Small & paid for ICT Kioskies versus bigger & free library services at Letlhakeng Village, Botswana

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Abstract

The use of ICT public access centers has been acclaimed as a worthy strategy for enabling disadvantaged communities' access to the technologies (Davidson et al 2006:6; Ankisola et al 2005:37). Botswana adopted a long term development strategy, popularly termed Vision 2016, as a guiding framework on national development strategies. The strategies include efforts to promote access and usage of ICTs to especially disadvantaged communities. The government introduced Community user Information System, popularly termed Kitsong Centers (place of knowledge) for especially people in rural areas.

The present paper is deduced from a broader study that set out to establish how the Letlhakeng community accessed and used the technologies that were available through public access centers to access social services. The library was the only center that offered the community access to the ICTs for free. The community also paid to use the technologies that were available in other smaller stand-alone centers.

The paper shares findings on the varied factors that shaped the access and usage patterns of the Letlhakeng community's access and usage of the ICTs that were available through public access centers. The study observes a worrisome trend of preference to access and use ICTs that are paid for instead of the free services at the library. The study also notes strategic collaboration opportunities between the library and the mushrooming ICT stand-alone in the effort to bridge the digital divide. The learning curves from the study contribute to the body of knowledge on the nature of the digital divide in Africa. It also offers information useful for improving especially libraries participation in bridging the observed divide.

Keywords: ICT public access centres; rural communities; digital divide; public libraries, information usage

1. Background/ introduction:

Botswana is a relatively small country with the 2011 national population census reflects a total population of just over two million (2 065 398) spread over an area of 582 000 square kilometers. As a build up towards the country's fifty years of independence Botswana adopted a long term development strategy, popularly termed Vision 2016, as a guiding framework on national development strategies. Some strategies target the broad array of factors that put the country on the adverse side of the digital divide.

1.1 ICT Landscape in rural Botswana
Some landmarks in Botswana's ICT landscape include the government's adoption of a national ICT policy in 2007 and the establishment of a dedicated Ministry of Science and Technology in 2004. The ICT policy commonly referred to as "Maitlamo" a Setswana word meaning commitment, embodies government's drive towards the universal access of communication services especially in underserved areas (UNDP 2005:54; Mutula et.al. 2010:10; Kereteletswe, 2015). Other recent attainments under the 10th National Development Plan (2009-2016) include the institutional reforms like the liberalization of the telecommunication industry to accommodate especially the mobile telecommunication providers (Mutula et.al. 2010:11; BTA 2006) and the privatization of the Botswana Telecommunications Cooperation in 2008 (Kereteletswe ,2015).

Different programmes have since been developed to collectively strengthen the telephone and ICT infrastructure and to promote computer penetration in rural communities. For example, two complementary programmes of rural electrification and rural telecommunications enabled the provision of essential ICT infrastructure services to such communities (Mutula et.al. 2010: 18; Mutula 2004:148; (BNLS/ACHAP 2009:45IST-Africa 2014).

These interrelated programmes also ushered in the establishment Community user Information System, popularly termed Kitsong Centers (place of knowledge) for especially people in rural areas (Mutula et.al. 2010:10). The first pilot centres were in 2004 in the villages of Letlhakeng, Hukuntsi and Gumare. These were meant to enable the communities to seize the acclaimed opportunities of ICTs to alleviate poverty; access social services and to facilitate the growth of an informed and educated nation.

The Ministry of Education also introduced computer literacy from as early as primary schools (Mogotlhwane, Khosrowshahi & Underwood 2013: 1056). The "Thuto Net" (ie. Education-Net) draws from both the rural electrification and telecommunication connectivity to equipe the schools with computers and provide the needed training (Dintoe 2010:56). Out of 239 secondary schools, 80 had access to WIFI while the other 62 had upgraded computer labs (Kereteletswe, 2015).

Despite some of these cited government investments, , the country's internet access and usage is reportedly below 5% of the nation's population with an estimated 2.5% or 40, 000 – 60 000 users (Mutula 2004:146; Mutula et.al. 2010: 14; Dintoe 2010:18; Batane,2013:18). Access and usage of these technologies is even lower amongst rural communities like Letlhakeng.

1.2 Letlhakeng Village

This village serves as headquarters of Letlhakeng sub-district, which lies within the Kgalagadi desert. The community is classified as poor; with low educational attainment and a high unemployment rate. As noted earlier, the village hosted one of the first ICT public access pilot centre (ie Kitsong Centre).The village also benefited from the government and the African Comprehensive HIV/AIDS Partnership (ACHAP) countrywide e-library project. This Bill and Mellinda Gates Foundation funded project aimed at offering communities free computer and internet services through public libraries (Grand et.al. 2010: x).

2. The study

The present paper is deduced from a broader study that was characterized by a constant comparison of the varied sub-plots and sub- themes as they emerged in the assessment and analysis of how the Letlhakeng rural community accessed and used ICTs that were available through public access centers. Although the study had four specific research objectives, for the purpose of this paper, the intent is summed up as an assessment of how the community uses the ICTs that are available through public access centres. The paper intents to highlight how the government supported library project can engage and support the community to access and use ICTs. The reviewed literature pointed if these centres are to become sustainable development vehicles, then the research community is challenged to document progress so as to inform policy and practice (Latchem& Walker 2001:4; Evusa 2005: 125 ; O'Neil 2002:84; Jacobs & Herselman 2005: 58).

2.1 Literature Review

The literature reviewed for the purpose of this study show the digital divide as a broad and complex concept with no universally accepted definition (Almay 2006:6; Yu 2006 236) and no distinct theoretical framework to guide the intervention strategies (Yu 2006:244; Calderaro2010:21). As Boote & Beile (2005:7) note, a broad topical issue of this nature can be best dealt with "by handling a smaller number of key conceptual pieces". This paper's concern is therefore narrowed down to how the Letlhakeng community's uses of ICTs that are available through the library and the stand-alone centres that were identified in the village.

The focus is on usage because of the contemporary stance of assessing the digital divide beyond just the gaps in infrastructure or ownership of computers to actual usage (Norris 2001:52; Barzilai-Nahon 2006:269; Calderaro 2010:25). Three key pillars that are core to the contemporary interpretations of the digital divide anchor on issues accessibility, affordability and quality of services.

The disparities In access and usage of the ICT, the digital divide, can be assessed qualitatively or quantitatively. For example, the International Telecommunication Union (ITU)'s reference to the ICT Development Index (IDI) and the Digital Access Index as guides for benchmarking and tracking intervention strategies. The assessment may be in terms of the gaps between the ICT users and non users or what Cho (2004) refers to as a vertical divide or a first level divide. The gap within users, also referred to as the horizontal divide or the second level divide, emanates

from issues of social integration relating to "socioeconomic (rich/poor); racial (majority / minority); generational (young/old) or geographical (urban /rural) factors (Sitawa-Ogututo & Rege 2010: 137). The disparities may further be broadly viewed as the global divide; the social divide and the democratic divide.

In line with the contemporary interpretation of the digital divide, Intervention strategies are therefore guided by many other interrelated theoretical stances. It is on this vein that the present study adopted a broad theoretical framework that argues that increased access and usage of ICTs in disadvantaged communities calls for collective intervention strategies that are equally guided by policies from a basket of theoretical positions.

The use of ICTs through public access centers have been widely applauded as a cheap and effective way to offer disadvantaged communities opportunities to access and use telecommunications and information resources (Davison et al 2000:4; Oestmann & Dymond 2001:3; Mutula 2004: 481; Evusa 2005:67; Ankisola et al 2005: 37; Elijah &Ogunlade 2006:55). Although the centers have varied names and forms they emerge as guided by a common principle of 'Universal Access" (UNDP 2005:54; Alampay 2006: 8; Mutula 2007:475) or the "Real Access/Real Impact" (Bridges 2005) or "real benefits for real people" (O'Neil 2002: 78).

Analysis of the literature on this concept broadly identifies two broad categories: "stand alone" as those managed and owned by individual entities while the "embedded" are mostly pinned to other existing programs or services (Latchem & Walker 2001; Jacobs &Herselman 2005:58). Even though the reviewed literature registered preference for and success stories on services in embedded centers (O'Neil 2002:86; Jacobs and Herselman 2005; Yu 2006; Benjamin 2001:82) the findings from Letlhakeng community were to the contrary.

2.2   Research Methodology

This was a qualitative case study that drew from a multi-disciplinary theoretical framework of an interpretative approach with a critical realism (Dobson 2002; Benoit 2007) (i.e. interpretation of reality coupled with recommendations for change).

2.2.1 Data collection

Qualitative data was gathered from a total of fifty one (51) participants as members of the Letlhakeng Village in Kweneng District, Botswana. These were in three broad categories of infomediaries (9), users (29) and none users (13). Data was collected primarily through interviews; formal and informal discussions; observations and review of related documents. Three sets of interview guides were used to collect data from infomediaries (i.e. people who provide the ICT services at the access centers); users of the ICT centers and the non-user community. A tape recorder and camera were also used to capture some of the data.

Participant selection was very purposive, targeting as the researcher wanted information rich community members to participate as infomediaries, users and or non users of the ICT public access centre. Continued data analysis therefore ran concurrently with data collection and continued evaluation of participants.

The complementarily use of research tools and techniques, coupled with the concurrent running of research phases helped to positively validate data gathered from the different sources (Falconer & Mackay 1999). It also positively contributed towards the continued improvement of the research tools (Herkathorn 2002:14*).

3. Findings

A key finding that relates to all other observations from Letlhakeng village was that the community was characterised by both the vertical and the horizontal divide. The noted information needs and the observed patterns of ICT usage differed within the community. It is also important to acknowledge that despite the noted digital divide, the community used the ICT public centres to access social services; to alleviate poverty and to keep themselves informed. Access and usage of the ICT public access centres differed in line with what Walker (2008:4) refers to as "socio-technical pointers". These include thematic interrelate issues of rural connectivity; the community's lack of time and money; management and location of the ICT public access centres and the varied social services effected the application of the technologies in actual life processes. These pointers have also been viewed as core in access and usage patterns of especially disadvantaged communities (Lesame 2008; Jacob & Herselman 2005.)

The study found that centres were helpful in supporting both the delivery of social services in the village and the growth of businesses in the village.

3.1 The providers of ICT public access centres in Letlhakeng?
Seven (7) ICT public access centers were identified in Letlhakeng Village. Five (5) of these were standalone (i.e. privately owned or managed by individuals) while two were embedded or pinned to other existing programs or services.

This study found that while the embedded centres were driven by government's responsibility to provide services to the community, the stand-alone centres were motivated by the owner's economic drive.
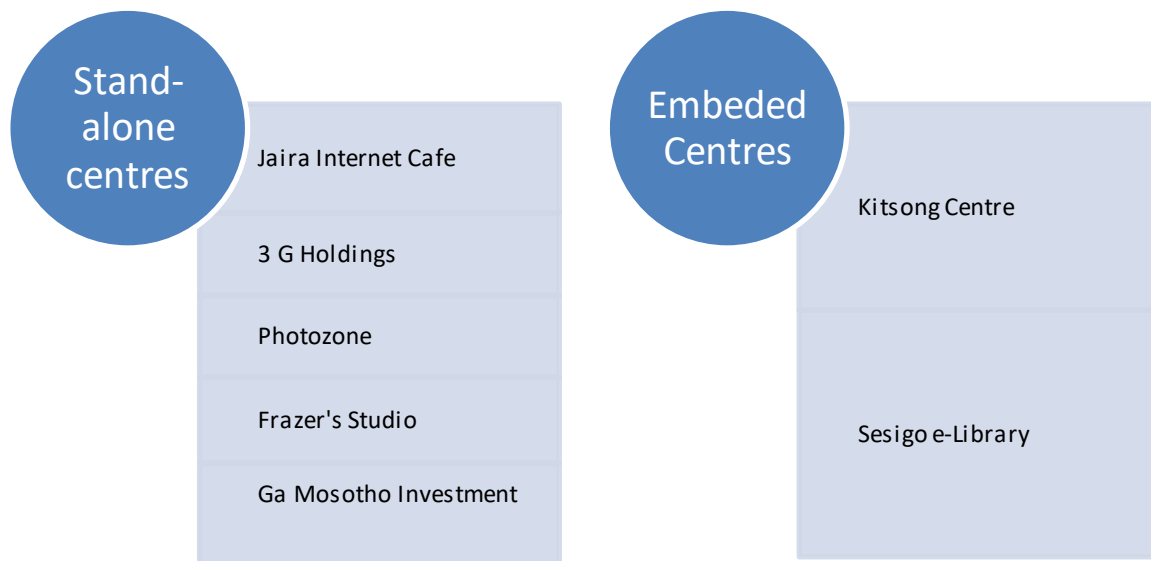
Figure 1: Types of ICT public access centers in Letlhakeng

These centres also diffred in management, structure and the services that they offered. The embedded centres well resourced, with good access to both telephone lines and internet. Both centres were also manned by qualified personnel with good support structures.

3.2 Structure of stand-alone centres

The location and structure of these centres was determined by the availability of affordable space that could be rented. In some cases such spaces was not conducive for the service. For example, one of the user participants lamented that:

> *"I think their main challenge is lack of conducive and adequate space to operate their business, because to attract more customers to your business you need space. The other problem is that, the rental is too expensive, so I don't think they are making no big profits"*

This was a response to a question that sought to find out the challenges that were faced by those who provided the community with ICT through public access centers.

The technologies available in the centers were related to the strucure of the center and the owners' interest and abailities. For example, one of the centers had two cameras and the first computer was mainly for processing photographs because of his interest in photography.

All the standalone ICT public access centers had photocopying machines, at least one computer and a printer. Two centers had a laminating machine each and two had fax machines each. Only one stand-alone centre, Jeirah Internet Café, had access to internet while all the other stand-alone centres were not connected because of both financial and structural issues.

Two stand-alone centres, Photozone Studio and Ga-Mosotho Investment, were reportedly initiated through financial support under a national youth empowerment program. These centres were relatively the most equiped with a photocopying machine, two computers, laminating

machine, camera and a fascimile. They both had fax machines although there was no telecommunication structures to enable usage.

As head quarters of the sub-district, the people from neighbouring smaller villages regularly visited Letlhakeng for a broad range of social services that were not offered in their smaller villages. These people mostly came to the ICT public access centers for quick services like photocopying; printing or passport photos as they proceeded for other services at places like the Rural Administrative Centre (RAC), post office, hospital, or schools.

The Stand alone centres there for had to strategically locate where there was continued flow of potential users. For example 3G Holdings and Frazer's Studio were both located in busy shopping complexes. The other three centres were along the road to the main village administrative centre. The centres therefore only opened at the times when the social service providers were open.

This study observed what one could term a "temporary operation" or "temporary lodging" attitude in the management of stand-alone centres. For example, the centres strategically operated where they could conveniently relocate as and when the owner of the centre saw the need to do so. Benjamin (2001:82) and O'Neil (2002: 84) viewed these as some of the attributes that created the seemingly temporary attitude; the unreliable nature of the standalone centres and being prone to collapsing.

3.3 Management and services of stand-alone centres

All the five identified stand-alone centres were owned and managed by young Batswana aged between 25 and 40 years old who constantly had to close the centre whenever there was any other errand to attend to. This also added to the already noted unreliability concern. Only two of the infomediaries in the stand-alone centres had the relevant IT qualifications (i.e. Ga Mosotho Investment and Photozone Studio).

The stand-alone centres developed the services based on the observed maket demand. The owners of these centres also had the advantage of being part of the community and hence having first hand experience of the need for a service. For example, Jeirah Internet Café was motivated by the owner's personal needs for the services to support her other income generating projects. This is in contrast with the needs assessment for the embedded centres which was done by researchers from outside the community.

The community also appreciated that in some cases stand-alone centres accommodated flexible payment terms the services offered. The study found that the Letlhakeng community mainly used the ICTs in public access centres to process information that was needed to access the social services that ranged from government poverty alleviation programmes; education and job opportunities. The community therefore processed information in formats that were dictated by the social service providers.

All the stand-alone centres offered printing and photocopying services at a cost of P2.00 per copy. They also offered typing services at a cost of P10.00 per page. The demand for

photocopying was so high that even some retail outlets offered photocopying services at some cost.

The people from neighbouring smaller villages regularly visited Letlhakeng, as headquarters of the sub-district, for a broad range of social services that were not offered in their smaller villages. These people mostly came to the ICT public access centers for quick services like photocopying; printing or passport photos as they proceeded for other services at places like the Rural Administrative Centre (RAC), post office, hospital, or schools. Stand alone centres there for had to strategically locate where there was continued flow of potential users. For example 3G Holdings and Frazer's Studio were both located in busy shopping complexes. The other three centres were along the road to the main village administrative centre. The centres therefore only opened at the times when the social service providers were open.

None of the stand-alone centers had training programs for the community because of lack of space and that would be costly for the already cash strapped centers. The centers also did not have space for such training. Although in some case the standalone centers allowed the users to do their own typing, in most cases the users preferred that the infomediary do the typing for them so as to save on time.

3.4 Who uses ICTs public access centers in Letlhakeng?
This study identified two broad categories of users of the ICTs that were available in public access centres in Letlhakeng village. these were the local user community and users from neighboring villages (i.e visitors). The local users had subsets of workers; out of school youth and the indirect users who sent able and willing family members to process information for them.

Although the community in general appreciated the advent of ICT public access centers in the village, the impact was mostly felt by the "visitor" user community. These users appreciated especially the fact that the services reduced the challenge of having to travel to either Molepolole or Gaborone for services like photocopying, printing and passport photos. For example, in one of the groups interviewed at one of the standalone centers, there was a lady who remarked that she used to travel 78 Km from Takatokwane to Letlhakeng, then proceed 140 km to Molepolole to get passport size photos.

Even though some of the neighbouring villages had Kitsong centers, the visiting users found it convenient to do any needed reprographics at Letlhakeng where they submitted various applications for a broad range of social services. The Kitsong centers in neighbouring villages like Kaudwane and Sorilatholo were predominantly used to charge mobile phones because the villages had no electricity. During the visit to these villages, the researcher also witnessed sixteen (16) and eleven (11) mobile phones being charged at respective villages
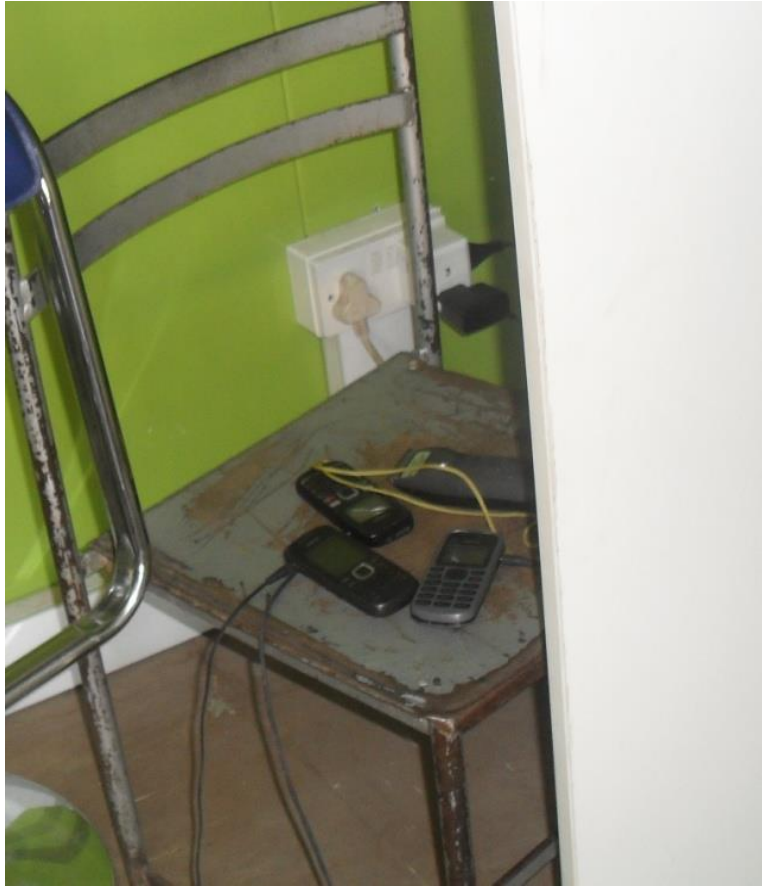
Figure 1: Mobile phones being charged at Kaudwane Kitsong Centre

The advent of internet in the village was seen as a very welcome development. Although free internet in the library was mainly used by out of school youth for leisure, some participants specifically indicated that the websites of the Ministry of Education, Skills and Development and the Ministry of Agriculture were specifically as being used by the community. The former was mainly used to access the school leaving examination results while the later was for information on agricultural products. The participants noted that accessing agricultural information through internet augmented and altered the traditional pattern of getting information from the radio and the local agricultural filed officers.

4. Challenges of using ICTs that were available through public access centres In Letlhakeng Village?

Many thematic factors related to rural poverty; low educational levels and individual preferences contributed to how the community used or failed to use the available ICTs. This paper zeros in on the challenges that related to the library so as to contribute towards service improvement of the project.

The general lack of ICT skills hindered good and effective usage of the technologies. The community preferred paying for services at standalone centres where infomediaries processed the information for their customers at a fee. This was mainly to address the challenge of lack of skills and at times the time constraint. The infomediaries at standalone centers also opted for doing the needed tasks for their users because of limited ICTs in the centers.

Although some community members had the skills to use the ICT's, they failed to effectively use internet for development. The out of school youth, who mainly used free internet at the library were generally stigmatized as lazy and negatively denting the cultural value systems because they lacked the skills to profitably use the technology. The non users were therefore not attracted into using the ICTS. This is in line with (Selwyn 2003: 100) assertion that usage of the ICTs will continue to be low if the people do not see the professed benefits of the technology. Such an observed trend is regrettable because it thwarts hope from the optimistic diffusion theory that more users would be attracted in to the technology as they see the positive effects from the early users (Calderaro2010:28).

4. 1 Hindrances related to the Library

This study noted with concern that there was lack of community involvement in the management of the library. For example, although there was a training schedule for the different primary schools posted in the librarian's office, some participants did not know about the training programmes.

Although the study did not set out to establish the cause of the community's detachment, the challenge was seen as related to the fact that the project was more of what Jacobs & Herselman (2005:68) and Evusa (2005:25) refer to as "top-down projects" with guidelines drawn by external funders. It was therefore guided by countrywide policies and management styles that are not easily altered to meet the immediate users' needs. The study also noted government and community involvement at the e-library Sesigo Project was strong at the stage that Narayan & Nerurkar (2006:35) refer to as the "time–to–public" phase but with less collaboration at "time-in-public" phases.

The librarian, who was not from within the village, always travelled out of the village to join her family every week end. This further detached her from the community. Even at the

preliminary visit stage of data collection, the librarian did not know most stand alone centers that were in the village.

The library operating hours were also not flexible and not convenient for especially the users classified as workers. This opening hours challenge was at times exacerbated by the thirty minutes booking system that the library used as a way of regulating usage of the ICTs. The arrangement seemed to only favour the out of school youth who could afford to wait for their time slot. This was discouraging to the workers and users from neighbouring villages who in most cases were pressed on time and could not afford to wait for a free slot. There was also concern that due to lack of skills, the 30 minutes slot could elapse before the user did the task he / she needed to do.

It emerged that, as a way of addressing the time constraint, the workers preferred to process information elsewhere, and then take it to the ICT public access centres to output the information. For example, they typed at home using their private laptops then used memory sticks to output through email at the library or to print at the stand alone centres. This presented a challenge of computer viruses at the centres. This challenge was further worsened by the lack of internet access in especially the stand-alone centres. In some cases some workers brought personal laptops to access free internet at the library. All these options were not possible amongst users from neighbouring villages who in most cases had no access to laptops or personal computers
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5. Concluding Recommendation

- **Robust Community Education program**

A positive observation from this community was the general call for more user education programs. It is recommended that the library should restructure the existing programs to cater for the different user levels. This recommendation also has implications for research tto l inform both content and delivery of the community education programmes; and on sustained community engagement in such programs.

- **Collaboration with Stand-alone centers**

It is also recommended that government and private telecommunication service providers should support stand-alone centres with financial schemes and entrepreneurship programmes. The library could specifically liaise with infomediaries at the stand-alone centers in needs assessment and service delivery. For example, given that the library does not offer photocopying services, one of the stand-alone centres could operate at close proximity to the library and with support from the library.

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