The Ulwazi Programme: Local Users, Local Language, Local Content[1]

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Abstract

The Ulwazi Programme uses the public library infrastructure, Web 2.0 technologies and the community to collect and disseminate indigenous knowledge and local histories. This user-generated content is compiled in an online digital library in the form of a website and access is provided through current mobile and web technologies. In this paper I describe the history of the programme, its objectives and its structure. The website's usage statistics are then unpacked to reveal the demographics of its users and popular content, with a focus on the use of the regional vernacular, Zulu.

Keywords

Indigenous knowledge, Web 2.0, digital library, mobile technology, digital divide, community participation.

Introduction

Local knowledge and ways of doing things in Africa have historically been transmitted orally from one generation to the next. In South Africa, various factors like urban migration and the AIDS pandemic in younger generations have contributed to a disruption of these chains of cultural transmission. Digital technologies, in particular, mobile phones, offer some ways in which this information can be recorded and circulated.

However, a lack of local content on the Internet has slowed buy-in from local communities into digital resources. This in turn, has impeded information and communication technologies (ICTs) skills development and social transformation (Greyling & McNulty 2011). The Internet is also a contributing factor. While Internet usage in Africa still lags far behind other continents at only 10.9%, the African Telecommunication/ICT Indicators 2008 highlights the phenomenal growth in Africa's mobile sector, including data services (ITU 2008). With increased access through the mobile Internet, the eThekwini Municipal Libraries developed a concept for the exchange of user-generated digital content, compiled in an online indigenous knowledge database, resulting in the Ulwazi Programme. The Ulwazi Programme, operates as an integral part of local public library and information services in the eThekwini Municipal Area in the province of KwaZulu-Natal in South Africa, utilizing both conventional desktop computers and the latest mobile technologies.

Digital technologies can facilitate the preservation and dissemination of local knowledge through the collection and sharing of audio recordings, photographs and articles. The Ulwazi Programme is a unique example of this, using the public library infrastructure, the communities it serves and Web 2.0 technology to record and share their knowledge and histories. The technology allows for multiple contributions from a variety of perspectives, male, female, young and old. A focus of the project is to record the knowledge of older people and make it available to the younger generation. This includes the history of local areas, details of traditional practices and ceremonies, and the ways in which things were done in the past. As mobile devices (tablets and smart-phones) become increasingly ubiquitous in Africa, the need for this type of regional and language-specific content, and the tangible link it provides between communities and their multiple pasts, becomes all the more important.

The Ulwazi Programme's Goals and Objectives

There is a growing demand for ICTs and digital media literacy among rural communities along the Ethekwini Municipal Area perimeter (Averweg and Greyling 2008). By harnessing ICTs, indigenous groups and local communities can be empowered to cross the digital divide to become part of the global information society on their own terms (Hughes and Dallwitz 2006). A long-term strategy of the Library and Heritage Department of the eThekwini Municipality is to provide equitable information services to all residents of the Municipality. The Ulwazi Programme was designed to provide a framework to allow communities in the municipality to contribute local knowledge, which in turn would contribute to the sustainable preservation and sharing of that knowledge. Access to a digital knowledge resource of local relevance also contributes to capacity building in digital and information literacy skills, constituting empowerment in terms of both knowledge and ICT skills.

The Ulwazi Programme digital library serves as a permanent social service which is in step with global trends. The social development dimension of the programme promotes a culture of community participation in local government structures, encouraging development of social capital and a sense of citizenship through the concept of a shared heritage. By employing social media technologies, the programme affords local communities different ways of interacting with their heritage.

Methodology

As a platform, the Ethekwini Municipal Libraries uses the established, multi-branch public library system, currently comprising ninety urban, peri-urban and rural libraries, all with free internet available on desktop computers. The programme consists of three components; the community, the

public library and the technology. I now describe the different technologies that the Ulwazi Programme uses and outline the interactions between the library, community and technologies. I then examine the usage statistics of the website and conduct a content analysis, focusing on content that is accessed the most often.

The technology

Together with developments in information and communication technologies over the past few decades, which have prompted a shift from collection development to collection management in libraries (Rowley 2003, Lwoga and Sife 2006), the recent emergence of Web 2.0 technologies is now enabling large-scale collaboration in the creation of online data (Farkas 2007).

In the Ulwazi Programme, preservation of indigenous knowledge is achieved through establishing a community web portal using open-source social software technologies. These technologies are ideally suited to satisfy the dynamic aspects of the community's organizational structure and can be used to support such community activities (Stanoevska-Slabeva 2002, WSIS 2003). Social web technology is easy to use, as content can be added in plain text and in any language. English is used alongside Zulu, the local vernacular, to satisfy the preferences of all sectors of the local geographic community.

At the outset of the project, the Ulwazi Programme team made a conscious decision to use open-source software, where possible. The Ulwazi Programme portal is a website that allows users to immediately access the different components of the Ulwazi Programme. It also provides information on the programme, submission procedures and contact details of team members. Linked to this is the 'Community Memory' component of the website, which is developed as a wiki. A wiki is a piece of software that is used for collaborative content creation of which the Wikipedia is currently the best-known example. In this "browser-based collaborative writing environment a community can create and exchange information without having web programming skills" (Rahman 2007). The Ulwazi Programme is running a local installation of MediaWiki[2] (the open-source framework used to run Wikipedia), restricted to content collected within the borders of the eThekwini Municipality. The software is well suited to the aims of this project. While anyone can edit or add to the collaborative website, the software also keeps a record of all changes made, allowing a content manager to track activity on the site and revert to an early edit, if needed. It has a user management system whereby users can be grouped together and assigned different permissions. This is useful for creating a hierarchy of authority to ensure that submissions are of an acceptable standard. MediaWiki software also has a flexible taxonomy, allowing categories and

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[2] More information on MediaWiki available from http://www.mediawiki.org

sub-categories to be created to accommodate the types of content collected. This can be expanded when needed, both vertically and horizontally. As an additional communication tool, the programme decided to utilize social media technologies that a large part of the target audience was already using. Thus also linked from the Ulwazi Programme website are the Facebook fan-page and the Twitter account, as well as the photo-sharing group on Flickr and the Ulwazi Programme online video channel on Vimeo.

In utilizing this combination of open-source and social media applications for archival and heritage purposes, the Ulwazi Programme is unique in South Africa. However, the Ethekwini Municipal Libraries is aware of the unprecedented increase in mobile phone usage in Africa, with popular statistics suggesting penetration close to 70% while the internet usage is still only at 10.9% of the South African population (World Internet Statistics 2008). This marked discrepancy points to obstacles of affordability and accessibility preventing or hampering access to the internet through the conventional personal computer (PC) (Ford & Botha 2009). Features like minimal dependence on stable electricity supply, easy maintenance and easy-to-use audio and text interfaces have attracted the ICT-marginalized communities of Africa to the mobile phone, driving the mobile revolution sweeping across the continent. Millions of Africans are resorting to 'the number in their pocket' to connect with people and information; mobile phones are fast becoming the African PC.

A recent, promising development in mobile technology has been the introduction of browsers on mobile phones, with the smartphone[3] set to become the standard in the next few years. This, combined with the third generation network all mobile providers in South Africa have migrated to, means that ordinary South Africans are accessing the internet from their phones in ever-increasing numbers. To service this potential market, the Ulwazi Programme developed a mobile interface for their website. This stripped down version of the portal still provides full access to all the available content, essential functionality including the ability to quickly navigate to pages or categories, full searchings and the facility to edit content.

While these technological advances have made the development of the Ulwazi Programme possible, unless they are taken on and used by the community, the project has no relevance.

The community

The model on which the programme is based follows the micro-level approach (Davids *et al*. 2005), adopting a bottom-up philosophy, with the community as the most important member in the partnership (Coetzee, 2001). A major influencing factor is the possibility for potential participants

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[3] A smartphone is a mobile phone that offers more advanced computing ability and connectivity than a contemporary basic feature phone.

to communicate with one another in a community-specific way, enriching social interaction processes and outcomes (Stanoevska-Slabeva 2002), thereby building social capital (Bidwell 2010). For the collection of content, volunteer fieldworkers are selected from the immediate communities - typically younger people with some ICT skills. Once they have been trained in oral history research and protocols, as well as media production (digital photography, audio recording and web-based content management), fieldworkers are sent out into their communities to collect information (Denis and Ntsimane 2008, Ritchie 2003, Thompson 2000). They bring this information to the central programme office in the form of short journalistic style reports and recorded audio or video files, where they are assisted to post it to the programme website[4]. Contributions are also encouraged from the general public, who can access the Ulwazi Programme's website from their mobile phone or desktop computer and create an account. Once logged in, they can then submit an article to the website. New submissions are moderated by the programme's content manager. Special target groups in the communities include the elderly, the youth, cultural groups including artists and crafters, and professionals. Contributions range from personal and community histories to customary practices, folktales, environmental knowledge, and individual and group interviews.

The fieldworkers and the general public who have accounts submit information for publication on the web on a voluntary basis, and from a personal perspective, i.e. they decide what information they want to part with and interpret the facts of an event from own experience. Contributors sign an agreement to release the information for educational purposes, without relinquishing copyright or performance rights. Content is published online using a Creative Commons License[5], with full acknowledgement of the owner of the knowledge provided.

None of this is achievable, however, without the public library's involvement, a long-established institution with relevance in people's daily lives and reach into the rural and peri-urban areas of the Municipality.

The library

The Ulwazi Programme is now part of the municipality's regular library services and receives an annual budget. As part of social services, it is well positioned to ensure free and equal access to information and knowledge (Hedelund 2006). By virtue of their profession, librarians bring expertise to the programme in the form of information/content management skills. Contributions to the Ulwazi Programme website are stored online in a collaborative website, managed by the library. A content manager (with assistance from librarians) is responsible for editing, proofreading,

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4 Located at www.ulwazi.org

5 Attribution-NonCommercial-ShareAlike. Full license available at http://creativecommons.org/licenses/by-nc-sa/2.5/za/

translations and categorization. Following Mosimege (2005), the website employs the use of folksonomies rather than the controlled vocabularies used in formal library cataloguing systems, where qualified cataloguers assign subject headings from a predefined, standardised list. The Ulwazi Programme allows contributors to create 'tags' to describe the content they submit. They are free to use their own language and terminology for concepts unique to the communities. The advantage of folksonomies, in contrast to a controlled vocabulary, is that they are open-ended and can respond quickly to changes in the way users categorize content (Hartman 2006). It thus promotes the forming of a social network among web users.

The open social-network platform on which the programme is built provides the potential to preserve the dynamic nature, social embeddedness and shared character of community knowledge. As such it is a living document, a 'work in progress' to which amendments can be made at any time, to keep the knowledge updated, while at the same time providing a historical window. This kind of heritage practice creates an opportunity to "understand the cultural and historical value of information shared and curated in a socially distributed fashion" across various technologies (Liu 2010).

More importantly, as a library outreach programme, it is in step with global goals as constituted in the African Charter for Popular Participation (United Nations 1990), the United Nations Social Development Plan (United Nations 1995) and the United Nations Millennium Development Goals (United Nations 2000). It is also in keeping with the World Summits' on the Information Society (WSIS 2003, WSIS 2005) plans of action, which were developed to achieve the goal of providing equitable access to information and knowledge (Greyling & McNulty 2011). From the Geneva Plan of Action (WSIS 2003), the action lines directly underpinning the programme described are:

- Access to information and knowledge. This concerns policies relating to public domain information, community access points (including such access in libraries), alternative software models (open-source and free software). One of the actions envisaged is the development of digital public library services.
- Capacity building. This covers skills needed for the Information Society, including literacy and digital literacy, the use of libraries in e-literacy work and the empowerment of local communities to use ICTs.
- Cultural diversity and identity, linguistic diversity and local content. This action plan focuses on promotion of respect for cultural identity, traditions and religions and dialogue among cultures as a factor in sustainable development.

Libraries feature prominently in this plan, most notably their role in providing access to content and indigenous knowledge. By implication, the role of libraries is extended to promote cultural

heritage, support local content development and to enhance the capacity of indigenous peoples to develop content in their own language.

Usage Statistics

Since the Ulwazi Programme's inception, Google Analytics has been used to track usage statistics. Google Analytics is a tool made available by Google to monitor and report on user-interactions with the content of a website. A small script, supplied by Google Analytics and added to every page of the website that you would like to track, sends data back to your Google Analytics account. This includes data on the where website users are located, what sources they use to access the website and what content they are interested in[6]. For the purposes of this analysis, I have extracted a report for the period 01/01/2011 until 31/12/2011. This period is the third year in the Ulwazi Programme's existence. By this point, the Ulwazi Programme was well-known in the region and the user-base was constant. I have focused on the location data as well as the content accessed and suggest that this data goes some way to justify the existence of the Ulwazi Programme and fulfills part of its original objectives. For the total period under examination, the Ulwazi Programme's website received 91,817 visitors.

User Demographics

Where are the Ulwazi Programme's website visitors located? In 2011, the Ulwazi Programme attracted visitors from 182 countries. The global reach of the internet and the effectiveness of search engines means that once content is published online it quickly spreads around the world. Countries in the top ten of Ulwazi Programme users include the United States, the United Kingdom, India, Germany, Canada, Australia, France and Netherlands.   However, the majority of visitors - close to 60% of the total - come from South Africa, suggesting an interest in local content by local users. On a national level, the regional spread is split evenly between the provinces of KwaZulu-Natal and Gauteng. KwaZulu-Natal is the province that the eThekwini Municipality and the Ulwazi Programme is located while Gauteng (the economic centre of South Africa) has a large proportion of Zulu-speaking residents. The other seven provinces in South Africa all send visitors to the Ulwazi Programme website but in considerably smaller numbers. This trend is reinforced when looking at visitor demographics at a city level. Durban (the main city in the eThekwini Municipality and largest city in KwaZulu-Natal) and Johannesburg (the largest city in the Gauteng province) are the top urban locations for Ulwazi Programme web-users. In the list of top ten cities, Cape Town is the only city that is not located in the provinces of KwaZulu-Natal or Gauteng. Therefore, while the project generates interest from around the world, it is South Africa, and particularly the two provinces with the majority of Zulu-speakers , that are the major users of the website.These

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[6] More information on Google Analytics available from www.google.com/analytics/

statistics uphold one of the Ulwazi Programme's assumptions - the need for relevant online local content in local languages.

Content Analysis

The Ulwazi Programme website has 791 user-generated article in total[7]. Of these, 356 are written in Zulu with the remaining 435 in English. The articles are organised into 176 different categories. Three broad categories - Environment, Culture and History - form the organising structure, with other categories created organically, depending on the content submitted by the community. The most popular of these categories (determined by number of articles) are People & Personal Histories; Children's Stories & Legends; Clan Praises; Indigenous Games; The History of Surnames; Traditional Ceremonies; and Traditional Customs. These categories give a good indication of the type of content available through the Ulwazi Programme website but also the information that the community feels is important to preserve and share.

If we change the focus from content collected by the Ulwazi Programme, to content accessed online by its users, we see an interest in uniquely regional and cultural content. Seventy-five percent of all visitors to the Ulwazi Programme arrive through search engines (such as Google, Yahoo! and Bing) with the remaining users accessing the Ulwazi Programme website directly; from social media networks and links from referring websites. Google Analytics tracks this data, including the search-engine keywords used to find the Ulwazi Programme website. These keywords indicate the type of content people are actively searching for. Popular search terms include *umemulo* (a traditional 21st birthday celebration), *umembeso* (a type of traditional clothing), *izaga* (Zulu proverbs), *izinganekwane* (traditional folk-tales), *umbondo* (a traditional marriage agreement), *umhlonyane* (a puberty ceremony for females), *impepho* (a spiritual herb) and *izithakazelo* (clan names). Notably, most of the top search terms are in the Zulu language. This is an indication of the desire for but lack of local language content online. The Ulwazi Programme - with a critical mass of Zulu articles, in particular of a cultural nature - has become a key resource for search engines. Popular pages on the Ulwazi Programme website (again also tracked by Google Analytics), include Isaiah Shembe (a Zulu religious leader), *Umemulo*, Traditional Wedding, *Imicimbi Yesintu* (a traditional ceremony), *Ukuqala Komemul*o (a coming of age ceremony), *Umembeso*, *Ukuthwasa* (a spiritual healer's training), *Umhlonyane* (a traditional ceremony), *Izinganekwane*, Zulu Clothing and Recipe for Steam Bread. The most-accessed articles on the Ulwazi Programme website are linked to traditional ceremonies and customs of the Zulu people. This data reiterates that local users are searching for local content online, and finding it through the Ulwazi Programme website.

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[7] June 2012 statistics.

Conclusion

On a strategic level, the Ulwazi Programme has achieved the actions advocated in the Geneva Action Plan of the 2003 World Summit on the Information Society (WSIS 2003). The main strategic actions included the development of digital public library services, the empowerment of local communities to use ICTs, the promotion of respect for cultural identity, traditions and religions, and dialogue among cultures as a factor in sustainable development. Through the Ulwazi Programme, the capacity of the local communities of eThekwini to develop and access content in their own language, has largely been proven. Previously marginalised communities now have online access to local knowledge, along with the prospect of participating in the global information society and bridging the digital divide.

A reading of the Google Analytics data further indicates that while the Ulwazi Programme website has global interest, the majority of users come from South Africa, in particular provinces in which Zulu is spoken. The content these users are interested in - as is revealed through search terms that bring users to the Ulwazi Programme website and the articles accessed on the website itself - is regionally and culturally specific, and for the most part, in the local vernacular. As the Internet becomes more pervasive in all aspects of society, through the development of mobile and geo-location technologies, it also has the potential to become more relevant locally. The Ulwazi Programme is a example of this - with local users interested in local content in local languages. The programme provides a model to be replicated in other African countries, bearing in mind the local contexts, languages and political environments in which it will function.

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