keywords

Telecentres, CMC, Mozambique, non-users, non-use, PAV, qual-quantitative.

## Introduction

Community Multimedia Centres (CMCs) are community-based public access venues (PAV) that combine a telecentre with a community radio, in order to boost its information and communication potential for underserved communities.

Established by UNESCO in 2001, and supported also by the Swiss Agency for

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

Development and Cooperation (SDC), and the local Ministry of Science and Technology (MCT), CMCs in Mozambique are currently the most widespread PAV in the country (Rega et al., 2011). This paper focuses on the telecentre component of Mozambican CMCs, venues that usually serve not only as places to access a number of different Information and Communication Technologies (ICTs) (computers, the Internet, fax, photocopy machines, etc.), but also as basic digital skills learning centres.

The study at hand addresses the perspective of telecentres' non-users and their reasons for non-utilizing their services. This aspect has been much less studied in the literature, and the authors consider it might lead to valuable local insights for researchers and policy makers. More specifically, the study aims to answer to the following research questions:

- 1) What are the reasons behind the lack of use of CMCs' telecentres, according to local stakeholders in Mozambique?
- 2) To which extent do different reasons explain the behaviour of those local non-users of CMCs telecentres who are aware of the existence of the CMC through its community radio?

To do so, two different analyses were carried out on the whole dataset:

- A **qualitative** exploration of motivations for non-use, according to a broad set of interviewed people (including CMC's staff, users of both the telecentre and the radio component, users of the radio only, and non-users);
- A **quantitative** assessment of motivations for non-use of telecentres' services among those people that do use the CMC community radio's services but don't use the telecentre component.

## Background

This section focuses on the telecentre component of CMCs, and explores current issues of investigation and studies, which considered the realm of non-users and their reasons. Telecentres are public places where people can access ICTs, which should fulfil the communication needs of the communities in which they are located. Telecentres are often managed and run by local staff, and funded by international organizations, non-profit organizations, and local or national governments (Rega, 2010). ICTs offered by telecentres in some contexts include, beside computers and the Internet, also technologies such as a fax, a xerox, and a phone (Whyte, 2000). In the last 25 years, telecentres have been a growing phenomenon, especially in developing countries, with an estimated number of 1'200'000 venues around the world in 2012, according to telecentre.org.

The underpinning of telecentres in the ICT4D discourse is based on the belief that connectivity, which is the technical capability of accessing ICTs, and access, which is the social, economic and psychological capability of using ICTs and getting information, will lead to the empowerment and development of poor and underserved communities (Roman & Colle, 2002). The goal of telecentres is, therefore, to be a place that offers access to information, consequently promoting knowledge on critical sectors of socio-economic development, such as health (Mayanja, 2001), education (Kenny et al. 2003), and agriculture (Bailur, 2004).

To date, researches on telecentres have been focused on two interconnected issues: their sustainability, and their socio-economic impact on the communities in which they are placed (Rega, 2010b). Sustainability of telecentres has always been a critical domain with little evidence of long-term financial sustainable telecentres around the world, and authors

taking two opposite positions on the issue. Some of them claim that telecentres must reach a financial sustainability to be declared successful; others point out that telecentres should be considered a universal service and, therefore, sustained by governments (Rega, 2010b). Nevertheless, sustainability has been treated in a more complex manner than only financial sustainability, including also the capability of a telecentre to be meaningful for its community and, therefore, to be used (sustainable) in the long-term. Many studies have investigated the relationship between socio-economic impact and sustainability, but the contribution of telecentres to socio-economic development is far to be demonstrated (Rega, 2010b).

A still neglected issue when focusing on the social impact of telecentres is the perspective of non-users: few researches explored this issue in terms of non-users demographics and reasons. An exception is the Global Impact Study (GIS) carried out by the TASCHA group at the University of Washington. GIS conducted a survey and investigated 2000 non-users in 5 countries in three different continents: Bangladesh, Brazil, Chile, Ghana, and the Philippines (Sey et al. 2013). *Non-users* are defined in this paper as individuals living in the community where telecentres operate, and who have never used any of its services.

The literature reports three recurrent demographic factors influencing the use (and non-use) of telecentres: gender, education, and age (Gomez, 2011; Sey et al., 2013). Women, people with a low educational level, and older individuals tend to use telecentres to a lower extent than other social actors. Also, some country-dependent socio-demographic factors have been reported, such as religion and caste belonging (Best and Kumar, 2008). On the other hand, no homogeneous results regarding the influence of income have been found: in some countries, the majority of non-users are above the poverty line, but the same is not true in other countries (Sey et al., 2013). The same can be said for the availability of technologies at disposal of non-users (Sey et al., 2013). These two factors have an interesting implication: non-users may belong not only to the less privileged part of the community, as they are the ones who do not have even the few pre-requisites to access their services, but they can also belong to the most advantaged parts, hence having different – and more efficient – strategies to access ICTs and the Internet.

As for reasons for non-access to telecentres, scholars individuated the first reason in the fact that people are not aware of the existence of these facilities in their communities (Chigona and Licker, 2008; Sey et al., 2013). According to GIS, the second main reason lays in the fact that people would not need this kind of venues, since they can have access to technologies elsewhere (Sey et al., 2013). Among individuals who know about the existence and services of telecentres, the most common reason not to use them consists in the fact that they do not consider computers and the Internet as something targeted for them (Parkinson and Lauzon, 2008). These individuals feel that their age and their low level of education hinder their possibility of learning and using digital technologies.

While previous studies have depicted some relevant elements to understand the “why nots”, there is still a need for deeper and more localized analyses to inform researchers and policy makers, as well as local stakeholders. This study provides a contribution in that direction.

## Research Design

The paper at hand aims to answer to two main research questions: (i) What are the

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

reasons behind the lack of use of CMCs' telecentres, according to local stakeholders in Mozambique?; and (ii) to which extent do different reasons explain the behaviour of community non-users of CMCs telecentres, who are aware of the existence of the CMC through its community radio?

To answer to this questions, the authors decided to combine both qualitative and quantitative methods: First, a qualitative exploratory study was conducted to identify local people's opinions about CMCs' telecentres non-use. Second, a survey was designed and implemented, to measure to which extent the formerly individuated reasons for non-use are considered by non-users.

The following sections explain how the research design was implemented. It will explain how telecentres to include in the study were selected, how data was collected and how both qualitative and quantitative information was analysed.

### **Telecentres Sample Selection**

Telecentres (and CMCs) to include in the sample were selected by crossing different criteria. First, geography: one CMC from each Mozambican province was included, for a total of 10 CMCs. Second, CMCs' distribution as rural (9 CMCs in the sample) and urban (1 CMC) centres, reflecting the actual distribution of the 34 CMCs present in that moment (2011) in the country. Third, their affiliation: CMCs in the country are managed mostly by local associations (7 CMCs in the sample), as well as by the Government, via its Institute of Social Communication (ICS) (2 CMCs), and by religious institutions (1 CMC, managed by Catholic Sisters). Fourth, a balance among older and newer CMCs was sought, since some of them were built at the beginning of the UNESCO programme in Mozambique, in 2001, others started operating on the territory even before that, with either a pre-existing community radio or a stand-alone telecentre subsequently integrated in a CMC (in the sample, the oldest community radio was born in 2000, and the oldest telecentre in 2001), and new CMCs are currently being established by the Government of Mozambique (1 in the sample, launched in 2010). The last criterion of inclusion was the variety of services offered in the venue, as Mozambican CMCs differ considerably in terms of facilities and services they are able to offer to the public (for a description of the services offered by each venue, refer to Rega et al., 2011).

The CMCs included in the sample and divided by region of the country are:

- North: Chiure (Cabo Delgado), Cuamba (Niassa), Ilha de Moçambique (Nampula);
- Centre: Chitima (Tete), Dondo (Sofala), Quelimane (Zambezia), Sussundenga (Manica);
- South: Chokwe (Gaza), Morrumbene (Inhambane), Xinavane (Maputo).

Figure 1 maps, in red, the locations of CMCs in the sample among the totality of CMCs in the country (in blue).

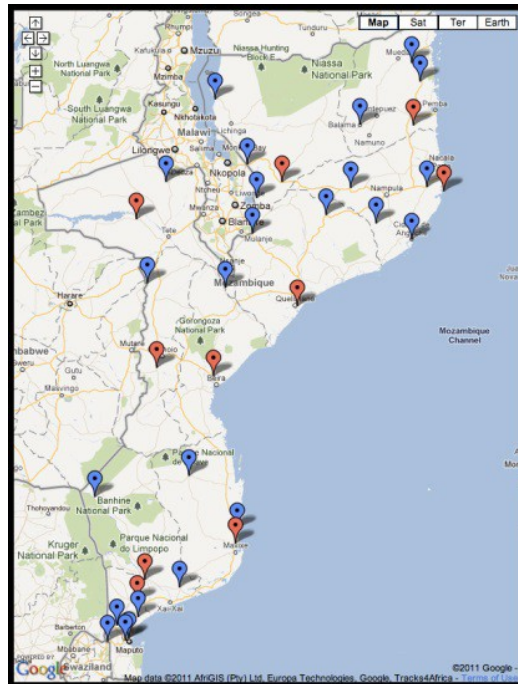


Figure 1. Text to describe figure

## Qualitative Study

### Interview protocol design

The qualitative part of this study consisted in the collection and analysis of semi-structured interviews (Harcourt, 2006), conducted with members of the communities where sampled CMCs are located; interviews encompassed staff members, users and non-users of the telecentres component of those CMCs. While the objective of the whole data collection was to gather local insights about CMCs, this study focuses on the parts of the interviews dedicated to understand people's reasons for non-use of the telecentres' component of CMCs (both their own, and their perception of other people's ones).

### Data collection

The aim of this study was to collect, for each centre included in the sample, 5 interviews with members of the staff, both paid and volunteers, 10 interviews with telecentres users, and 10 interviews with telecentres non-users (hereafter, "non-users"). During the months of March and April 2011, a total of 229 interviews on an opportunity-sampling basis (Jupp, 2006) were conducted. They distribute as follows:

- 57 staff members of CMCs, who were working either as employees or as volunteers;
- 95 users of the telecentres component of the CMC, (hereafter, "users");
- 77 non-users of the telecentres component of the CMC (hereafter, "non-users").

Each interview was digitally recorded and successively transcribed and coded.

### Data analysis

Interviews transcriptions have been coded by using a quali-quantitative content analysis (Krippendorff, 2003). The first content analysis on the corpus followed a bottom-up approach, leading to a preliminary explorative code index done by using paper and pencil

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

on a small number of interviews. This explorative analysis aimed to identify thematic areas and recurrent topics. At this point, a first formalization of the interpretative model was drawn. To manage the large body of data and to perform further analysis, a qualitative content analysis software (NVivo, version 9.2) was used. A second phase of analysis included a top-down approach, moving from the first formalization of the interpretative model, and continuously refining it, in a constant shift between a top-down and a bottom-up approach meant to let the data “talk”.

From this analysis, a total of 147 occurrences of reasons not to use telecentres were singled out. Reasons that emerged from this qualitative analysis informed about local narratives of non-use, and served to build a questionnaire aimed to investigate reasons why people who are active users of community radios (part of the CMC model), do not use telecentres (the other part of the same CMC model).

## Quantitative Study

### Survey Design

The quantitative part of the study was intended to investigate the weight that the qualitatively-informed reasons for not using telecentres have in the considered communities. A survey was created for this purpose, and it was directed to *active users of community radios* who had never used the telecentre component of CMCs. “Active users of community radios” are defined as people who not only listened to the community radio, but who have also interacted with it at least once in their life (e.g.: broadcasting announcements and necrologies, calling to the radio to intervene in programs, paying advertisements, etc.). Community radio active users were chosen for the investigation on the assumption that they were familiar with the CMC, hence likely to acknowledge the presence of its telecentre component. The research at hand intended to investigate why, even so, those persons did not make use of the services offered by telecentres.

The survey was designed on the basis of the above-mentioned TASCHA’s Global Impact Study Non-User survey instrument (Survey Working Group, 2012). GIS survey was simplified and customized to address the purposes of this study: first, the selection of the sample (non-users, who are active users of the community radio) reduced the variety of respondent cases foreseen by GIS survey. Second, this study’s section addressing reasons for not using telecentres was based on reasons emerged from the qualitative analysis of the interviews. Third, household and demographics sections were shortened, and customized according to the Mozambican context. Eventually, the survey was composed by 3 main sections, preceded by three screening questions to select respondents. The first section, respondents were asked to choose among a series of reasons why they did not use the telecentre part of their CMC, and to express their opinion on a series of statements. Second, respondents’ media use (or “media diet”) was investigated; finally, respondents’ demographics were collected. Table 1 summarizes the main sections of the survey.

**Table 1. Survey sections.**

<b>Sections</b>	<b>Goal of the question</b>
0 – Screening questions	Is the respondent an active user of the community radio? Have they ever used the telecentre of the CMC?
1 – Reasons for non-use	Acknowledgement of telecentres’ existence Acknowledgment of telecentres’ services

	Own reasons for telecentres non-use Opinion on statements about the telecentre
2 – Media Diet	Computer literacy and use Internet literacy and use Motivations to use computers and the Internet Indirect use of telecentres Media diet (access to newspapers, books, television, radio, mobile technologies, landline phones, electricity...)
3 – Demographics	Gender Age Educational level Belonging to the community Main communication languages Employment status

## Data collection

Surveys were distributed to 9 out of 10 locations included in the sample for qualitative analysis, due to the fact that one of them (Chokwe, province of Gaza) did not show interest in continuing working within the research project. In a field trip conducted during the months of May and June 2012, in each CMC one or two people (for a total of 11 interviewers) were trained and instructed on the target of respondents to look for in their communities, on how to conduct the surveys, and to send filled questionnaires back to Maputo. The set goal was to fill 50 surveys from each of the 9 places in one month since researchers' visit.

Once filled in, all questionnaires were sent back to Maputo, where researchers and a Master students recorded the answers of all questionnaires in a spreadsheet. Out of the 450 questionnaires received, 409 were filled in and then copied into the spreadsheet, while 41 were blank. In order to perform the analysis, however, the sample had to be further cleaned: some questionnaires revealed the respondents were not non-users or not active users of the radio, thus had to be removed. In total, 81 further questionnaires were not considered as valid, and were eliminated from the sample. The final sample considered for this analysis, then, consists of 328 questionnaires correctly filled in and analysed.

## Data analysis

Descriptive statistical analysis has been applied, which allowed for a rigorous descriptive analysis of respondents' reasons, media diet and demographic attributes. The analysis was performed with the help of the software package SPSS Statistics (version 19).

## Results

### Qualitative results

Qualitative content analysis was performed on the whole textual corpus given by the interviews with members of the staff, users of both radio and telecentres components of CMCs, users of the radio, and non-users of the whole CMCs included in the sample. Within the whole corpus, interviewees referred to reasons for not using telecentres 147 times.

References were analysed in-depth, and revealed that local stakeholders' reasons for non-

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

using telecentres of CMCs can be grouped into 4 main areas, two of them can be attributed to the object: the telecentre and the way it is managed, while the other two ones can be attributed the subjects: people of the community and their requirements.

Object-related issues are:

- *Competitors*: it groups all references related to other venues and businesses offering the same kind of services offered by telecentres of CMCs, and the reasons why people prefer to use them;
- *Service*: it brings together all references related to the (poor) quality or lack of proper presentation and promotion of the services offered by CMCs.

Subject-related issues are:

- *Resource-constraints*: all references to personal limits related to space, time, and cost are grouped here;
- *Relevance*: it groups all references to personal relevance-related issues, respondents do not feel either adequate/able enough to access, or challenged enough; in other words, according to them the telecentre is offering something they do not need, either because is too much/far from their needs, or because it is too less.

Figure 2 presents the 4 main reasons for non-using telecentres, while the next sections will explain into detail local people's narratives for each theme.

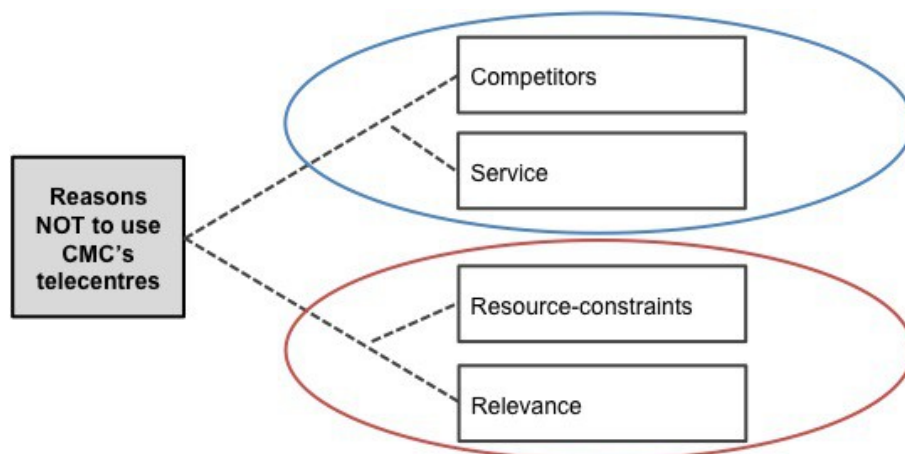


Figure 2. Reasons not to use CMCs.

### Competitors

One of the issues why people do not take advantage of the services telecentres of CMCs offer is related to the presence of other businesses or local services offering the same services in the communities. Competitors can be chosen for *cost*-related reasons:

As there are computers in the school, students prefer to go there because in the radio ["Radio" is the name many people in the communities refer to, when talking about CMCs<sup>1</sup> they have to pay. (Chiure, non-user 6)

Because it is cheaper, as they say [...] they prefer to go more to the Salesianas [Centre of a Catholic Sisters' Order]. (Quelimane, user 5)

...or because they offer a *better service*:

Computers are always busy in the telecentres [...], so it is better to use places where there are free computers, and in the TDM [Internet Café of Telecommunication of Mozambique] they always have free computers, and in the library, too. (Chokwe, non-user 7)

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63



Besides the TDM, there are other places where the Internet is working properly, and people prefer to go to the TDM because there they get quality. (Dondo, staff 1)

Or, finally, because people already *were used* to going elsewhere:

Almost, in my opinion [...] it is that they learned it in another place, as I learnt here, and to go somewhere else it's not easy. (Xinavane, user 1)

### **Service**

Some reasons were, instead, connected directly to the services offered by telecentres of CMCs. Some interviewees found the *quality* of CMCs' services not good enough:

The place is not well organized because when I went there in 2008 I didn't see any computer. The place was dirty, not well organized. Even the guys that work there, they are not organized. (Chitima, non-user 3)

Someone told me the computer course is not good. (Quelimane, user 1)

Others judge that services offered are *useless* for them or for the rest of the community:

Someone else simply never thought about typing a document into a computer, so they never needed to come here. (Sussudenga, staff 6)

In other cases, instead, people complain that the services they would need are not *available*.

That is a multimedia centre, and it could offer also a fax service, and also the Internet connection. When we want to receive a fax we are forced to ask it somewhere else, but we have a multimedia centre, so it is essential that they start to offer the services of fax and the Internet. (Chiure, user 2)

My goal was to search something on the Internet, but when I got there they told me that the system was down, so that I could not do anything. (Morrumbene, non-user 3)

From interviewees' narratives, it seems that often telecentres cannot *communicate and promote* their services properly, so people don't know them:

Some people do not have concrete information of what the radio is, there are people who don't even listen to the radio, so they don't know. (Chokwe, staff 9)

Maybe they need more information, they need to be told that, in the end, this is for students but also for peasants, who can take advantage of the books and read different books, and stay informed. (Dondo, staff 3)

### **Resource-constraint**

Paragraph Resource-constraint reasons include space, time, and cost-related issues. A first reason why people do not use telecentres is *distance*:

Many people leave far away. (Dondo, Staff 3)

Distance is related with time and costs:

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

What it brought me not to go is that the place where I am living is in the countryside, and going from there to Morrumbene costs 50 mzn [meticaais, local currency] for the return ticket, and there, where I live, for someone to have money it is very difficult. (Morrumbene, Non-User 8)

I reckon it is because of distance. Distance is huge [...]. Coming to learn [how to use] computers and you have to come everyday, back and forth, back and forth, so it's a lot of money, but people feel like coming here and learn more. (Chiure, Staff 1)

A second reason for not using telecentres relates to *time* constraints:

...Because of time. I am busy from 7h30 to 15h30 and at that time it is already too late to go there. (Ilha, non-user 2)

... and ensuing priorities people have to establish:

I have to be busier with school than other things. (Chokwe, non-user 2)

Third, telecentres' services *costs* are frequently mentioned as the main reason why people cannot afford to use them, despite they would be interested in going there:

I would like to go, but I don't have the [financial] possibility to do it. [...] I reckon that to go there I need [financial] conditions. (Chiure, non-user 7)

And staff members seem aware of this fact:

Some people do not appear because they lack financial conditions, because they are not having the money to use these facilities. (Chokwe, staff 10)

### **Relevance**

Lastly, the issue of relevance for the interviewee was adduced as reasons not to use telecentres. In some cases, spending time at telecentres is judged as either *not profitable* for the person:

I don't catch anything relevant there. (Chiure, non-user 10)

... or *not challenging* enough, as the interviewee already know what they teach at telecentres and has nothing more to learn there:

I don't go to the computer room [at the telecentre, n.d.a.], because the packages they teach I already know them [...]. There they need just people who don't know. (Chiure, non-user 3)

...or, finally, *too difficult*:

Some people do not come [...] because they think it is demanding, but for someone who has will it is not demanding. (Chiure, user 9)

Other people declared *no interest* in the services offered by telecentres:

I am not interested in computers and all this things. (Chiure, non-user 4)

I usually am in my field, because of hunger. (Sussundenga, non-user 9)

Steyn, J., Van der Vyver, A.G. (eds.). (2013). Public and private access to ICTs in developing regions. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

Finally, some people think services telecentres offer are *not for them*, and people feel inadequate to go and use them:

But, how can I go there, I don't know how to read and write. (Ilha, non-user 7)

The computer, I don't know anything because I am already an oldie, I only know that computers exist, I see young students fiddling with computers, I don't know what is the meaning of a computer. (Morrumbene, non-user 4)

## Quantitative results

### Main demographic attributes of the sample

Out of the 328 valid respondents, the wide majority were men (62.6%). Most of the respondents (33.2%) were 20-29 years old, closely followed (26.8%) by people in their 30-39 years (see table 2).

**Table 2. Respondents by age groups.**

Age Group	Frequency	Percent
Under 20	32	9.8%
20-29	109	33.2%
30-39	88	26.8%
40-49	55	16.8%
Over 50	17	5.2%
No answer	27	8.2%
<i>Total</i>	<i>328</i>	<i>100.0%</i>

Regarding their education level (table 3), the wide majority of respondents completed their 11<sup>th</sup>/12<sup>th</sup> and 6<sup>th</sup>/10<sup>th</sup> classes (31.7% and 31.1% respectively), and 16.7% completed the 5<sup>th</sup> class only. The same number of respondents has received either a university-level education, or no education at all (8.2%).

**Table 3. Education level in the sample of respondents.**

Education Level	Frequency	Percent
No education	27	8.2%
1-5 class	55	16.8%
6-10 class	102	31.1%
11-12 class	104	31.7%
University	27	8.2%
No answer	5	1.5%
Other	4	1.2%
Does not know	4	1.2%
<i>Total</i>	<i>328</i>	<i>100.00%</i>

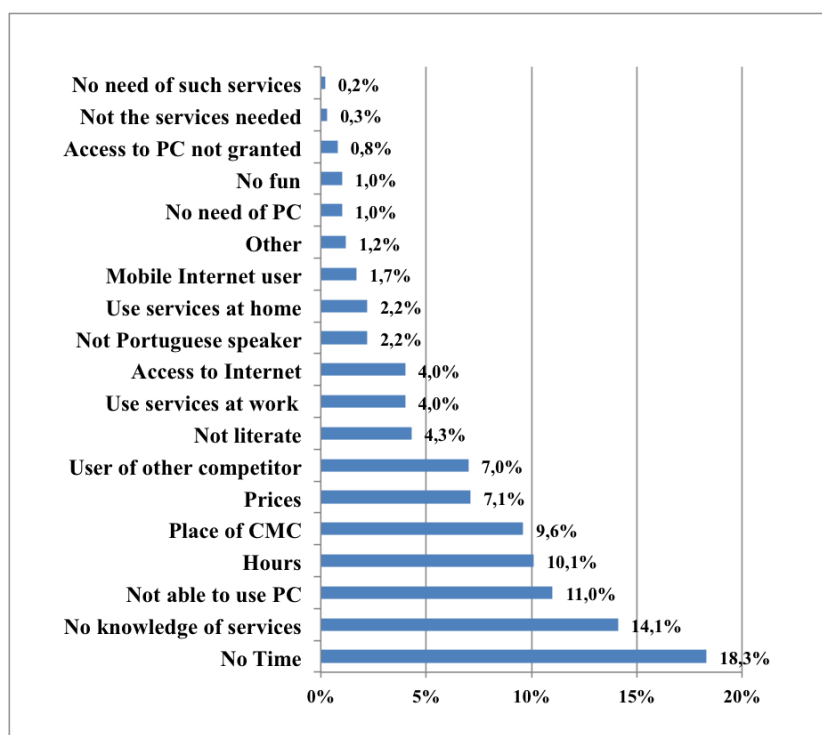
Three out of four respondents stated they are permanently living in the communities where the CMC is located (75.0%), while 21.0% state they are not living there, and 4.0% did not answer. Finally, the majority of respondents (52.4%) declare to live with a salary below the minimum established national one of 2'430 MZN (table 4).

**Table 4. Income of respondents.**

Income	Frequency	Percent
Below national poverty line	172	52.4%
Above national poverty line	132	40.2%
No answer	24	7.3%
<i>Total</i>	<i>328</i>	<i>100.0%</i>

### Analysis for reasons for non-use

Respondents' reasons for not using telecentres have been examined from different perspectives: first, respondents were asked whether they did know about telecentres' services, in order to highlight those users who were not even aware of them. This distinction might mark a deeper gap between possible marginalized non-users, thus cut out of the services available to them because of their socio-economic condition, and non-informed non-users, because of poor promotional activities of the local CMC. Interestingly, 14.1% of non-users confirm they are not aware of the services offered by telecentres (figure 3) despite being aware of the services offered by the local radio. Moreover, the relative majority of answers suggest that timing is a key constraint for non-access: indeed, 18.2% and 10.1% of answers respectively indicate lack of time and non-convenient service hours for the respondent. Computer illiteracy (10.9%) is another important element driving non-use of CMC services, while respondents identified lack of literacy (4.3%) and of knowledge of Portuguese language (2.1%) as minor barriers. Price does not seem to represent a major barrier to access (5.8%), while the location of the CMC accounts almost twice the number of answers (9.4%).



*Figure 2. Main (single) reasons for non-using telecentres' services.*

By grouping reasons according to the issues explained in section 4.1 (figure 2) it is possible to identify resource constraints as the main driver of non-use (45.8%), followed by relevance (27.9%), services (19.3%), and competitors (7.0%), and services (5.2%).

Service, here, include also the 14.1% of respondents who declared they were not aware of the services, a striking fact due to the composition of the sample (made of “active users” of the radio).

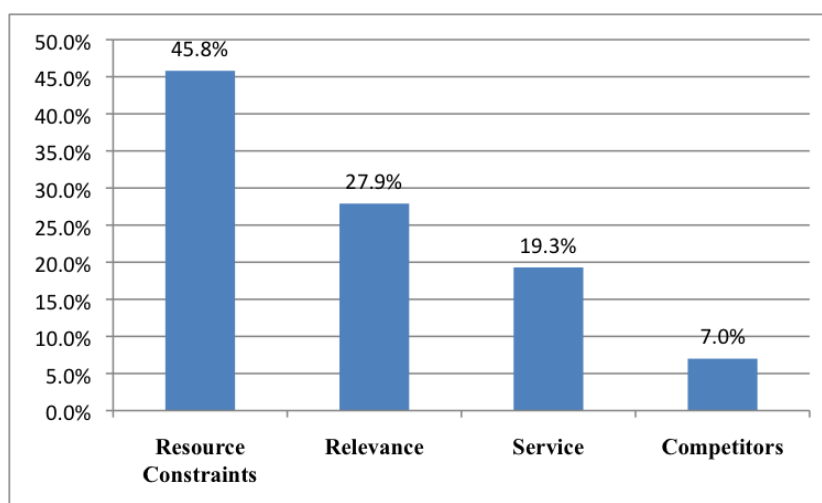


Figure 3. Main (grouped) reasons for non-using telecentres' services.

Respondents presented very different profiles in terms of access to computers and the Internet: 52.1% reported they have used a computer at least once in their life, and 43.3% had access to the Internet (see table 5): even though less than one any two persons has access to the Internet in the areas of the survey, this percentage suggests that a substantial number of non-users have other ways of access beyond the CMC.

Table 5. Use of computer and access to Internet at least once.

	Used a computer at least once %	Already accessed the Internet %
Yes	52.1%	43.3%
No	47.9%	56.7%
<i>Total</i>	<i>100%</i>	<i>100%</i>

Among the respondents who accessed the Internet at least once, one out of two have used both a mobile phone and a computer to do so (see table 6). However, the percentage of respondents who, for that, has employed only a computer (21.0%) is lower than the one of respondents who has employed a mobile phone only (29.0%). The latter group of respondents (the ones who have accessed the Internet through a mobile phone only) is mainly composed by people with the highest level of secondary education (47.5%), and by young people (82.5% are below 20).

Table 6. Medium used to access to the Internet

Answers	Frequency	Percent
Computer	29	21.0%
Mobile Phone	40	29.0%
Both	69	50.0%
<i>Total</i>	<i>138</i>	<i>100.0%</i>

Among respondents who declared they had accessed a computer and/or the Internet, places of access have been analysed. Figure 5 and 6 show which are the venues where respondents use computers and access the Internet respectively. The first place ranked for computer access is the workplace (28.1%), followed in second place by friends' or relatives' houses (21.5%), and, third, respondents' own homes or public places (both 17.6%). Schools are ranked last (15.2%). This might be due to the composition of our sample, where only 9.8% of respondents are younger than 19 years old.

Schools rank last also as a place to access to the Internet (6.5%), while the workplace ranks first again (28.8%). However, it is interesting to notice a gap in the number respondents who have used a computer but not accessed the Internet at work (72 and 53 respondents, respectively). On the contrary, almost the same number of respondents declared they used a computer and accessed Internet at home (45 and 43 respondents, respectively), thus suggesting that who has a computer also has an Internet connection in their households. Interestingly, even if the number of respondents who used a computer and accessed to the Internet in public places is similar (45 and 51 respectively), access to the Internet in PAV was pointed out by 27.7% of respondents among the various gateways to the Internet, and to a lesser extent (17.6%) as a place to access computers.

Also, there is a gap between the number of respondents who accessed a computer or the Internet at their friends' or relatives' homes (respectively 55 and 25). This gap might be explained by a possible difference between the social statuses of our respondents' network, and suggest a need of further analysis in this direction.

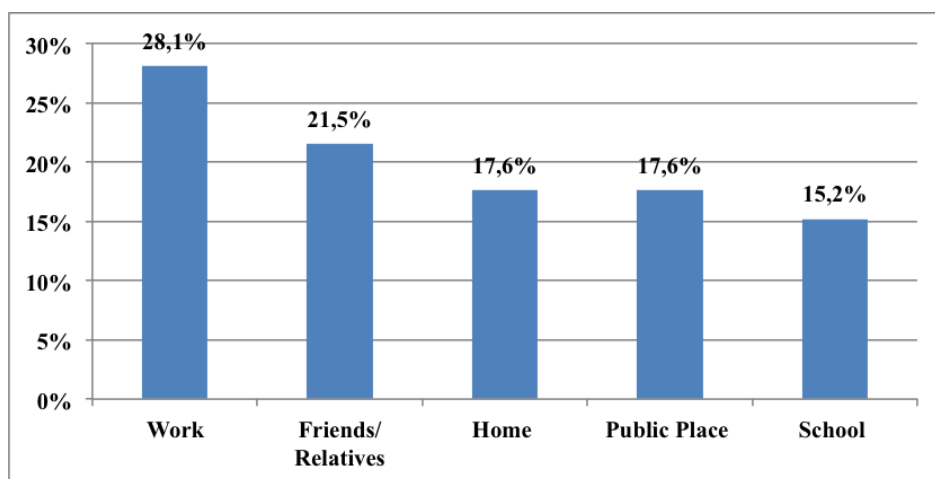


Figure 4. Places of access to computers (on % of responses)

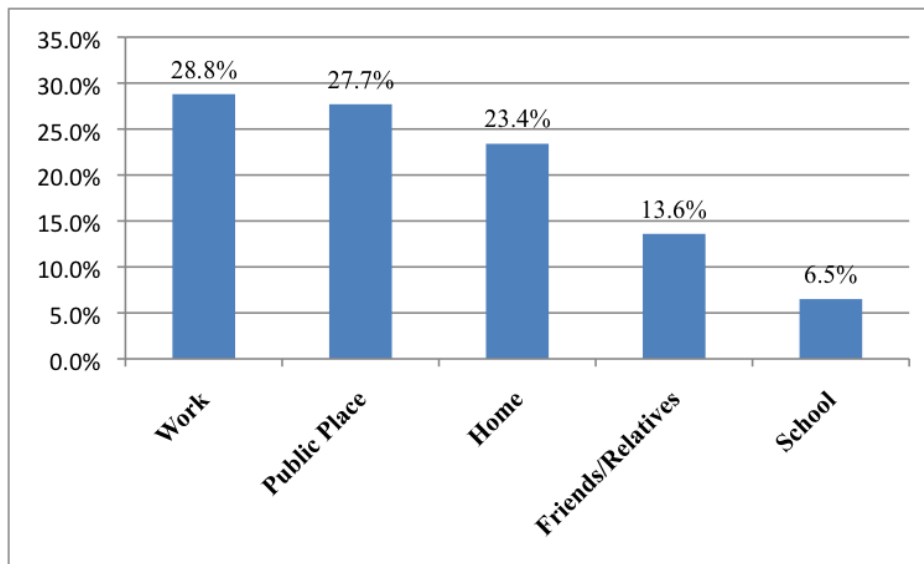


Figure 5. Places of access to the Internet (on % of responses).

Finally, a significant presence of proxy, users who used telecentres on someone else's behalf (Sey et al. 2013), may be noticed in the communities included within by this study. This confirms the findings of the GIS survey report (Sey et al. 2013), pointing to the potential reach of telecentres beyond people who have physical access to them. Indeed, 34.1% of non-users state they have asked someone to go to the CMC to undertake some tasks on his/her behalf. Among these tasks (see figure 7), photocopies are the most requested service (30.8%), followed by typing documents (19.7%), and access to education-related information (17.9%). Other tasks are accounted below 10%.

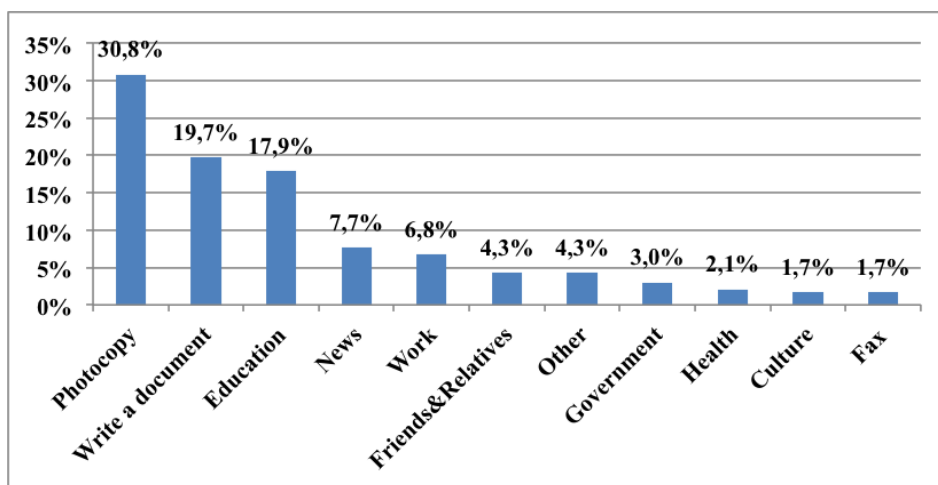


Figure 6. Actions performed at CMC on behalf of respondents.

## Discussion and Conclusions

This paper aimed to shed light on a still underexplored research area regarding telecentres: the reasons why community members decide not to take advantage of this facility. In particular, this paper has presented an in-depth analysis of the reasons why people in Mozambique do not access the telecentres' component of their local CMC. Based on both qualitative and quantitative data, the analysis depicted four main reasons or

non-use. Two of them point to the respondents: (i) their constraints – distance, and lack of time and money –, and (ii) relevance for them. The other two are related to telecentres themselves: (iii) their lack of competitiveness if compared to other strategies to access ICTs and the Internet, and (iv) their limited services or service quality, including a lack of proper communication of their activities to the communities.

The findings of the study confirm the main insights of the few existing literature specifically targeted to the topic of non-use. Non-users of telecentres were found from two opposite segments of the population: the one with lowest-income/lowest-access-to-ICTs, who cannot afford, nor have the skills, to benefit from telecentres' services; and the most privileged one, who have the resources to access ICTs at home or at work, and who already have sufficient computer literacy skills. This sheds light on the existence of a whole social group who does not feel challenged enough from telecentres' offers. Besides personal constraints, the dynamics of non-use with specific regards to service-related motivations indeed highlight a complex and multi-layered reality, where a significant share of the sample consider the quality of services a primary reason for not using CMC services.

In order to achieve sustainability and to have a more profound impact on the communities they serve, telecentres should take into consideration both typologies of non-users. CMCs, thanks to their radio component, already have the potential to address the information and communication needs of the least privileged sector of the population. As in countries that are usually considered more advanced in terms of technology adoption, telecentres in Mozambique could offer more advanced services, tailored on the most privileged strata of the population.

Finally, insights from this study show how communication and promotion of telecentre services and mission are underused and underestimated factors. Scholars had already pointed out to bad communication practices in telecentres as a reasons for non-use. This study brings this factor even more into the spotlight, given the *ad hoc* sample chosen to run the quantitative study (i.e.: people familiar with CMCs' community radios, who should have, then, acknowledged the existence of telecentres). Better communication strategies for telecentres should probably be designed and implemented, in Mozambique as well as in other contexts.

## Acknowledgements

This study is part of the broader project RE-ACT (social REpresentations of community multimedia centres in Mozambique and ACTions for improvement), a joint research and cooperation project between the NewMinE Lab – New Media in Education Laboratory of the Università della Svizzera italiana (Lugano, Switzerland), and the Department of Mathematics and Informatics and the Centre of African Studies of the Universidade Eduardo Mondlane (Maputo, Mozambique). RE-ACT Project is funded by the Swiss National Science Foundation (SFNS) and the Swiss Agency for Development and Cooperation (SDC).



## References

- Bailur, S. (2007). Using Stakeholder Theory to Analyze Telecenter Projects. *Information Technologies and International Development*, 3(3), 61–80. doi:10.1162/itid.2007.3.3.61
- Best, M. L., & Kumar, R. (2008). Sustainability Failures of Rural Telecenters: Challenges from the Sustainable Access in Rural India (SARI) Project. *Information Technologies & International Development*, 4(4). Retrieved from <http://itidjournal.org/itid/article/view/309/141>
- Chigona, W., & Licker, P. (2008). Using Diffusion of Innovations Framework to Explain Communal Computing Facilities Adoption Among the Urban Poor. *Information Technologies and International Development*, 4(3), 57–73. doi:10.1162/itid.2008.00017
- Gomez, R. (Ed.). (2011). *Libraries, Telecentres, Cybercafes and Public Access to ICT*. IGI Global. Retrieved from <http://www.igi-global.com/book/libraries-telecentres-cybercafes-public-access/49588>
- Harcourt, B. E. (2006). *Language of the Gun: Youth, Crime, and Public Policy*. University of Chicago Press.
- Jupp. (2006). *The Sage dictionary of social research methods*. London ; Thousand Oaks, Calif: SAGE Publications.
- Kenny, C., Grace, J., & Qiang, C. Z.-W. (2003). *Information and Communication Technologies and Broad-Based Development: A Partial Review of the Evidence*. World Bank Publications.
- Krippendorff, K. H. (2003). *Content Analysis: An Introduction to Its Methodology* (2nd ed.). Sage Publications, Inc.
- Kumar, R. (2004). eChoupals: A Study on the Financial Sustainability of Village Internet Centers in Rural Madhya Pradesh. *Information Technologies and International Development*, 2(1), 45–73. doi:10.1162/1544752043971161
- Mayanja, M. (2001). *The Nakaseke Multipurpose Community Telecentre in Uganda*. In *Telecentres : case studies and key issues : management, operations, applications, evaluation* (Commonwealth of Learning.).
- Parkinson, S., & Lauzon, A. C. (2008). The Impact of the Internet on Local Social Equity: A Study of a Telecenter in Aguablanca, Colombia. *Information Technologies & International Development*, 4(3). Retrieved from <http://itidjournal.org/itid/article/view/300>
- Rega, I. (2010). *What do local people think about telecentres? A key issue for sustainability* (Doctoral Thesis). Università della Svizzera italiana, Lugano.
- Rega, I., Cantoni, L., Vannini, S., David, S., Baia, A., & Macueve, G. (2011). *Community Multimedia Centres in Mozambique: a Map*. (White Paper No. 1.0). Lugano: NewMinE
- Steyn, J., Van der Vyver, A.G. (eds.). (2013). *Public and private access to ICTs in developing regions*. Proceedings of the 7th International Development Informatics Association Conference, held in Bangkok, Thailand. ISBN: 978-0-620-58040-3 Pages 46-63

Lab. - USI. Retrieved from <http://www.newmine.org/publications-2/working-papers/white-paper-community-multimedia-centres-in-mozambique-a-map>

Roman, R., & Colle, R. D. (2002). Themes and Issues in Telecenter Sustainability. IDPM Development Informatics working paper n. 10.

Sey, A., Coward, C., Bar, F., & Sciadas, G. (2013). Connecting people for development: Why public access ICTs matter. Seattle, WA.: Technology & Social Change Group, University of Washington Information School.

Survey Working Group, A. (2012). Global Impact Study surveys: Methodologies and implementation. Seattle, WA.: Technology & Social Change Group, University of Washington Information School.

Whyte, A. V. T. (2000). Assessing community telecentres guidelines for researchers. [Ottawa, Ont., Canada]: IDRC. Retrieved from <http://site.ebrary.com/id/10176420>