ICT for Anti-Corruption, Democracy and Education in East Africa
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Introduction

The publication you hold in your hand is the first product of Spider’s Research Related to Projects initiative. This research model was devised and first implemented in 2011, to establish a closer connection between ICT4D research and ICT4D practice. ICT4D researchers in Sweden, in collaboration with researchers and practitioners in partner countries, carried out research on ongoing Spider-supported projects. This cross-breeding between ICT4D research and ICT4D practice has generated research that can contribute more directly to development work, and provide a substantial contribution to poverty reduction and other development goals.

Closer collaboration between researchers and practitioners contributes to ICT4D research that is grounded in reality, while at the same time allowing practitioners to draw on expertise that surpasses a particular project. The combination of research and practice is thus fruitful not only for future implementation, but also to improve ongoing activities. Establishing and forging a connection between the two fields can create synergistic effects, where the mere shift of perspective or alternative experiences can deepen the understanding of both practitioners and researchers. A well formulated research question can spur the imagination and inspire practitioners to look at their work with new eyes. In the words of David Obura, Project Coordinator for CORDIO EA (Chapter 6) “Mathias injected some new energy and dynamism into the approach to field work (and) his research questions forced us to be more objective about our work in the field.”

The contributions in this volume are organized into three thematic sections: anti-corruption, democracy, and education. Each chapter can be read independently but they also resonate as they elucidate various common aspects in ICT4D initiatives.

1 Addendum CORDIO Project Progress Report Jan-June 2012
The reader is first introduced to the thematic area of anti-corruption and how information and communication technologies can raise awareness, expose, and to a certain extent curb the practice. The two chapters in this section offer novel insights into the ways ICT can create a public space of debate and mediate action, while at the same time underscoring the cultural contextualization of ICTs and social media and how actions online relate to actions in the world.

The second section focuses on the use of ICT in democracy and accountability. The two chapters in this section highlight the challenges and possible solutions in using ICTs in democratic processes of accountability and transparency. Limitations in infrastructure, literacy and ICT skills requires solutions that rely on both “old” and “new” technologies, drawing on what is available and what is possible to find a combination that works.

The final section focuses on the use of ICT in education. Two contributions underscore in different ways the how close attention to the needs, priorities and capacities of the target groups strengthens ICT for education initiatives. Topics chosen by the participants themselves increase motivation, anchor ICT skills and inspire the participants to spread the knowledge further.

ANTI-CORRUPTION
Paula Uimonen presents a rich ethnographic description of how ICTs can play a key role in empowering ordinary Tanzanians to raise their voices and share their experiences of corruption. The concept of mediation allows us discern the agency that is embedded in acts of public sharing and online discussions. ICT play a key role in mediating, multiplying, and weaving together various media and statements and contribute to breaking the “culture of secrecy” that obscures corrupt practices. Public discussions also reveal that corruption is not so easily defined and delineated.

A similar conclusion is drawn by Johan Hellström and Brooke Bocast who have explored the divergence between the support of an anti-corruption campaign in social media and actual involvement in the initiative. While there has been great interest in the proliferation of social media, there is much more to learn about the impact of social platforms in development work. Their analysis of the concept “motive alignment” is an attempt to capture and understand this transition.

DEMOCRACY
While the number of mobile phone and Internet users is steadily increasing in developing countries, their use is concentrated among urban elites. In rural areas these technologies can only be used to a limited extent, this primarily due to the difference in infrastructure, literacy and ICT skills. Edgar Asiimwe, Wakabi Wairagala and Åke Grönlund have explored the ways ICTs are used to improve transparency and accountability in rural Uganda, the challenges of these initiatives and some suggestions for ways in which these can be overcome.
The use of ICT in developing contexts entails a variety of challenges, but limitations can also be the source of creativity and innovation. This is evident in the work of Aris Alissandrakis and Marcelo Milrad, who had to emulate a toll-free line in Uganda through a smart phone and a server in Sweden. Designing solutions that are available to the majority of the population requires close attention to context and the needs of the target groups with the lowest capacities. Approaches that rely on co-design or interactive techniques can bridge the gap between developers and end users, are thoroughly described in this chapter.

EDUCATION
Close attention to the needs and priorities of the target groups is also a key factor in the success of ICT initiatives in education. The online course in human rights Haki Zangu, developed and subsequently researched by William Jobe and Per-Olof Hansson, shows that a topic unanimously chosen by participants can have completion rates in Kenya that surpass the numbers generally accepted in the West. This must be considered in a context where only a minority of the population has Internet access, which remains limited and deterrently expensive.

A similar conclusion is drawn by Sarah Ater and Mathias Hatakka. Learning topics prioritized by the target groups themselves allow the benefits of education to take root and grow, not only in the immediate target groups but to the community. ICT training that is closely connected to the daily lives and goals of the target groups is no longer an abstract end in itself but has a direct resonance and impact on the livelihoods, self-esteem and capabilities of participants.

NOTE FROM THE EDITOR
I would like to thank my colleagues Ulf Larsson for his assistance in reviewing and commenting the contributions, Caroline Wamala for her assistance and Spider Director Paula Umonen for helpful comments and advice.
Mediated Agency: Music and Media against Corruption in Tanzania

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The painted sign on the tour bus carries a bold message: Chanjo ya Rushwa, Uvivu na Ubinafi (vaccination against corruption, laziness and selfishness), along with the name of the band Vitali Maembe & The Spirits. I notice that when traffic police read the sign, they simply urge the bus to pass on, not bothering with the usual “checkup.” It takes five hours to reach our destination, Kilwa Kivinje in Lindi region in southeast Tanzania. We are weary from the journey, hours on unpaved roads in poor condition, running parallel to a new road under construction, which as usual is taking longer than planned to be completed. Our first stop is the ward office, where Vitali Maembe shows a copy of his permit from the National Arts Council, while explaining the purpose of the planned performance. Although the permit is nationwide, he needs to secure local permits in every town and village of the tour. To our relief, the local authorities in Kilwa are cooperative and welcome the campaign, issuing the permit without delay. The tour bus is parked right outside the office, in a large open public space. It is a scenic location, a coastline with fishing boats anchored near the shore and historical buildings in what used to be an important trade port on the Swahili coast in precolonial times.

The band members offload the music equipment from the bus and position it on a small concrete platform. Although exposed to the hot tropical sun, the platform will bring the performers closer to the audience, thus they prefer to use this makeshift space rather than the existing stage with a roof a few meters away. Instruments and sound equipment are carefully placed on and around the platform. The heavy generator is carried to a nearby patch
of dry grass, to reduce the noise. Although the equipment is heavy, the stage is constructed within less than an hour, following a well-established routine that has been perfected during the past months of the tour. The musicians proceed with an elaborate sound check, which attracts curious onlookers. As the band gets ready, more and more people appear, patiently waiting in the shade of trees or leaning against walls. Towards late afternoon, Vitali Maembe jumps on the stage and the band begins to play music. Maembe introduces the group to the audience, along with the message they wish to deliver: vaccination against corruption. It is 30 January, 2012 and the Chanjo campaign has reached yet another district in Tanzania to give ordinary citizens an opportunity to speak up against corruption. The tour is mediated by microphones, organized with mobile phones, and documented with digital video cameras.

This chapter explores the use of music and digital media in the Chanjo campaign against corruption in Tanzania, focusing on mediations of agency. Building on Latour (2005), I use the concept “mediated agency” to refer to a process in which different cultural forms (mediators) bring about social transformation (agency). In so doing I recognize the “agency of art,” especially its embeddedness in networks of social relations and its “practical mediating role” in processes of social change (Gell 1998). Similarly, I appreciate media and other mediators in the broader sense of “social mediation,” with an emphasis on social interaction and exchange (Boyer, 2012). Thus, while understanding agency in the sense of transformative action or practice, I build on anthropological theories of mediation, focusing on social processes of intervention and interaction that include but go beyond different forms of media. In this chapter, I will argue that the Chanjo campaign creates a platform that mediates the agency of participants, empowering them to speak up against corruption. The music itself is of course an important form of mediation, but so is the method of delivery, not least the interaction with the audience, as well as the mobility of the campaign. These layers of mediation intersect in different ways, which enforces the process of social and cultural transformation. Through digital mediations and remediations (Bolter and Grusin, 1999), especially through social and mobile media, the campaign expands in time and space, thus extending agency beyond the tour itself.

BACKGROUND
Corruption has become widespread in Tanzania, now perceived to be one of the world’s 14 most corrupt countries when measured by the payment of bribes (Global Corruption Barometer, 2013 p.10). Over the last few years, the country has shown a downward spiral in the Transparency International Corruption Perceptions Index, dropping from 93 in 2006 to 126 in 2009. In 2010, Tanzania ranked 116, and in 2011, it rose to 100, still a lower rank than in 2006. Detailed analyses of governance structures suggest that official corruption has become pervasive, from petty corruption to political corruption (Policy Forum, 2009a). The police force and judiciary top the list of corrupt institutions, followed by medical services as well as public and civil
services, including education.\(^2\) Corruption is by no means confined to the state. Widespread corruption is also found among NGOs/CSOs (Policy Forum, 2009b), while foreign companies have been involved in large-scale procurement scandals (Dowden, 2010).

Research in Tanzania points to the “systemic” nature and “institutionalized” forms of corruption in the country (Heilman and Ndumbaro, 2002). Scholars underline the need to understand corruption in terms of “power relations and the morals, values, ethics, and material conditions that uphold them” (Ibid. 15). For instance, the social obligations of “patronage networks” tend to blur public/private boundaries, compelling public officials to abide by an “alternate moral code” that places greater emphasis on family, friends and clients than the common good (Ibid.). These alternative moral codes are by no means unique to Tanzania. Anthropological research on corruption in other parts of Africa underlines the “fluidity” and “variety” of both formal and informal rules, resulting in an “excess of rules” that is “clearly favourable to the dissolution of the boundary between licit and illicit practices” (Blundo and Sardan, 2006 p. 97). Similarly to other parts of the world, corrupt practices have become so widespread in Africa that scholars discuss the phenomenon in terms of “belly politics”, “culture of corruption,” and “culture of impunity” (Bayart, 2009; Blundo and Sardan, 2006; Smith 2007). Efforts to reduce corruption in key institutions such as the Tanzania Revenue Authority have had limited effect due to the prevalence of competing moral codes (Fjeldstad, 2003), while it is questionable to what extent the “pay reform” and “accountability mechanisms” of the state have come to terms with corruption (Mutahaba, 2005). In 2007, the Prevention and Combating of Corruption Bureau (PCCB) was established, “to provide promotion and enhancement of good governance and eradication of corruption.”\(^3\)

As indicated by the poor rankings in global corruption indexes, this government agency has had little effect on curbing corruption in Tanzania. If anything, the poor performance of PCCB illustrates what has been noted in other countries, namely that “the top-down creation of anti-corruption institutions on the instigation of external partners does nothing to halt corrupt transactions in the current context” (Blundo and Sardan, 2006 p.7).

In 2010, the Tanzanian musician Vitali Maembe released a music album entitled Chanjo (“vaccination” in Kiswahili). Having himself encountered corruption in different ways since he was in primary school, Maembe set out to make an effort to fight this social ill, using his music as a symbolic form of vaccination against corruption. The lyrics, mostly in the national language of Kiswahili, focused on corruption from different angles. In the cover of the Chanjo CD, Maembe stated his aims: “My focus is on awakening the society to see the power in us to change the current situation that put us in jeopardy such as corruption.” Similarly to other musicians in Africa, like Fela Kuti in

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\(^2\) http://www.corruptiontracker.or.tz/tcts/?p=465 accessed on 6 September 2013

\(^3\) http://www.pccb.go.tz/index.php/about-pccb accessed on 6 September 2013
Nigeria or Thomas Mapfumo in Zimbabwe, Maembe used his music as a “political weapon,” addressing the problem of corruption through lyrics of resistance (Thorsén 2004). Maembe’s political and social use of music built on the aesthetics of “art for society’s sake” that used to characterize the arts college in Bagamoyo where he was trained (Uimonen, 2012).

After the release of the album, Maembe started performing at schools, to “vaccinate” school children. His unsponsored one-man tour raised quite a few eyebrows and he recalls that many of his friends thought he had gone crazy. But with the help of a few friends, Maembe travelled around and reached as far as the political capital of Dodoma, where he delivered his album to the Members of Parliament. On his way back, he felt intimidated by a car following his movements, but he managed to return home safely. After this incident, he kept a low profile for a while, understanding that he was probably being watched.

In 2011, a more ambitious music campaign, “Chanjo: Campaign Against Corruption Through Music, Mobiles And Social Media”, was initiated with support from Spider. The project was undertaken in partnership with the Jua Arts Foundation for Children, a small non-profit organization managed by Vitali Maembe, and his fellow artists Hussein Masimbi and Diana Kamara. With financial support from Spider, the one-man tour was expanded to a nationwide campaign, carried out by Vitali Maembe & The Spirits. The band performed in open spaces, combining live music with public debates. The target audiences were marginalized groups: urban and rural poor, women, and children.

In conjunction with the tour, the Chanjo team set up a campaign blog, posting updates from the tour using photographs and a Facebook page, complementing the personal page of Maembe and other members of the team. Throughout the campaign, the team documented performances and interactions on video and still camera. Songs from the Chanjo CD were made freely available online and audiences were encouraged to share them on their mobiles.

In 2012-2013, I carried out the research project “Corruption In Everyday Life In Tanzania” based on the Chanjo campaign, together with local research assistants (Vincent Vinbro Ssekamatte and John Mughobi Sagatti) and a local filmmaker (Sixmund Begashe). We used a combination of ethnographic and visual research methods (Banks, 2001; MacDougall, 2006), including participant observation in the tour, interviews and group discussions with the Chanjo team, as well as photo and video elicitation. The aim of the research was to investigate how ordinary citizens perceive, experience and respond to corruption in everyday life in Tanzania. The empirical basis of

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4 Spider financed the campaign with money recovered from a Ministry in Tanzania, following a thorough investigation of financial mismanagement, carried out by Swedish auditors.
Mediated Agency: Music and Media against Corruption in Tanzania

the research comprised data gathered during the tour as well as the project team’s reflections on the outcomes of the campaign. During the research process, we also made an ethnographic road movie, Chanjo ya Rushwa, which is available online. This chapter draws on my fieldwork during the Kilwa tour (January-February 2012), the research reports by Sagatti and Ssekamatte, as well as the Chanjo film. Readers are encouraged to watch the film to get a better understanding of the analysis presented here.

MUSICAL AND DISCURSIVE MEDIATIONS
“Corruption is an enemy of rights and development,” Maembe stresses to the attentive audience in Kilwa (Figure 1). Mediated by the microphone, his words travel with emphasis, reaching well beyond the hundreds of people who have gathered to watch the performance. People listen in silence. Such words are rarely spoken in public, but the message is clear and strikes a familiar chord. Most of the people who have gathered at the public ground are poor; marginalized groups in a society where economic growth is doing little to improve the living conditions of the underprivileged. “The issue of corruption surely hampers people’s development and it affects the people with low economic capacity worse,” the Ward Officer in Kilwa tells Maembe, as he issues the local permit. “A person may be a patient, seek medical treatment, but because he/she can not afford a bribe, the patient may die” he exemplifies. Having to pay “extra” costs for free public services in health and education are often cited as examples by audiences throughout the tour, instances of petty corruption that burden the strained household economies of poor people in particular. Indeed, when given a chance to speak up, ordinary citizens complain a great deal about corruption, a phenomenon so widespread that few of them believe it can ever be stopped—possibly reduced, but never eradicated. The idea of vaccinating people against corruption seems a daunting task.

Figure 1: Chanjo performance in Kilwa. Photo by Paula Uimonen.

5 http://www.youtube.com/watch?v=HWdP8oPC7yE
LIVE MUSIC AND PUBLIC DEBATE

The Chanjo campaign uses music to mediate agency, a combination of lyrics and sounds to provoke reflection as well as action among listeners. As stated by Maembe in the cover of the Chanjo CD: “I hope that my lyrics provoke discussions in which people find solutions on their own.” This emphasis on agency, mediated by musical discourse, is embedded in the campaign, as exemplified in the slogan: “chanjo ya rushwa” (vaccination against corruption). Corruption is viewed as a disease and the music is a method of preventing it. In this way, the music itself carries agency, while mediating the agency of the people it reaches. As one of the team members reflects: “I can talk about Chanjo, just like a medicine, it penetrates like a syringe. It encounters an ordinary citizen, and it opens up his/her ears, because his/her ears were clogged, not understanding what is going on in Tanzania.” The lyrics address corruption through poetic symbolism that carries strong cultural resonance, while underlining that corruption is not an external social force but something within the community, as exemplified by the song *Hamia Ndege* (“Chase the Birds,” translation by Maembe):

**Chase the Birds**

*Maybe it’s me, maybe it’s not me.*

*Maybe I’m involved, maybe I’m not involved.*

*Chase the birds out of the rice field,*

*They are eating our father’s rice.*

*These birds are still in my rice field.*

*These bad birds with my rice.*

*My rice is like my heart.*

*My heart is my flower.*

*Corruption is against my development.*

As suggested in these lyrics, the music redirects the focus from government to citizens, which represents a novel approach in the fight against corruption in Tanzania. Throughout the campaign, the Chanjo team has to explain that they are not sent by the government, but carry out the tour in their capacity as musicians and as citizens. This is a new concept and many people find it hard to grasp, since they expect the campaign to be a government initiative, and more specifically, an effort organized by the anti-corruption agency PCCB. These expectations reflect a common situation in many parts of Africa, where donor-driven efforts of “good governance” have placed anti-corruption efforts in the hands of the state, albeit with very limited impact (Blundo and Sardan, 2006). Since the Tanzanian government has sought to implement such top-down measures to curb corruption, as exemplified by the establishment of the PCCB, citizens assume that anti-corruption efforts are state-run. The Chanjo team’s effort to make people realize that everyone can play a part in the fight against corruption thus represents a radical departure from the commonly held view that anti-corruption efforts belong to the sphere of the state. The novelty of the campaign’s approach is elaborated by Diana Kamara, artist and co-founder of Jua Arts Foundation:
“People are tired and fed up with corruption, but they don’t know how to fight it. They expect others to do something about it. Some people are not aware, they don’t know it’s a crime, a problem, a disease. Chanjo triggers people to wake up. We know it’s life changing. People can see things in a new direction, not waiting for government, but see what they can do themselves.”

(Interview with Diana Kamara 29 January 2012).

During live performances, the music is combined with public debate, thus merging musical and discursive mediations. As much as the songs aim to provoke discussion, it is above all through interactions between performers and audiences that critical discourses are articulated. The songs are interspersed with open discussion, during which Maembe elaborates on different aspects of corruption, while encouraging the audience to share their views and experiences. As the performance gains momentum, more people speak up, often sharing concrete instances of corruption that they themselves have experienced, or common practices encountered in their everyday lives. Encouraged by the musicians, especially Maembe who takes on the role of facilitator, the audiences muster the courage to share their views. In so doing, they venture into the unchartered territory of open public debate.

BREAKING THE CULTURE OF SILENCE

These public debates give a voice to the voiceless, thus breaking the “culture of silence” on corruption (Sagatti, 2013). In his analysis of the Chanjo campaign, Sagatti emphasizes that due to a combination of political, cultural, and social factors, issues relating to corruption are not openly discussed in Tanzania. He argues that the culture of silence and corruption itself are tied together; corruption is practiced in secrecy and since it is not talked about openly it remains hidden. By creating a forum for public debate, the Chanjo campaign breaks the culture of silence on corruption. In a social context where people feel uneasy about discussing critical issues, the campaign empowers people to speak up, thus strengthening their agency. This sense of empowerment is channelled towards critical analysis of corrupt practices, while emphasizing individual as well as collective responsibility in addressing corruption. As people start talking about corruption, many other issues emerge, with citizens using the opportunity to critique and question various aspects of governance. This discursive practice can be compared to Nigeria, where corruption has become a “dominant discourse of complaint”, commonly invoked to explain and interpret a wide range of morally questionable social behaviour, within and beyond the sphere of public administration (Smith, 2007).

The “culture of silence” is indicative of the limitations of transparency and accountability in established power structures. As much as the ideals of “good governance,” with its emphasis on efficiency, accountability, transparency, and the rule of law, constitute a “new form of aid conditionality” (Blundo and Sardan, 2006 p.6), in practice this “development discourse”
amounts to little more than “moral impression management” (Dahl, 2007). Research has shown that contrary to the rhetoric of good governance, the “deregulation of governance” and its accompanying “culture of legality” coincides with an escalation of lawlessness around the world, resulting in a “dialectic of law and disorder” (Comaroff and Comaroff, 2006). The discrepancy between official rhetoric and everyday practice suggests that contemporary forms of statehood are far more complex than envisaged in the global models that guide public reform programs, including anti-corruption efforts. For instance, Tanzanian statehood can be described in terms of “state of creolization,” a hybrid form of statehood constructed from a variety of cultural fragments that also reflect the asymmetric structure of the world order (Uimonen, 2012). In this context, it comes as no surprise that the ideals of transparency and accountability coexist with a culture of secrecy and impunity, since corrupt practices are associated with power, which is not subject to public scrutiny or liability. The co-presence of transparency and secrecy illustrates that power remains “opaque” and “out of reach,” which explains the rise of “occult cosmologies” around the world, offering alternative interpretations of invisible power (Sanders and West, 2003). And it is this invisibility, the very opposite of transparency, that underlies the culture of silence in a country like Tanzania.

FAMILY MEETINGS

The Chanjo team uses the idiom of “family meetings,” thus building on cultural practices that help break the culture of silence. Unlike typical awareness campaigns where people are spoken to, the Chanjo campaign focuses on engagement and interaction, the performances offering a “safe stage” for dialogue and debate (Sagatti, 2013). As Maembe himself reflects: “Chanjo, it gives the stage to people, to discuss.” This safe stage is enforced by the family idiom. By creating a sense of community based on family ties, the Chanjo team builds on elements of social equality and collective identity, while couching critical discourse in the cultural roots of oral tradition. Corruption is brought home, unearthed through dialogue, and addressed through a web of social relations. The problem is collectively shared; the family members come together to find a solution. The role of children is given particular emphasis, as exemplified in Maembe’s statement to the audience in Kilwa:

“If this environment (of corruption) continues these children will believe that corruption is the beginning of development; corruption is part of life.
So, you and I should stand today, to tell our children that corruption is the enemy of rights and development.”
(Ssekamatte field notes from Kilwa tour in January 2012)

The family idiom takes on even greater significance through appeals to a shared national identity. The back of the tour bus displays familiar nationalist images: a portrait photo of Baba wa Taifa (Father of the nation), Julius

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Kambarage Nyerere, along with the Tanzanian flag. As indicated by his title, Nyerere remains a powerful icon of national unity, and the Chanjo team uses his words to enhance the campaign slogan. Next to the pictures are citations attributed to Nyerere, written both Kiswahili and English: “Rushwa ndani ya Tanzania haina nipaka...Tanzania inanuka Rushwa,” “Corruption in Tanzania has no bounds...Tanzania is stinking with corruption” (1995) and “Yaweekana, Timiza Wajibu Wako,” “It Can be done, Play your Part.” By invoking the words of the father of the nation, the Chanjo campaign is connected to the historical roots of the nation, a time when corrupt practices were considered anti-patriotic and severely punished.

AMPLIFIED MEDIATION
Mediated by microphones, the performances encourage the agency of the audience, empowering them to speak up. The microphone is a simple form of information and communication technology, but in this context it has powerful impact. The microphone amplifies the sound of the voice, thus magnifying dialogical engagement. It takes courage to break the silence on corruption and to speak up in front of hundreds of people, but the microphone offers a sense of empowerment. For once, the voices of ordinary citizens are heard and their words are listened to by their fellow citizens.

These discursive mediations are amplified well beyond the use of a microphone, cutting across gendered patterns of public speech. The Chanjo platform creates an atmosphere of critical thinking and open communication (Sagatti, 2013). While some people use the opportunity to voice their experiences through the microphone, many more engage in dialogue and debate without a microphone, during as well as after the performance. This holds particularly true for women. Interactive as they may be, the Chanjo debates are gendered; it is mostly men who speak up, thus reproducing the cultural ideal of women remaining silent in public. But the women are not altogether silent: “Women here may not have picked up the microphone to speak publicly, but they have nevertheless been speaking all the time; you just need to be close to them to notice” (Ssekamatte fieldnotes from Kilwa January 2012).

COLLECTIVE OATH
At the end of the performance, the audience is invited to pledge their commitment to fight corruption, their agency mediated by a discourse of individual and collective action (Figure 2). Maembe articulates a vow with his right arm raised high, and members of the audience follow suit, while repeating his words:

- Corruption is an enemy of rights and development.
- I swear I will not tempt any person to partake in corruption.
- Nor let my soul partake in corruption.
- So help me God.

The oath combines several discursive strands, layers of mediation that capture the cultural essence of the Chanjo campaign. The perception of corruption as
an “enemy” reflects the moral underpinnings of the campaign, which is carried out as a crusade, with missionary zeal. It is a campaign against “evil,” defined in moral and religious terms, which is also how corruption is interpreted in many other parts of Africa (Smith, 2007; Sanders and West, 2003). The emphasis on “rights” and “development” amplifies the patriotic mission of the crusade, while expressing disappointment with bureaucratic and administrative practices that deviate from the ideals of “good governance” (Blundo and Sardan, 2006). The words “I will not tempt” expose the agency of participants, reminding them that they are part of the problem and can play their part to find a solution. Corruption is thus positioned within the social collective, not as an external force that renders people passive. The spiritual emphasis on “my soul” underlines that corruption affects people well beyond the material dimensions of social existence, thus relating to the religious dimensions of cultural identity. Indeed, the appeal “so help me God,” carries considerable agency in a nation where religious beliefs play an influential role in everyday life.

Figure 2: Collective oath against corruption. Photo by Paula Uimonen

SOCIAL AND MOBILE (RE)MEDIATIONS
After the performance, people gather around Maembe, who signs copies of the Chanjo CD, which he hands out for free to some participants (Figure 3). The copies are simple in appearance, without a label or cover, reproduced on the laptop used for the tour. Throughout the performance the team has encouraged the audience to download the music from the campaign blog, free of charge, and to share it with others. As far as Maembe is concerned, the more his music is spread, the more people will be vaccinated against corruption. Interestingly enough, by complementing live performances with the distribution of music CDs, the campaign is able to expand spatially as well as temporally, through digital layers of mediated agency. Similarly to the musical and discursive mediations, these digital interventions and interactions mediate the agency of participants, empowering them to speak up and make their voices heard as well as recorded, while expanding the performance space of the musicians.
CHANJO BLOG

The campaign blog⁶ adds an important layer of online mediation to the music tour. Set up in August 2011, the blog contains information about the tour, the team, and partners. The blog offers the Chanjo music for free, which can be downloaded through Soundclick, along with lyrics of some of the songs. As explained on the blog, for security reasons the schedule of the tour is not posted, but visitors are encouraged to contact the team to perform in their village, district, school or college. In 2011 the team posted monthly updates on the blog (10 in total), and in 2012 the updates were spread over the year (11 in total), with a final blog post on October 21, announcing Chanjo TV.

The blog expands the tour in time, lending permanence to performances that are ephemeral, as evidenced in the continued growth in viewers, even after the campaign. In December 2011, the blog had received 2,400 views, in December 2012 the number had increased to over 7,600, and in September 2013, almost a year after the completion of the tour, the number grew to over 10,000. The blog also increases the spatial reach of the tour, placing it in online worlds that expand the geographic scope of the campaign. Not only is the blog accessed by people in different parts of the country and the world, but it is also featured on other blogs.

FACEBOOK

The team also uses Facebook, with a Chanjo ya Rushwa page as well as personal accounts of the team members. The team set up the Chanjo ya Rushwa page in May 2012, to intensify the campaign’s media engagement. The page is used to post photos and announcements, and reaches over 350 “friends.” The page is, however, not very active. Instead it is through personal pages, especially Vitali Maembe’s page, that interaction takes place. Even before the campaign, Maembe had over 900 friends in Facebook, and as the tour goes on, the number grows to over 2,000. Maembe uses his page to share information and to initiate discussion, and receives many comments whenever he posts some news. Inspired by the campaign, members of the team also create Facebook pages of their own, many of them for the first time.

⁶ www.chanjoyarushwa.blogspot.com
Compared to the blog, which has few comments and only fifteen followers, Facebook proves to be a more interactive platform. This difference is partially attributable to differences in the platforms: blogs follow a more broadcast style of information flow (from blogger to viewers/readers), while Facebook builds on interaction within the context of social relations (“friends”). More people can be reached through social media that are accessible to the online public (e.g. 10,000 views on the Chanjo blog), than through social media that are confined to a closed social circle (e.g. 2,500 or 350 friends). But the level of interaction tends to be higher among people who “know” each other and it is this social context that makes Facebook a more interactive platform, especially in a cultural context like Tanzania where social relations are of overriding importance in everyday life.

Facebook is becoming a popular medium in Tanzania, especially among youth, whose media practices correspond to aspirations for modernity (Ekström, 2010; Uimonen, 2012). In December 2012, the number of Facebook users was estimated to be over 700,000, corresponding to 12% of the online population of 5.6 million people (12% of the total population). Building on the cultural ethos of *pamoja* (togetherness), Facebook is used by Tanzanian youth to manage translocal social relations and to express their cultural identity, not least through creative uses of profile photos (Uimonen, 2013). In Maembe’s case, he used a photograph from the tour as his profile photo during the Chanjo campaign, depicting him standing on a rock with his fist raised. The picture was taken at the family house of Nyerere in Butiama, which the team visited during the campaign, and the rock holds a torch that is toured annually around the nation. Through his profile photo, Maembe expressed his cultural identity as a Tanzanian musician, leading a patriotic campaign.

VISUAL MEDIATION

On the blog, the Chanjo team uses visual narratives, sharing highlights and information about the campaign through photographs. Throughout the tour, team members take photographs of performances, debates and the journey itself. This material is shared on the Chanjo blog, thus serving the dual aims of documentation and dissemination. It is a form of visual storytelling that mediates live performances online, glimpses of people and places encountered in the tour.

These visual narratives frame and mediate agency. For the team, the video captures their musical and discursive mediations in a format that allows them to reflect on their own performance. For the audiences, the presence of a video camera augments the sense of empowerment mediated by the microphone. Not only are participants given a chance to speak up, their statements are even recorded. In some cases, participants choose to speak off camera, out of shyness or fear of reprisal, but in most instances they do not

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shy away from the camera. For the marginalized groups reached through the campaign, this offers a rare opportunity to get their voices heard and recorded, thus amplifying their agency through digital mediation.

MOBILE PHONES
During the tour, mobile phones feature in many ways, mediating mobility as well as reflexivity. The mobile phone is the primary medium used to organize the tour, and the tour leader Maembe is often on the phone, communicating with everyone from band members to authorities. Even though the team travels with a laptop, email is not an option for daily communication, since it is not commonly used in Tanzania. The team also publicizes phone numbers on the blog that people can use to call them. During performances, participants are encouraged to download or copy the Chanjo music and share it through their phones. In Tanzania, the use of mobiles to listen to and share music is a common cultural practice (Uimonen, 2012). Some participants also use their mobiles to record the performances and debates, although few have access to smart phones, especially among the poorer social strata that the campaign focuses on. But some youth in particular record the performances on their phones, for later viewing and distribution. The use of digital devices (mobiles, cameras, video cameras) to record the performances mediates the campaign’s emphasis on interactivity and public engagement. Performers and audiences are not only gathering in the same place, engaging in dialogue, but they are also jointly recording the event.

ONLINE AND OFFLINE REMEDIATIONS
A great deal of remediation takes place during the campaign, underscoring interlinkages between online and offline media, thus exemplifying how different media “refashion” or “remediate” other forms of media (Bolter and Grusin, 1999). Photographs from performances are distributed through the campaign blog and Facebook, thus remediating live performances through online visual storytelling. In August 2012, the tour is featured in a local newspaper (The Guardian), which the team posts on the campaign blog, thus remediating print media in social media. The team posts news from the blog in Facebook, encouraging people to visit the blog, thus remediating between different social media. And after completing the campaign, the team publishes some video clips on YouTube, highlighted on the blog as “Chanjo TV,” thus remediating broadcast media online.

The tour bus itself serves as a form of remediation, extending mobile mediations of the campaign. Slogans and images are painted on all sides of the bus, making the vehicle a mobile platform for the campaign (Figure 4). As the team travels around the country, people can see the messages on the tour bus, the campaign thus reaching numerous people along the way. This mobile mediation also contains a form of remediation. The blog address is prominently written on the sides of the bus, the vehicle thus servings the double purpose of mobile mediation as well as remediation of social media.
These different forms of mediation and remediation expand the campaign, temporally as well as spatially, thus enforcing the mediation of agency. This expansive ideal is embedded in the campaign itself, as exemplified by the forward looking notion of “vaccination,” a preventive measure that will yield future results, and “music” as a method of delivery, which allows the campaign to reach well beyond the boundaries of physical space. Temporal and spatial expansion is thus an important dimension of the campaign, carried out through layers of mediation and remediation.

When asked during the tour in Kilwa how Chanjo can make a lasting impact, Hussein Masimbi, musician and co-founder of Jua Arts Foundation, responded:

“Since I was a child, some performances have stayed with me. Especially in these remote areas, it is a different experience. It [Chanjo] is not political campaigning, but a different experience, of community, it is interactive. It is not often they see this kind of approach. It is something they can compare with, so they will always remember it. They can download the music, so they can also remember. As the music will be free forever, they can always connect.”

(Interview 31 January 2012)

CONCLUDING REMARKS

By mediating the agency of participants to speak up against corruption, the Chanjo campaign has revealed that ordinary citizens are quite aware of how widespread corrupt practices have become, yet they are unsure of how to address the problem. Marginalized groups are often drawn into corrupt practices in everyday encounters with government authorities, but feel they have little choice but to abide by such instances of power abuse. This ineffectual compliance is compounded by the expectation that it is the government that should tackle corruption, thus reproducing the sense of powerlessness among ordinary citizens.
The lack of agency runs deep in the social fabric, as illustrated by the culture of silence on corruption. Contrary to the ideals of transparency and accountability, the rights of citizens are not verbalized, while corrupt practices that deny or divert citizens’ rights are veiled in secrecy. Invisible from public view, corruption is not openly discussed. Yet people are aware of corruption, as evidenced in the many statements collected by the Chanjo team, and when given a chance to speak up, they voice their frustrations, anger and despair.

The Chanjo campaign has contributed to breaking the culture of silence on corruption, through a creative combination of interactive methods and strategic uses of digital media. Since the campaign originates from the convictions and commitments of Tanzanian artists, it offers a bottom-up alternative to top-down campaigns commissioned by governments or donors. It is of course much too early to determine the impact of the Chanjo campaign, not least since the very aim has been long-term prevention through symbolic vaccination. But suffice it to say that by mediating the agency of ordinary citizens, the Chanjo campaign has enabled a growing number of people to play their part in the fight against corruption. As reflected by Hussein Masimbi:

“Of course it will take time, but if corruption is eradicated, Chanjo played a role. If it is still there, Chanjo will be remembered for fighting it.”
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ABSTRACT
While there is a lot of hype surrounding anti-corruption crowdsourcing interventions among development practitioners and international media, scholarly attention to the phenomenon within the development context is limited. In the “Crowdsourcing Critical Success Factor Model” (Sharma, 2010), the crowd’s “motive alignment” is singled out as the key determinant of success of the crowdsourcing initiative. By looking in-depth into the project “Not In My Country” (NIMC), which is a crowdsourcing platform used to record, report, and publicise corruption in Ugandan universities, the concept of motive alignment is scrutinised. While “Not In My Country”, 11 months after its launch, has notable popular support (over 3,500 “likes” on Facebook and over 15,000 unique visitors to its website), only 110 lecturers and 10 corruption reports have been submitted. If NIMC has apparently tapped into widely held anti-corruption sentiment and garnered significant traffic to its site, why do so few visitors actually engage with the site as its implementers intended? Data collected through a questionnaire and focus group discussions with Ugandan university students who have “liked” NIMC’s Facebook page, indicate that the concept “motive alignment” must consider not just ideological alignment, but alignment of modes of action and communication norms between participants and the crowdsourcing pro-
ject. Motive alignment needs a temporal dimension to be fully understood as subjects’ more immediate interests can subvert long-term goal alignment.

Keywords: ICT for development, ICT4D, crowdsourcing, ‘critical success factor model’, anti-corruption, Uganda.

INTRODUCTION
The past decade has witnessed a global proliferation of development-oriented crowdsourcing interventions. These interventions seek to harness collective knowledge and inspire popular participation in initiatives ranging from mitigation of natural disasters to election monitoring (see Bott and Young, 2012 for an overview of the crowdsourcing phenomenon). While donor, NGO, government and international media support for such projects are widespread, the scholarly attention to the crowdsourcing phenomenon within the development context has been limited. In particular, little work has been done on “failed” crowdsourcing interventions.

A report by Internews (Bailard et al., 2012) reveals that 93% of almost 13,000 Crowdmaps (user-friendly version of the crowdsourcing platform Ushahidi) had fewer than 10 user-generated reports while 61% of Crowdmaps had no activity beyond installation. This report raises a number of questions related to output (creation of a crowdsourcing platform) and outcome (impact), including questions regarding challenges and success factors.

A few scholars have identified a number of concerns relating to crowdsourcing in general (Currion, 2010; Hellström and Karefelt, 2012; Joyce, 2010; Morozov, 2011; Poblet, 2010). These concerns centre around the unverifiability of anonymous data, potential insecurities in reporting platforms, users’ lack of trust in the system, and the risks to citizens posed by the above. Crowdsourcing and its side effects “need to be addressed to avoid the consequences of technological misuse and subsequent risks for citizens” (Poblet, 2010, p.215).

Other scholars have identified crowdsourcing success factors (Bott and Young, 2012; Pedersen et al, 2013; Sharma, 2010; Walter and Back, 2011; Warner 2011). Sharma (2010) identifies a number of peripheral factors (vision and strategy; human capital; infrastructure; linkages and trust; and external environment) which all affect the key factor of “motive alignment” (see Figure 1), which is defined as “the extent to which crowd is able to associate with long term objective of crowdsourcing initiative” (Sharma, 2010, p.15). Motive alignment is the lynchpin of an intervention’s success or failure. However, this concept requires further unpacking to become a meaningful category of analysis.
RESEARCH PROBLEM

In this chapter we focus on the case of “Not In My Country” (NIMC), a web-based crowdsourcing anti-corruption initiative in Uganda. NIMC is far from the only anti-corruption effort using web and mobile-based crowdsourcing as a technique to engage the populace and achieve change; IPaidABribe (India, Kenya), Bribespot (worldwide), Bribr (Russia), RosPil (Russia, see Healy and Ramanna, 2013), Corruption Tracker (worldwide), Bribecaster (India; see Mittal and Rubin, 2012), Piata de Spaga (Romania, Romanian for “Bribe Market”), and Hatari (Kenya, Kiswahili for “Danger”) all provide means for citizens to anonymously submit reports of bribery and irregularities in public sector functioning (e.g., instances of police brutality, election fraud, etc.). As Davies recognises and as Table 1 below indicates, “many tools and platforms remain experimental, hosting just tens or hundreds of reported issues, and offering only limited stories of where crowdsourced SMS reports, or irregularities spotted in open data, have led to corruption actually being challenged, and offenders being held to account” (Davies, 2012 p. 48). Heeks (2002) would blame the failures of these projects on design gaps between the system as designed/intended/imagined and the actuality of the context into which it is deployed. This (mis)match is both context- and time-dependent.
<table>
<thead>
<tr>
<th>Project</th>
<th>Country</th>
<th>Website</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bare The Fox</td>
<td>Uganda</td>
<td><a href="http://www.weinformers.net/our-uganda/report-corruption/">www.weinformers.net/our-uganda/report-corruption/</a></td>
<td>Emerging from the BigPictureJournalism Trainer Workshop in Nairobi, June 2012. Initiative has generated only two reports.</td>
</tr>
<tr>
<td>Hatari</td>
<td>Kenya</td>
<td><a href="http://www.hatari.co.ke/">www.hatari.co.ke/</a></td>
<td>Focuses on Nairobi, uses Ushahidi and run by volunteers. 106 reports from Sep 07, 2009 to Nov 18, 2012.</td>
</tr>
<tr>
<td>IPaidABribe</td>
<td>Kenya</td>
<td><a href="http://ipaidabribe.or.ke/">http://ipaidabribe.or.ke/</a></td>
<td>I Paid A Bribe now operates in 10+ countries. In Kenya, they have received more than 3500 bribe reports. These are used to argue for improved governance systems and procedures, tightening law enforcement and regulation.</td>
</tr>
<tr>
<td>Tanzania Corruption Tracker</td>
<td>Tanzania</td>
<td><a href="http://www.corruptiontracker.or.tz/">www.corruptiontracker.or.tz/</a></td>
<td>Corruption reports can be sent via mail or SMS, which automatically generates a tracking number for feedback purposes. Website indicates almost 1M visitors but only two reports are mapped.</td>
</tr>
</tbody>
</table>

Table 1. Selection of anti-corruption crowdsourcing initiatives in East Africa.

What makes NIMC’s approach unique compared to the projects mentioned above is that they focus on one specific sector, that they target individuals rather than organisations and/or locations, and that they address both “quiet” and “hard” corruption.

Further comparison with the projects mentioned above reveals, importantly, that NIMC’s secure, encrypted and anonymous reporting system is rare: the connection to their site is encrypted (https), information submitted in cor-
Users of NIMC generate data regarding the competency and ethics of university faculty and staff using two distinct channels: 1) An anonymous rating and ranking system that captures “quiet” corruption such as incompetence and inefficiency (similar to a website popular in the U.S. called RateMyProfessors.com). This channel seeks to verify anonymous data by aggregating large amounts of information that serves as a check on itself. 2) A confidential system for reporting instances of “hard” corruption, such as bribery and personal favours.

NIMC presents a unique opportunity to probe the concept of “motive alignment” as the initiative has an impressive record of popular support: over 3,500 “likes” on its Facebook page and over 15,000 unique visitors to the website. However, only 110 lecturers rated a total of 296 times and 10 corruption reports have been submitted (as of April 15, 2013). According to Sharma’s (2010) “Crowdsourcing Critical Success Factor Model,” these statistics would qualify NIMC as a “failed” crowdsourcing project. If NIMC has apparently tapped into widely held anti-corruption sentiment, and garnered significant traffic to its site, why do so few visitors actually engage with the site as its implementers intended? This is the question that this chapter addresses.

RESEARCH DESIGN
In order to answer the above research question, we conducted surveys and focus group discussions with Ugandan university students who “liked”
NIMC’s Facebook page. This subject selection allowed us to probe the relationship between “liking” NIMC and participating in NIMC’s crowd-sourcing platform. Subjects were initially identified via NIMC’s Facebook page and recruited through private messages containing a link to the online survey; focus group participants were further recruited from the group of survey respondents. Due to this three-tiered system of recruitment, we reached subjects who demonstrated their enthusiasm for NIMC by: 1) “liking” NIMC’s Facebook page; 2) responding to our survey, and; 3) within the survey, indicating their willingness to participate in a focus group discussion. Thus, our subjects potentially represent those students who are most aware of, and committed to, NIMC’s objectives.

Survey questions addressed a broad range of factors relating to students’ engagement with NIMC, including: ICT usage, political activism, and experiences with and understanding of “corruption” on campus. These questions were designed to capture trends that influence students’ likelihood to engage with ICT crowdsourcing and anti-corruption initiatives. We received 31 completed surveys out of 227 distributed. Based on survey responses, we constructed a protocol that homes in on key elements of students’ responses. In particular, the focus group discussions addressed the gap between Facebook “liking” and platform participation in terms of technical, ideological, and institutional factors. Six focus groups were conducted with a total of 30 participants hailing from six universities around Uganda. Data from the focus group discussions was analysed using content analysis (Neuendorf, 2002). Discussions were transcribed and the coding terminology was developed based on the data. The coding terminology was then used as categorical themes under which the material was sorted and the emerging patterns were considered in light of the “Crowdsourcing Critical Success Factor Model.”

FINDINGS AND DISCUSSION
A number of our findings regarding NIMC’s “failure” to attract participation can be attributed to the peripheral factors outlined in “Crowdsourcing Critical Success Factor Model.” Limited access to the Internet, a nonintuitive platform, and students’ fears of government surveillance all contributed to students’ reluctance to report corruption on the NIMC website. However, none of these issues address the core research question of this particular chapter. For those students who were committed to NIMC’s mission to the extent that they overcame the above-mentioned peripheral challenges and engaged with NIMC’s Facebook page, why did they not rate lecturers and report corruption on NIMC’s website? We believe that the answer can be found through a closer examination of the elements of “motive alignment.”

First, our data suggest the need to incorporate deeper understanding of the temporal dimensions of “motive alignment” into crowdsourcing design. While all of our respondents share NIMC’s long-term goal of reducing “corruption” in Ugandan universities, data reveal that students recognise some benefits of corrupt practices for themselves and their peers. On the one
hand, many recounted incidences in which they or their friends were treated unfairly by lecturers and administrators, asked to pay bribes, sexually propositioned, and/or subject to tribal discrimination. At the same time, students also noted their own involvement in corrupt practices, as a way to “get what you want” (quote from one focus group discussion). Students reported benefiting from lecturers who distributed exam questions ahead of time, for a price, and similar acts of favouritism. This ambivalence complicated students’ motivation to publicly condemn individual lecturers, even when these same students believed that corruption was “wrong” in general. To some extent, subjects’ more immediate interests subverted long-term goal alignment.

This is neither a case of students simply saying one thing and doing another nor can it be explained solely through theories of “slacktivism” (see Morozow, 2011 p.179 ff.). All of our respondents demonstrated support for the anti-corruption cause by “liking” and/or commenting on NIMC’s Facebook page, taking our survey about corruption on campus, and participating in our focus groups. Further, a number of our respondents engaged in internal and external channels to address campus grievances such as corruption.

For example, focus group respondents participated in radio call-in shows, campus demonstrations, and anti-corruption petitions. Some used a suggestion box to voice their concerns (see Figure 3) and in several cases, students used their peers as proxies to report instances of corruption, in order to conceal their own identities. What these methods have in common is that they allow students to be truly part of a crowd, whereby they avoid one-to-one reportage and confrontation. These findings make sense in relation to Uganda communication norms that dictate the use of indirect communication regarding difficult or stigmatising matters (see, for example, Whyte, 2002; Low-Beer and Stoneburner 2004).

Thus, motive alignment must consider not just ideological alignment, but alignment of modes of action and communication between participants and the crowdsourcing project. This data also points to the many factors within “motive alignment” still to be unpacked (see Future Research below).
That our respondents—presumably NIMC’s target audience—failed to engage with the site as its implementers intended speaks to the complexity of human-ICT/crowdsourcing interaction. In fact, the evidence base on the impact in general of transparency and accountability initiatives is limited (McGee and Gaventa, 2011), and research on anti-corruption impacts of technology for transparency is very scarce. More in-depth research in the field is urgently needed.

What all this shows is that the proposed “solution” might not be a solution, since it is not addressing the problem—again underscoring that ICT systems and platforms are merely a tool, not a solution.

This chapter has addressed the question of why, despite the fact that NIMC has tapped into widely held anti-corruption sentiment and garnered significant traffic to its site, do so few visitors actually engage with the site as its implementers intended? The main reasons are that 1) students recognise some benefits of corrupt practices for themselves and their peers, and 2) students prefer to engage with anti-corruption initiatives that accord with local communication norms. Apparently, the line between victims and perpetrators is not that clear.

FUTURE RESEARCH
NIMC launched in Kenya in April 2013, approximately 11 months after it went live in Uganda. Comparing user statistics from the two country sites, Kenya had almost as many lecturers rated in 11 days as Uganda had in 11 months. One explanation could be that Kenya’s largest daily newspaper, Daily Nation, published an article about NIMC the day they launched. In Uganda, the major papers were (according to the implementers of NIMC), either too scared to publish articles about the project or they wanted bribes to do so. But are there also other reasons why Kenya generates more ratings and corruption reports? The peripheral factors outlined in the “Crowdsourcing Critical Success Factor Model”, especially human capital and infrastructure might differ. A deeper look into the similarities and differences would further shed light on the key determinants of success of crowdsourcing initiatives, i.e. the motive alignment.

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Using Technology For Enhancing Transparency And Accountability In Low Resource Communities: Experiences From Uganda

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ABSTRACT
This study aimed at investigating the user needs, practices, experiences and challenges faced in promoting transparency and accountability using ICT in low-resource communities. The research was conducted on two ICT4D (Information and Communication Technology for Development) initiatives, a call center, and a telecenter supported by two projects; (1) “Promoting Social Accountability In The Health Sector In Northern Uganda”, (2) “Catalyzing Civic Participation And Democracy Monitoring Using ICTs”. The two projects sought to fight corruption by increasing transparency and accountability using ICT to enable “whistle-blowing,” i.e., reporting misconduct in service provision. The projects are based in Uganda and are carried out by Spider (Swedish Program for ICT in Developing Regions) partner organizations: Transparency International (TI) Uganda and Collaboration International ICT Policy in East and Southern Africa (CIPESA). Using interviews, focus group discussions and observations, the study addressed three research
questions: (1) How have the two projects provided citizens a trusted and effective channel for “whistle-blowing”? (2) What are the enabling factors for whistle-blowing through ICT and challenges that affect whistle-blowers and how can the challenges be overcome?

The ICT service-delivery monitoring and reporting methods used by projects include toll free phone calls, blogs, radio talk shows, SMS and e-mail for reaching out; and processes for verification of reports and for communicating reports to government. There are results that indicate these methods are sound enough to serve the purposes of transparency and accountability, and the track record exhibits real change achieved in many instances. ICT users are optimistic and trustful of these ICT methods. Effective whistle-blowing includes efficient and effective reporting processes, convenience in reporting, actual service delivery improvements, availability and privacy, and affordability. There are also a number of challenges, including user education, gender issues, and general issues pertaining to the business model, including economic sustainability and finding the most effective scope of the operations.

Keywords: Transparency, Accountability, Corruption, ICT, Low-Resource Communities

BACKGROUND

There are many factors that play a role in achieving social development and transformations in society. One such factor is good leadership and governance that promotes and supports involvement of citizens in government agendas and the management of public resources. This chapter addresses two governance-related issues, transparency and accountability, that are key goals in a democratic society, but also conducive for another democratic virtue, namely citizen participation (Bertot, et al., 2012; Subhajyoti, 2012; Grönlund, 2010). The chapter discusses user needs, practices, experiences, and challenges concerning using ICT for enhancing accountability and transparency in low-resource communities. The practical focus of the chapter is on ways of using Information and communication technology (ICT) to improve citizen participation in improving public sector services by enabling citizens to report incidents where services were not satisfactory, which in practice means that corruption either occurred or was suspected. The chapter discusses how such reporting, which we refer to as “whistle-blowing” in this chapter, can be arranged in ways that are user friendly, improve effectiveness in reporting, and protect the reporter.

There has been considerable dissatisfaction among developing countries in areas of public service delivery (Subhajyoti, 2012). While poor service delivery may stem from many factors, corruption in the public sector is a major issue in many countries—in many cases the single most detrimental one—and one which has to be systematically addressed so as to effect change. A common definition of corruption, used by the World Bank and Transparency International, is “the abuse of entrusted power for private gain” (Ondrej,
Abuse may be through accepting, soliciting, or extorting bribes. Transparency and accountability are known to reduce corruption by making procedures more open and forcing governments to assume more responsibility for improving and controlling service delivery to citizens and companies and to reduce the opportunities to abuse positions of power for private gains. In an effort to fight corruption, many actors in developing countries are striving to create open government, sometimes also called “citizen-centered government,” by using ICT to increase accountability and transparency by providing government data, while also being accountable and transparent in the ICT use itself (Weinstein and Goldstein, 2012; Harrison, 2013). The projects studied in this chapter are examples of such efforts.

We are not interested in the reasons for poor service, but the systems by which citizens can report perceived misconduct, the procedures by which these reports are addressed, the investigation of the validity of the claims, and the subsequent follow-up and action.

The purpose of the study is to investigate the challenges involved in improving transparency and accountability by means of establishing safe avenues of reporting, whistle-blowing, and prompting organizational responses to those reports. The research questions are:

- How have the two projects studied organized their attempts to provide a trusted and effective channel for whistle-blowing to citizens?
- What are the enabling factors for whistle-blowing using ICT and the challenges that affect whistle-blowers and how can the challenges be overcome?

The first research question is mainly descriptive, while the second attempts to extract some general knowledge from the project experiences which can serve as a guideline for other projects as well as for improvements in the ones studied. The study focuses on two projects in Uganda.

ACCOUNTABILITY, TRANSPARENCY AND USE OF ICT

Accountability is “the quality or state of being accountable,” which in practice means “an obligation or willingness to accept responsibility or to account for one’s actions” (Merriam Webster, 2013). Officials take responsibility for their actions in the management of public offices, public resources, and public services. Accountability also applies to technical and administrative systems designed both to assist individuals in assuming that responsibility and to document procedures for auditability. One of the preconditions for accountability, but also considered beneficial for other reasons, is transparency, which refers to government being open regarding, rules and regulations, plans, processes, and actions involved in public management. “Transparency is internationally regarded as essential to many functions of democracy: participation, trust in government, prevention of corruption, informed decision making” (Bertot, et al., 2012 p.26). Lack of transparency and accountability undermines honesty and social trust, and creates infor-
mation advantages to privileged groups in society and subsequently hinders development (Anderson, 2009; Subhajyoti, 2012).

ICT is increasingly used to improve transparency and accountability. The Open Development Alliance report (Kuriyan, et al., 2011) shows that ICT can serve as an enabler for accountability, transparency and participation; it may be employed to reduce the distance between governments and citizens, provide a forum for information access and sharing, create faster interaction and feedback channels for government-citizen communication, and serve as a vehicle for individuals and groups to engage in action to exert their rights. Subhajyoti (2012), and Woro and Supriyanto (2013) demonstrate how ICT can play a role in amplifying the voices of the unheard people, increasing awareness and civic education through mass communication, empowering citizens to engage, and monitoring and evaluating delivery of services. There is a large number of ICT tools that can be used for the above-mentioned purposes. This chapter discusses how two projects supported by Spider are using ICT to support low-resource communities in what, according to the UN, is a “least developed country.”

Uganda is among the 25 poorest countries in the world. Located in East Africa, the country is estimated to have 36 million people, of whom 24.5% are living below the poverty line (CIA Factbook Index Mundi, 2013). One of the causes of Uganda’s extreme poverty is corruption. Uganda ranks among the most corrupt countries in the world, ranking 130 out of 176, according to Transparency International (TI, 2012). There are numerous examples of public servants embezzling funds for personal gain instead of delivering programs for creating investments that reduce poverty. It is estimated that the government has lost more than USD 300 million due to corruption between 2011-2013 (Lowenstein, 2013). The funds are lost through a number of ways, including the creation of “ghost” projects and “ghost” public servants such as teachers and army personnel, diverting foreign aid and local government funds to private bank accounts, bidding and selling government assets at lower costs with an intention of earning a profit from the buyer, diverting logistics for public servants’ welfare, and poorly monitored revenue sources and programs (IG Report, 2011).

Uganda is under international watch after several foreign funders including Norway, Denmark, Sweden, and Ireland cut financial support in 2012/2013 due to mismanagement of donor funds. It is against this background that stakeholders including civil society organizations, citizens, and external donors are seeking ways to intervene to promote transparency and accountability. Some of these interventions involve use of ICT, and the ones studied here are among those.

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8 World Bank to ‘review’ aid to Uganda over abuse of funds: http://www.monitor.co.ug/News/National/World-Bank-to--review--aid-to-Uganda-over-abuse-of-funds/-/688334/1620270/-/rh2lx8/-/index.html
Access to ICT is still relatively low in Uganda but growing at a fast pace. According to the Uganda Communications Commission—the industry regulator—about 17% of the population uses the Internet, while mobile phone density (number of phones per 100 inhabitants) stands at about 60%. Mobile phones and social media are among the main drivers of increased access to the Internet in Uganda, while competition among the six telecom service providers has helped drive down prices. However, low literacy rates, high costs of accessing and owning ICTs, acute shortages of electricity, and a lack of usage skills all hamper the use of ICTs in the country.

It is worth noting that the availability of these tools does not always automatically translate into their usage. As Maximo and Braun (2006) noted, connectivity, capability to use new tools, and content, in terms of relevant information provided in accessible and useful form, are equally key to effective utilization of ICT. Similarly, researchers (Bimber, 2000) have concluded that around one half of the “digital divide” between men and women on the Internet is fundamentally gender related but complimented by socioeconomic and other factors. Research in Uganda and other African countries has identified various issues that hinder women from using mobiles and the Internet including low levels of employment, lower education, cultural norms and practices. These issues are said to directly influence their income and the capacity/skills to use the technologies (Gilwald, 2010).

Similarly, Kitaw (2006) pointed out that there are several “non-connectivity” and “non-political” barriers to accessibility and use of ICT services, including cultural background, language, and level of technology experience. This then calls for particular attention to be drawn to the linguistic and cultural insight bearing on the conception, design and deployment of ICT applications, notably for rural communities. Other researchers such as Cook (2000) and Helbig, et al. (2009) have investigated whether or not citizens are being consulted on what services should be provided electronically; their research reveals how understanding people and demand is a vital practice when relationships with technology and community are being constructed, and thus citizens’ consultations are crucial.

THE CASE STUDIES
This chapter is based on the study of two projects. “Catalyzing Civic Participation And Democracy Monitoring Using ICTs” is a project carried out by Collaboration on International ICT Policy in East and Southern Africa (CIPESA); and “Promoting Social Accountability In The Health Sector In Northern Uganda”, managed by Transparency International (TI). Both projects aim to enable access and use of ICT tools to improve democracy monitoring and civic engagement, and to understand needs of citizens.

Just about 10% of the population is connected to the national electricity grid. http://www.energyprogramme.or.ug/other-activities/
CIPESA facilitates the development of networks of civil society organizations, media, citizens’ groups and local government that use and promote the use of ICT in governance. Within its scope of activities in 2011-2012, CIPESA supported the Kasese e-society, which is an e-service center/computer hub, i.e., a telecenter with a library. The center is located in the local government headquarters in the Kasese district, one of the biggest and oldest districts in western Uganda. The center serves local residents with ICT needs. It is a center for access and sharing of information and training and teaching in ICT. It provides free training in ICT, free Internet access (two hours per person a day), providing reading material (printed and electronic), and printing. The center is also responsible for updating the website of the Kasese local government office. The residents use this ICT hub to monitor and report public services delivery using Internet access provided by the center as well as digital cameras which are used by staff and citizen reporters to document issues within the local community.

The second case study, TI Uganda’s “Promoting Social Accountability In The Health Sector In Northern Uganda”, aims to empower health users to monitor corruption cases using technologies such as a toll-free telephone line, mobile text messaging, and social media such as Facebook. Through one of its projects TI Uganda implements a call center in the northern Uganda district of Lira. The call center provides free calls for specific user groups that monitor their respective health centers for better health service delivery. TI Uganda also organizes radio talk shows to allow people to air out their views on public service delivery issues. This organization also trains Voluntary Action Committees (VACs) and facilitates them with minimal resources to support their work of service delivery monitoring. The call center and the Kasese e-society are the two ICT initiatives studied in this research.

METHOD
The purpose of the study was to analyze the effectiveness of two projects in promoting transparency and accountability by means of organizing citizen reporting of poor service delivery and potential corruption cases and organizational responses to those reports with the aim of identifying general success factors and challenges so as to provide guidance to others. The primary methods used were face-to-face individual interviews, focus group discussions with system users and implementers, reviews of existing reporting methods, and observations of use of the tools, services and user training. The combination of methods was chosen both for convenience and effectiveness. Group interviews are useful because they can support discussions among respondents which can lead to more issues being discovered, as well as provide an opportunity to investigate issues more in-depth because interaction among respondents stimulates memories and experiences and their verbalization (Lindlof and Taylor, 2002). Focus groups can also provide an indication of the level of agreement among users because participants can validate each other’s statements (Tracy, et al., 2006).
Individual interviews were necessary when it came to individual staff as we were then interested in the tasks of specific individuals and their experiences of interacting with the users of the systems.

Use observations were made during end user training and during use of the projects’ services. Service processes were charted using several sources: documentation, employee interviews and user statements. Observation of users and processes in action are necessary to complement the views given by the respondents with a first-hand view of the activities. Observation serves as a necessary background for the interviews and focus group discussions, and also to some extent serves to validate user statements. A measure of triangulation is useful in any research but arguably especially so in qualitative research where data sources may be affected by individual bias. Any qualitative interview method carries a risk of observer/interviewer dependency as well as a risk of respondents keeping to what is considered socially acceptable. Group interviews also involve a risk of “groupthink” influencing individual opinions (Nachmais and Nachmais, 2008).

METHOD IMPLEMENTATION
There were two focus groups, one with 23 people and one with nine. Individual interviews were conducted with one local government official in the Kasese district, who was the acting Information Technology Officer (ITO), three TI staff in the Lira district, and one CIPESA staff member. Survey participation at both centers was open to ICT users that were willing and available to take part in the focus group discussion. All project administrators we interviewed were selected due to their roles. The focus group discussions and the individual interviews were guided by semi-structured questions. The interview questions were designed to cover key factors known to be important in soliciting citizen input in what may be sensitive issues. The questions covered three main areas: 1) description of the way operations were designed and managed, including user services and procedures for reporting incidents to authorities; 2) identification of critical issues enabling or prohibiting whistle-blowing in the context of ICT use, such as privacy, monitoring and evaluation, motivation for use and some suggestions for improvements.

RESULTS AND DISCUSSION
This section presents the results of the study. The presentation is organized by the three fields of investigation; whistle-blowing and the monitored services, enabling factors for whistle-blowing by ICT, and challenges and suggestions for improvements.

WHISTLE-BLOWING; PROCESSES AND METHODS FOR SERVICE DELIVERY MONITORING AND REPORTING
In both cases studied, the reports on failures in service delivery are from individual members of the community or individuals assigned to convey these re-

ports to local government. Some individuals are members of a VAC and hence are committed to monitor the state of public services delivered in local communities. For the e-society, the cases are reported to local government officials and are also discussed by the community members on the ICT forums. Cases reported include issues like absenteeism or late arrival of health workers, drug stock-outs, denial of services, and poor sanitation at health centers. Any verified call creates a case and all cases are recorded for reference and follow-ups. Figure 1 shows the general procedure; a VAC member or individual contacts TI administrators at the call center. The administrator makes a report and visits the health center to verify the report. The issue is presented at a health center meeting to discuss a solution. The dialogue may involve a government official. In some cases, reported cases are handled by the administrator of the health center once TI staff and the VAC members have brought an issue to their attention. In most cases, the cases have to be presented to the District Director of Health Services, or even (on rare cases) to the headquarters of the health ministry in the capital of Kampala for action to be taken. This is because it is often the case that lower level officials at health units do not have the power to recruit or fire staff or to stock up on drugs.

There are various methods used to monitor and report cases. Before introducing ICT, reporting involved travelling as it was done in person at the authority or in physical gatherings at some location other than the telecenter. These ICT reporting methods were used:

- By telephone via the toll-free line (call center).
- Text messaging (SMS) which was considered to be expensive as they incur a charge.
- Radio (on talk shows). This method was also said to be expensive since callers make live calls to talk shows to participate and the telephone number used is not toll free. The callers may not be able to report in-
stantly, but can report previous occurrences. This medium reaches a bigger population since radio is the primary source of information in northern Uganda, but the reports are not instant.

- E-mails are also used for reporting and sharing information but no instant feedback is given.
- Social media: Some respondents noted that they use online platforms such as Twitter and Facebook for reporting service delivery while others use blogs, for example, the Kasese center’s blog\(^\text{11}\) or TI’s Facebook page\(^\text{12}\).

These processes of reporting and the reporting methods enable faster communication and feedback and use of transparent channels that bring along more benefits. However, there are drawbacks such as cost in relation to service maintenance and training, infrastructure and others.

**MONITORED SERVICES**
Various service delivery failures reported through the use of ICT included the following.

Through the TI call center:
- Absenteeism from work by health center staff and tardiness coming to work, which affected the operations of the health care facilities. Respondents highlighted that some public servants held offices in other private institutions or personal businesses where they spent more time than on their official duties. This was attributed to poor supervision in government institutions and poor employment conditions that necessitated public servants to earn extra income outside their jobs.
- Poor health services offered (eg. rude nurses, missing drugs) and poor conditions around hospitals (eg. compounds overgrown with grass, hospital waste inappropriately disposed of, poorly kept latrines).
- General corruption cases, including unequal or less distribution of drugs among the available health centers, and procurement irregularities.

Through the Kasese e-society center:
- All kinds of corruption issues and poor service delivery cases in all government sectors mainly agriculture, health, transport, education and water.
- Quality of service. Whether the services are poor or good, reports are made to complain or show appreciation. Violence, most especially domestic violence against women.

**ENABLING FACTORS FOR WHISTLE-BLOWING**
The most important enabling factor for “whistle-blowing” is finding motivation to report. This also includes the absence of discouraging factors. In the cases studied, users stated the following motivation factors:

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11 http://kasesenews.blogspot.se/
12 https://www.Facebook.com/tiuganda
**Efficiency and effectiveness in reporting processes:** The response during reporting of incidents/cases is fast. Case reporters, for example a VAC member who used a toll-free line received instant responses on what measures will be taken in the case they are reporting. Some of the reported cases are handled immediately by the call center staff by forwarding them to the duty bearers (such as the head of health services in the District), to elicit action on the failure in service delivery. This fast feedback cultivates hope and trust among the members of the public who are monitoring and reporting on service delivery failures.

**Service fees:** The services at the projects that were investigated in this study were available to users free of charge. Services included free telephone calls via a toll-free number for the call center, while for the Kasese e-society there was free ICT training (how to use the Internet and computers for reporting and other purposes), Internet access for two hours per person a day, access to library and e-material for reading, and ICT support services such as printing and scanning. For a community in which average daily earnings are below $2 dollars per person, such cost-free services are an important motivating factor.

**Feedback loop and service delivery improvements:** Many interviewees provided examples of how their monitoring and reporting on failures in service delivery had led to improvements in the services they received. Many VACs reported that health workers were reporting to duty on time and staying throughout their shifts, and that the health center whose poor sanitation they reported about had made improvements. Health workers were at a risk of losing their jobs if any form of poor performance and irregularity was reported, as citizens had proven they could directly elevate matters to higher authorities. Where citizens reported a shortage of health workers, more staff was deployed. In Kasese, citizens used cameras from the resource center to document the failure of a big project that was supposed to provide water to thousands of citizens. They uploaded the photos on Facebook, on blogs and on discussion forums where many of the Internet users in the district are subscribed. Discussions ultimately forced the district engineer to attend to the matter, the technical issues were rectified and the water delivery is now operational. There is a similar experience with a bridge in Kasese which district authorities had declined to work on, claiming there were no funds. But when discussions about its poor state (which was leading to loss of lives) was discussed in the online forums and also on radio shows by VACS, district leaders met the VAC members, visited the site, and constructed the bridge. The Center’s Facebook group has attracted 2,265 members and YouTube is also being used to share and document stories from the community.

13 Rwenzururu Discussion Board, https://www.Facebook.com/groups/nokasesesplit/
Availability and privacy: The Kasese local government website which is managed by the e-society serves as an information hub for residents in Kasese district. The call center is available 24/7 while the e-society center is open from 08:00 to 17:00 Monday to Saturday. Corruption case reporters noted that their information is not being disclosed which gives them anonymity and confidence to keep reporting on service failures since they are assured that relations between them and other members of the community, who might be unhappy about the reporting, are protected. Furthermore, for call center users, the information on the reported case and the caller is backed up in a voice recording and can be used for reference by the call center staff that also have callers’ identities but never share them with the health officials or other duty bearers responsible for service provision.

CHALLENGES AFFECTING ICT USERS
There were also challenges reported during interviews and focus group discussions, including the following:

Poor infrastructure facilities and limited ICT resources: Some of the rural areas have low connectivity while others experience electricity shortages and blackouts. This affects communication. Considering the total number of inhabitants in both the Lira and Kasese districts, the ICT resources are insufficient and the lines to the call center are always busy as there is too few staff to take the calls. Members of VACs noted that “sometimes, it takes a lot of time for a call to be received, at times more than 20 minutes.” At the Kasese e-society service center there is a similar shortage. The center is hosted in a small facility with few computers within a large community of people and the location of the center is far from residents.

Trust in VAC members and project officials: The nurses and other medical workers are frightened by the community members who act as monitors as opposed to their traditional monitors/supervisors. They thus become suspicious and feel they are being spied on. Members of VACs noted, “…they (the nurses) get scared and don’t trust us.” Projects need to include awareness-raising among the health workers that members of VACs and other citizens are not monitoring the services they offer for malicious reasons but in order to help improve the quality services offered to the community. But trust can be built. In Kasese, the staff said that while they had been treated with suspicion and hostility, including threats of physical attacks, by government officials such as local councilors, they have now established a good working relationship with district officials after showing that they were not acting out of malice but simply for the public good. Beside TI Uganda, there are also other anti-corruption agencies such as Anti-Corruption Coalition Uganda who offer similar services in an effort to fight corruption. So there is some confusion on part of the callers as to making the choice regarding which agency will be effective in solving the problems they come across.
Use irregularities: Prank calls continue to be an issue for the call center. Such kind of misbehavior prompted the central management not to disclose the toll-free number to the general public as the problem would escalate. Similarly, some users of the e-society were using the computers and Internet primarily for their personal use rather than to report and share information on service delivery issues. There is a need to create awareness among users regarding the core purposes for which the services are intended.

Lack of ICT skills and motivation to use: Respondents acknowledged their lack of skills in using the available ICT resources, especially for purposes of reporting. The reported information was at times too much to comprehend or not precise enough to provide a basis for an investigation. There has also been some misuse of ICT resources with users not using the ICT resources as instructed. Lack of skills may lead to poor use of facilities and low motivation and it is clear that users need ICT training.

Sustainability and costs: Offering a service involves a cost. Currently some of the services provided in the studied projects are supported by the local government, others by external funders such as non-governmental organizations. The services are free for the users so there is no revenue to be generated from the users to facilitate the running of the ICT services provided. At the same time, the costs of Internet connections and telephone calls are high, transportation and facilitation of the running of the centers, as well as the VAC members who need to travel to distant places on monitoring duty, is funded by the projects. Without external funding the services cannot be provided, and this is a big sustainability challenge.

Gender issues: The study observed gender discrepancies in access and use of ICT services. Respondents noted that in the community ICTs are mainly viewed as artifacts for men, and the majority of the users are men. Possible factors underlying this view may include that in developing regions women are economically disadvantaged which means they will often lack access to a mobile phone, or not have the skills to use the Internet. Furthermore, there is a cultural division of labor perspective that suggests women should do activities that are carried out within the premises of homes. Other tasks outside homes, especially for uneducated families, are perceived inapplicable for women. Such cultural issues suggest a need to educate the communities and to create incentives for females to also take part in the monitoring activities.

CONCLUSION
This research gives an insight into the ICT monitoring and evaluation tools used in low-resource communities to promote transparency and accountability with the primary intention of eliminating corruption. Two case studies are presented to discuss challenges of the process and the user needs that must be met in order to provide effective support. The current methods for accountability and transparency in the studied cases have been effective to the extent that they have allowed hitherto disempowered sections of the community to
play an active role in reporting service delivery failures. Furthermore, the initiatives have had impact in terms of eliciting action from responsible government officers as evidenced by a bridge constructed in Kasese; a water service rejuvenated in Kasese; and in the Lira district, lower levels of health staff absenteeism, higher hygiene standards at health centers, fewer demands for bribes before patients are given services at a number of centers monitored by VACs, and fewer instances of drugs stock-outs. Besides these impacts that are attributable to the work of the ICT monitoring tools, it is also noteworthy that because service providers now know that they are under the watch of citizens who are empowered to speak directly to hundreds of members of the public and also to the supervisors of these public officials, the service providers are more keen to do right even when the monitors are not looking.

In this chapter we have pointed to a number of success factors in enabling whistle-blowing, including efficient and effective reporting processes, convenience in reporting, actual service delivery improvements, availability and privacy, and affordable services.

We have also discussed number of challenges, such as lack of trust in or credibility of the organization delivering the service, use irregularities, poor infrastructure facilities and limited ICT resources, lack of skills in ICT use and reporting among users, as well as gender issues.

There are also issues pertaining to the general business model for this type of service which may affect the service in a long-term perspective. Economic sustainability is one such issue that conflicts with the importance of keeping costs for users down. Another issue is to what extent specialization, e.g., to one specific sector such as health care, is necessary so as to develop the proficiency and contact network needed for being effective in not just reporting but achieving real change. After all, being effective in this is the crucial factor for motivating people to report on service irregularities.

Whistle-blowing services like the ones discussed in this chapter can be replicated in similar regions to promote change, despite the multiple challenges. The services studied here have achieved considerable credibility, and achievements include not only direct ones like actual improvement of some services but also more general ones such as increased transparency, i.e. awareness among people of work responsibilities in public institutions, improved ICT skills and use, reduced gap between citizens and local government officials, increased access to information and information exchange etc.

Furthermore, results suggest that ICT can function as an amplifier of the voices of citizens. ICT is perceived to be reliable, secure, fast, conducive to protecting privacy, and promoting gender equality despite the perception that ICT tools are artifacts for men. Women in the studied districts obtained the opportunity to share their views using various media tools. This is unlikely to happen in face-to-face meetings in rural areas.
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Designing Interactive Mobile Services To Promote Civic Participation In Northern Uganda

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ABSTRACT
This chapter presents the activities and outcomes of the project called “People’s Voices: Developing Cross Media Services to Promote Citizens Participation in Local Governance Activities”.

The aims of the project were as follows: a) To identify and describe a number of cross media services that can be used to promote citizens’ participation in political decisions and civic activities, and b) To develop a conceptual design and a prototype system of such a service. The project included a number of field trips from Sweden to Uganda, used participatory design and ethnographic techniques for requirements elicitation, actively involving the different stakeholders. The developed system allows people in Uganda to use their mobile phones with an interactive voice menu interface to submit reports of poor service delivery or irregularities in local governance.

We hope that our contribution will emphasize how novel ways of integrating and using ICT can provide opportunities to encourage and facilitate civic engagement in North Uganda. The potential massive adoption of the kind of interactive mobile services described in this chapter can allow this technolo-
gy to be used in unique ways to provide opportunities to make government-
ment services more innovative, transparent and cost-effective, as well as to en-
courage citizens to become more engaged and goal-focused for the common
good of their society.

The project was partially funded by the Swedish Program for ICT in Devel-
oping Regions (Spider) and was a collaboration between the Center for
Learning and Knowledge Technologies (CeLeKT) at Linnaeus University
(LNU, Sweden), the Women of Uganda Network (WOUGNET), and Maker-
ere University (MAK, Uganda).

INTRODUCTION
The current chapter presents the outcomes from the ICT4D research project
“People’s Voices: Developing Cross Media Services to Promote Citizens Par-
ticipation in Local Governance Activities” carried out by CeLeKT.

The motivation behind the “People’s Voices” project was related to an
ICT4D project carried out by WOUGNET in North Uganda, called “Emp-
owering Local People and Communities to Monitor Districts Services De-
livery through ICTs” (funded by Spider). The WOUGNET project was
launched in the five districts of Amuru, Gulu, Oyam, Kole and Apac in Sep-
tember 2011. Since then a number of activities took place, including ICT ca-
pacity building workshops in the different districts, and orientation of pro-
ject participants (Voluntary Social Accountability Committees, VSAC) in
how to use mobile phones to send SMS messages to report poor service de-
livery and irregularities in local governance to the respective authorities.
These participants were also instructed in how to use digital cameras for
taking pictures as evidence of their concerns, and how to use computers.

These different awareness-raising activities have created excitement, espe-
cially among women who had not thought of owning and using a mobile
phone. As a result, a number of them have since acquired their own phones
and use them to report cases of poor service delivery. A website using the
Ushahidi\textsuperscript{15} web platform is used to show these reports across the five dis-
tricts. WOUGNET is also using more traditional media to inform about the
project, including newsletters, articles in newspapers, and involvement in a
radio talk show.

Despite these ongoing efforts, members of WOUGNET had identified a
number of challenges. These included limited awareness of the benefit of us-
ing ICT, especially mobile phones, in disseminating information. The isolat-
ed use of the different types of traditional media to empower the local com-
unities in fighting corruption seemed to lead to a waste of resources. This
was mainly attributed to the lack of ICTs (e.g. few mobile phones amongst
many), high levels of illiteracy in the community and low level of ICT skills,

\textsuperscript{15} http://www.wougnet.org/ushahidi/
and appropriate sensitzation on the need to combat corruption through community monitoring. Therefore, the isolated use of ICT tools within Northern Uganda’s districts has not had a substantial impact on reducing corruption within the local communities. Another related problem lies with strong cultural norms and practices that still limit the usage of ICTs, especially among women.

Megwa (2007) points out that although some organizations have launched different initiatives to counter the digital disparities between urban and rural areas in South Africa, most of the attempts tended to introduce more and more ICT hardware to rural areas instead of looking for creative ways to expand ICT access to benefit poor and rural communities. Guided by such observations, for the “People’s Voices” project we wanted to repurpose and reuse existing technologies rather than introduce new ones.

The rest of the chapter is organized as follows: Section 2 presents the project research aims and objectives, while Section 3 describes the methodological approach that was followed. In Section 4 we describe the activities that took place, and Section 5 describes the conceptual design and the prototype that were developed based on the requirements we identified during our field trip in the summer of 2012. Section 6 describes the testing and validation of the prototype in the summer of 2013, and finally in Section 7 we present our conclusions.

RESEARCH AIMS AND OBJECTIVES
The objective of the related WOUGNET project was to empower local people and communities to monitor district service delivery through a combination of different ICT-based tools and traditional media.

Many initiatives in Uganda and other nations have focused on supporting civic participation. It appears that such efforts do indeed improve the quality of public service delivery (Deininger and Mpuga, 2005). Additionally, the use of ICT for the purpose of improving public service delivery (Zanello and Maassen, 2011) and fighting corruption (Grönlund, 2010) has shown promising potential. ICT is applied in various ways with the hope of improving transparency and fighting corruption, especially in sub-Saharan Africa (Heacock and Sasaki, 2010). According to a white paper by Barkat et al. (2011), the use of a combination of inexpensive and widely available tools and social media can empower citizens to organize themselves and to improve their civic responsiveness.

The use of “cross-media” to empower the local communities in monitoring and reporting corruption has a considerable impact on community development. Cross-media refers to interactive experiences across multiple media, including the Internet, video, cable TV, mobile devices, print and radio. The new media aspect of the “cross-media experience” typically involves a high level of audience interactivity (Davidson et al., 2010).
Thus, the research question that guided our efforts in the context of the “People’s Voices” project was as follows: What are the potentials of using cross-media services for supporting and empowering the people of Uganda in order to increase their civic engagement?

In particular, co-design and interactive techniques (Benyon, 2013) involving different stakeholders were used to identify the needs for the design of such interactive services. The project brought researchers and master’s students from LNU and MAK together with different actors from WOUGNET in order to achieve the following objectives:

- Identify and describe a number of cross-media services that can be used to promote citizens’ participation in political decisions and civic activities.
- Develop a conceptual design and a prototype system of such a service.

RESEARCH METHODS

An important aspect of the work that was conducted in this project deals with technology and service design, especially interactive services. We explored new solutions and ways to modify or improve existing methods to include the creation of cross-media services to support civic engagement. We applied exploratory and iterative approaches that involved a number of concurrent and interlinked activities that included:

- Generation of concepts
- Design and assessment with the different stakeholders
- Refinement of concepts
- Creation of prototypes

Design-based research is an attempt to combine the intentional design of interactive environments with the empirical exploration of our understanding of those environments and how they interact with individuals (Hoadley, 2004). Dourish and Button (1998) refer to the term “technomethodology”, which is closely related to our interest in using qualitative social science methods represented by participatory design and ethnography together with technology design.¹⁶

The team consisted of researchers from the fields of computing, information and media technology, software development, as well as members of the WOUGNET team. These stakeholders contributed in different ways to the knowledge base that guided and scaffolded the process of collaborative design (as it cannot be expected that each individual team member should be acquainted with all aspects of the knowledge base). The discussions and negotiations between the team members were guided by scenario-based design (SBD, Rosson and Carroll, 2002) as it is a methodology based on narratives that enable rapid communication about usage possibilities and concerns among many different stakeholders (Penuel et al., 2007).

¹⁶ For a comprehensive guide to interaction design see (Benyon, 2013; Beyer and Holtzblatt, 1998).
The methods used for analyzing the different communication processes and their implication for the design of the cross-media services were partially ethnographical. We used field notes, captured voice, and video recordings of dialogues with different stakeholders, and conducted interviews and observations that were connected to authentic situations. The aim of using such ethnographic methods has to do with “coming closer” to different situations in real settings, find out “how communication is taking place”—how artifacts are used, what the interaction between the participants looks like, and so on. In the next section we present an overview of the different project activities that took place between the period of spring 2012 and late summer 2013.

PROJECT ACTIVITIES
In the initial phase of the project (starting in the spring of 2012), the research team carried out an analysis of the ongoing efforts by WOUGNET as well an investigation of the technological feasibility and practicality of the project objectives mentioned in Section 2. Regular online meetings took place between the Sweden and Uganda teams, to discuss and work together. The outcomes of these efforts lead to an initial identification of requirements that could be used to guide our future developments. A web-based repository was established for project members to share documents and relevant scientific publications.

Following an identification of needs and a feasibility study, a team of two researchers and four master’s students from LNU traveled to Uganda in the summer of 2012 for a period of two weeks, visiting Kampala as well as the Apac, Oyam and Gulu districts. The team met with the academic partners from MAK and WOUGNET representatives. During the trip to the three northern districts, several members of WOUGNET, as well as a master’s student from MAK, accompanied the group from LNU. The purpose was to conduct field trips in order to get a deeper understanding of the problem domain, as well as to carry out the requirements definition. In each of the three districts an interactive design workshop took place (see Figure 1), together with the different stakeholders (these included members of WOUGNET, VSAC, and local people, totaling more than 150 persons). In addition to these workshops, the local radio station at Apac was also visited, to explore some further cross-media possibilities.

Figure 1. Photos from the workshops during the first trip to Uganda. Photos by LNU, Media Technology Department.
During fall 2012 and spring 2013, a conceptual design was developed. Guided by the analysis of the data collected in the field and the continuous interaction with our colleagues in Uganda, we embedded user needs into the design and implementation of interactive mobile services. Given the component identification, a conceptual design and a prototype were developed and implemented. Both will be described in more detail in Section 5.

Finally, in the summer of 2013, a follow-up trip to Uganda took place, in order to test and validate the functionality of the prototype. Two master’s students from LNU (supported by a third master’s student working remotely) traveled to Uganda for a period of three weeks and engaged in activities related to the deployment of the system (see Figure 2). They were mainly stationed in Kampala (where they worked closely with WOUGNET), and visited four districts (Oyam, Gulu, Amoru and Apac). More details about this trip will be presented in Section 6.

![Figure 2. Photos from the second trip to Uganda: (Left) training WOUGNET staff on how to use the system, (Middle, Right) workshops to test and evaluate the system. Photo by Lars Lorenz.](image)

CONCEPTUAL DESIGN AND PROTOTYPE

During the initial workshops conducted in Uganda in August 2012, the participants were asked to describe some “typical” report cases, actual events that took place and that fell under the categories of governance irregularities or poor service delivery. The participants explained how these were reported (and for some cases how these were resolved), what kinds of ICT (if any) were used in order to do so, and—in the cases that did not involve ICT—how they would imagine using ICT to report and resolve those cases. Having an overview of the type of cases at each district, some representative ones were chosen and a number of group interviews were conducted for more information. Examples included lack of staff or resources in schools and medical centers; people charging for services or equipment that should be free (like a donation of bicycles), or not delivering contracted work for the communities (leaving buildings and roads unmade or with problems).

The collected data after that first field trip (notes, audio and video) allowed the synthesis of a “super case” that combined as many of the characteristics as possible, and helped to define both requirements and limitations for a possible solution.

The proposed interactive mobile service should fulfill the following requirements:

- Be free, in order to encourage people to use the service and make reports. The high cost of telephone services in the region was noted.
• Be easy and intuitive to use, requiring very little training.
• Be accessible over the existing ICT infrastructure available in the region. As mentioned above, we avoided introducing new technologies, but instead took advantage of existing (and familiar) ones.
• Preferably use voice as the main channel to collect, deliver and interact with information, instead of text (such as SMS), due to high levels of illiteracy among the local population.
• Allow the dissemination of important information to a wide audience. One of the main problems in the rural areas is the lack of communication infrastructure, and the resulting lack of information is allowing incidents of bad governance and poor service delivery.

Following the above-mentioned requirements, a conceptual design of a solution that would be a combination of Content Management System (CMS) with Interactive Voice Response (IVR) was proposed. This approach would allow WOUGNET to collect reports via mobile phones from the local people, and also disseminate information back to the community through the same channel. Already at this stage, we identified that our initial ideas of combining and connecting traditional radio channels with mobile communication could instead be deployed by using IVR technology and mobile devices.

A typical scenario from a users’ perspective would involve making a call with a mobile phone to a toll-free number, and going through an interactive voice menu to either report (record) a new case, or listen to existing ones in the system. A database of cases submitted by the local people would be available to WOUGNET personnel for their own activities (e.g. updating their Ushahidi website) but also to approve and make them available back through the same service. By using existing mobile phones, at no cost, not involving the use of text but rather voice (with a few key presses to navigate the menu) we hoped to make the service accessible for widespread adoption and empower the local people and communities. This specific way of interacting with mobile services using voice was guided by the requirements specified above. However, obtaining a toll-free line number in Uganda had proven very difficult in practice, and also did not meet some of the technical requirements for connecting with the server. The solution was to emulate a toll-free line so that the caller does not have to pay for the service.

After examining a number of available technological options we chose two off-the-shelf technologies for creating a prototype that would allow such a scenario, these were Drupal\(^17\) (in particular the VoIP Drupal\(^18\) module) and Tropo\(^19\) (see Figure 3). Revisiting the scenario above, a person with a mobile

\(^{17}\) Drupal (http://drupal.org) is an open source CMS system commonly used for websites and applications.

\(^{18}\) VoIP Drupal (http://drupal.org/project/voipdrupal) is a framework that allows the use of voice and Internet Telephony with Drupal.

\(^{19}\) Tropo (http://www.tropo.com) is a Cloud Application Program Interface (API) for Voice and SMS.
phone calls a local number. This number belongs to an Android mobile phone ("mobile server") located at the WOUGNET offices in Kampala. The mobile server rejects the call (busy signal), and forwards the caller’s phone number (via the Internet, connected by WiFi) to the “server”, located at LNU in Sweden. The server forwards once again the caller’s phone number, along with an appropriate voice menu script (created by the “reporting system”) to the Tropo cloud service, which then makes a call back to the caller’s mobile phone. Answering the returned call provides access to the voice menu (see Figure 4).

Figure 3. An overview of the system components and the communication between them.

The voice menu was designed following the model of IVR interfaces for low literacy users proposed by Sharma Grover et al. (2009). The caller is guided step-by-step, using touch-tone input (pressing keys on the phone keypad) instead of voice recognition, and is provided assistance if a wrong (invalid) key is pressed.

Figure 4. The voice menu.
After an initial welcome message, an optional announcement message (e.g., an important message by WOUGNET) can be played. Instructions on how to use the system follow: if the “1” key is pressed the caller can record a report, if the “#” key is pressed the caller can listen to existing reports in the system. If neither of these two keys are pressed, an input error is assumed, and the caller can try again after listening to a help message. In order to conserve system resources, retries are limited to up to three times. After recording a report, this is played back, and the caller has an option to either submit or re-record.

TESTING AND VALIDATION

In July of 2013 a team of two master’s students from LNU travelled back to Uganda for a period of three weeks, to test and validate the prototype. The team was mainly stationed in Kampala. A mobile phone with a local SIM card was obtained, and the mobile server software (see Figure 4) was installed. This particular “mobile server” phone was placed at WOUGNET’s office in Kampala, with WOUGNET being responsible for keeping it charged and connected to the Internet (via WiFi). Members of WOUGNET were trained in how the system works and how to use it. After a number of initial tests to make sure the system worked as intended, the team visited four districts (Oyam, Gulu, Amoru and Apac) and conducted workshops to make sure the prototype worked in the field too.

The objectives of these workshops were two-fold: on the one hand we wanted to allow VSACs to get familiar with the interactive services, and on the other hand we wanted to validate whether the provided functionality would match people’s expectations based on the requirements identified in the previous phases.

Overall, during these workshops, the participants (in total around 30 members of VSAC) found no major difficulties in how to use and interact with the system. Some of the participants even started using it straight away to generate new reports, providing some encouraging indications about the potential added value of this type of interactive mobile service.

Apart from these initial promising outcomes, a number of important observations were made during this testing period:

- Electricity and Internet access could not be taken for granted, not even in the capital city of Kampala. Extended blackouts (some lasting days) were, unfortunately, rather frequent. Given that the mobile server needs to be charged and with continuous Internet access, the availability of the service cannot be guaranteed. If someone tries to use the service during a blackout, that call is lost.
- Rather unexpectedly, the quality of mobile phone services in Kampala is worse than in the northern rural areas. Possibly due to network overload problems, calling and reaching the wrong phone number by accident is rather common. This can have implications when the system
tries to call back. The issue was confirmed both from system logs and from private communications with the Uganda team.

- It is common for people to have their voice mailboxes on their mobiles activated to answer all incoming calls. This can interfere with the callback from the system, and they would need to be aware and deactivate this feature.
- The voice menu is currently only in English; language options were requested, as this kind of feature is typical for automated phone systems in Uganda.  
- There was interest expressed in adding a geo-location feature, in order to associate a place with the report.
- Many raised concerns regarding anonymity, and also the possibility that their data (reports and means to identify them) would fall into the wrong hands.

CONCLUSIONS
Research within the field of ICT4D is a relatively new area that has gained a lot of attention in the last 7 years. The series of International Conferences on Information and Communication Technologies and Development (ICTD) started in 2006 and since then it has been attracting researchers from almost all over the world working in the field. An overview of the research efforts described in the conference proceedings from ICTD [2006-2012] indicates that not many efforts (Bussell, 2009; Gigler, 2009) have been carried out in the particular line of research described in this chapter. Gomez et al. (2012) provide insights about the trends and directions in the field by doing a comprehensive analysis of the ICTD literature across multiple sources over the last ten years. While looking specifically at the research efforts carried out in Uganda and reported in these proceedings, a few can be identified in the field of ICT for health care, agriculture and banking (Ho et al., 2009; Futterman and Shuman, 2010; Ghosh, 2012).

For our project, we used participatory design and ethnographic techniques for requirements elicitation, actively involving the different stakeholders. An interactive mobile service was developed and tested, that allows people in northern Uganda to submit reports of irregularities in local governance or poor service delivery.

The results of the “People’s Voices” project contributes to the ongoing scientific discourse in the field of ICT4D about how ICT and well-informed design can help less privileged people and marginalized communities across the world to benefit from technological developments to improve the quality of their lives. In particular, we hope that our specific contribution will emphasize how novel ways of integrating and using ICT can provide opportunities to encourage and facilitate civic engagement in North Uganda. We can sum-

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20 English is one of the official languages, but there are over forty languages used, including Swahili and Luganda (mostly in and around Kampala).
marize by stating that the outcomes emerging from these efforts provided us with a better understanding of how interactive mobile services in countries with non-standard ICT infrastructure should be guided by the needs and the contextual settings in which they should be used.

The potential of widespread adoption of the kind of interactive mobile services described in this chapter can be used in unique ways to provide opportunities to make governmental services more innovative, transparent and cost-effective, as well as to encourage citizens to become more engaged and goal-focused for the common good of their society. As described in the introduction, the ICT infrastructure available in the community, in particular mobile phones and Internet, can be utilized in new ways to facilitate the reporting of cases of bad governance and poor service delivery. The reduction in costs of services afforded by the use of different ICT solutions within the country can lead to easy acquisition by the people and hence can be used to monitor and report corruption.

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Mobile Learning For Human Rights In Kenya: The Haki Zangu Case For Non-Formal Learning

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ABSTRACT
This project, entitled “Mobile Online Learning for Human Rights,” was conducted in cooperation with the Kenya Human Rights Commission (KHRC) in their Spider project called “Reforms Through Citizen Participation And Government Accountability.” The primary goal was to create a platform to spread information about human rights to any Kenyan for free in order to increase knowledge and engagement. The research goals of this project were to explore the viability of using a Massive Open Online Course (MOOC) with incentives to reach, engage, and educate Kenyans. Therefore, a non-formal MOOC about human rights using any Internet-connected device was designed and created. The course was free and open to anyone in Kenya and offered both a digital badge and certificate from Stockholm University in Sweden upon completion. The course was called Haki Zangu (Kiswahili for “My Rights”), and it explored how using incentives such as digital badges and certificates of completion affected learning outcomes. It offered ubiquitous access based on principles of responsive web design and used audio recordings of the entire course content. The course is still ongoing, but after six months, 160 partici-
pants had enrolled, and ten had completed the course and received certificates and digital badges. The participants showed extensive enthusiasm and engagement for human rights issues and expressed desires to learn more and further spread knowledge about human rights. The current findings indicate that the availability of digital badges and certificates increased interest for participation and positively affected learning outcomes. Furthermore, the platform proved adequate for disseminating education in a developing country, and allowed for unencumbered, ubiquitous access regardless of device. Additionally, the participants found ethical dilemmas and forum discussions on various human rights issues most rewarding. Lastly, key challenges facing future MOOC efforts in developing countries are Internet access and its associated costs.

**Keywords:** ICT4D; Lifelong learning; Mobile learning; Digital badges

**INTRODUCTION**

Mobile devices are commonplace in developing countries and ubiquitous in Kenya. Kenya has around 29 million mobile subscribers and mobile penetration is around 75% (Communications Commission of Kenya, 2012). About 27% of the population has Internet access, 15% of mobile subscribers access the Internet via smartphones, and the usage of both mobile devices and the Internet is increasing (Kenya ICT Board, 2011). In Kenya education is critical to making the transition from poor to affluent, and both formal and non-formal education open new doorways to employment and a better life. Primary school in Kenya has been free since 2003; however, the reality is that formal schooling at the secondary and tertiary level is a pipe dream for many due to prohibitive fees. Kenya has a population of approximately 40 million inhabitants and the poorest quintile goes to school for 6 years on average and the richest quintile goes to school for 8 years on average (World Bank, 2013). 76% of the population is rural, life expectancy is 56 years and a remarkable 67% live under the poverty line which means that 2/3 of the population has an income of less than $2/day (World Bank, 2013). The poor are marginalized and occasionally their rights are abused. Therefore there is a significant demand for Human Rights education in order to improve awareness of citizens’ rights as well as to prevent violations.

Within the general context of relatively high mobile and Internet use, little formal education, and human rights abuses, this project was initiated in cooperation with the Kenya Human Rights Commission (KHRC), a national non-governmental organization that promotes human rights and democratic values. The KHRC was financed by Spider to implement the project entitled “Reforms through citizen participation and government accountability.” The KHRC worked closely with the Human Rights Networks (Hurinets) in Kenya and provided equipment, support, and training to a variety of ICT initiatives. These initiatives used social media such as Facebook, Twitter, and blogs to monitor and report human rights violations. Together with KHRC they were using ICT to empower citizens to assert their rights. This particular goal became one of the foci for this project.
This mobile learning project for human rights was one segment of the Spider project, and had two primary aims. The first aim was practical and intended to fulfill the KHRC goal of empowering Kenyans to claim their rights in society. The second goal was research-oriented and intended to explore the viability of using a Massive Open Online Course (MOOC), mobile devices, and incentives, such as digital badges and certificates, to spread information about human rights as well as provide a platform to interact, discuss, and share ideas relating to human rights issues. The intended impact was to create and provide an open and free platform that would allow any Kenyan, regardless of ICT device, to access the content.

METHODS AND PREVIOUS RESEARCH
The research methodology of this study was a design-research-based case study. The design research concerned the design and implementation of the Haki Zangu course. Hannafin and Wang (2005) compare and describe a variety of terminology dealing with design research such as design-based research (Designed-based Research Collective, 2003), design experiments (Collins, 1992, 1999), design research (Edelson, 2002) and developmental research (Akker, 1999). Hannafin and Wang define design research as “a systematic but flexible methodology aimed to improve educational practices through iterative analysis, design, development, and implementation, based on collaboration among researchers and practitioners in real-world settings, and leading to contextually-sensitive design principles and theories” (2005, p.6).

This definition appropriately describes the approach used with the Haki Zangu course because this effort took place in a real-world setting and included the three stages of design, development and implementation. Furthermore the process was iterative and was adjusted over time. Additionally, Akker, Gravemeijer, McKenney and Nieveen (2006) describe educational design research as the systematic study of designing, developing and evaluating educational efforts as solutions to address complex problems in educational practice. This definition further supports the use of design research for Haki Zangu because this effort evaluated the results of the course after six months.

The initial idea for a non-formal course about human rights arose from a previous research project, the Frontrunner project, where 30 Kenyan semi-elite runners were given smartphones in order to study how the devices would affect their training, informal learning, and business opportunities. The Frontrunner project lasted one year, and during various interviews the participants expressed an interest in studying in a more formalized way. They were encouraged to select a topic, and somewhat surprisingly, the runners unanimously chose to take a course in human rights. They stated that formal schooling had taught them very little about human rights, and that they wanted to learn more. The funding from Spider allowed the scope of the course to be extended such that it was freely available to anyone in Kenya, rather than just the runners who were participating in the Frontrunner project.
The researchers made two visits in the fall of 2012 to complete the design portion of this methodology. Numerous meetings with KHRC and the Kenya Institute of Education (KIE) were held to determine the appropriate human rights subject content and discuss the best technical platform to reach as many Kenyans as possible. However, meaningful collaboration with KIE never materialized. KHRC, on the other hand, was extremely helpful in assisting with human rights content and a course design that would reach and help as many Kenyans as possible. KHRC even served as a liaison to the Hurinets, so that this effort would reach further than just Kenyan citizens in and around Nairobi. The meetings with KHRC in which they provided guidance borne of their experience with ICT efforts in Kenya resulted in a number of design principles regarding the content and structure of the human rights course. The key design principles that were agreed upon and used to create the structure and content of the course were as follows: 1) access from any device, 2) a focus on multimedia content such as videos/photos, not just text, 3) audio recordings of all textual content, 4) course offered in English and Kiswahili, and 5) a focus on interaction using ethical dilemmas to stimulate discussions about human rights.

Once the content and platform were decided, the researchers performed the development portion of the methodology. This consisted of creating the technical platform, creating the digital badge and certificate of completion, filling the course with content in English, making audio recordings of the textual content, and translating the course to Kiswahili. Once all the steps were completed, the researchers then executed the implementation phase of the method and released the English version of the Haki Zangu course to the public in November of 2012. The KHRC further assisted the deployment of the course by sharing experiences and lessons learned regarding the best way to disseminate information about the course and make it available to Kenyans. The course was therefore advertised in local newspapers and TV interviews as well as through viral advertising on Facebook and Twitter. The KHRC event sent links to the course directly to their contacts in the Hurinets.

As the Haki Zangu course is ongoing, the researchers decided to collect data about the course and evaluate the results after six months. The evaluation of the course consisted of two parts. The first portion of the evaluation consisted of examining the log files of the Moodle LMS (the technical platform used) to gather concrete data about participation in the different sections of the course as well as completion rates. The second portion of the evaluation consisted of summarizing and analyzing the answers of the voluntary online survey that formed the last section of the course. This survey gathered information about the participants’ opinions about the course, the platform, badges, etc.

A comparable study combining MOOCs and mobile access was made in 2011, entitled MobiMOOC, and was a six-week course about mLearning. It was a non-formal MOOC that provided a certificate of participation for
memorably active participation (de Waard et al., 2012). De Waard et al. (2012, p.44) concluded that “mLearning and the MOOC format have a great potential for informal and lifelong learning. Both learning forms allow for knowledge creation to happen overtime without being tied to a particular space and contexts.” De Waard called for further research in the two areas of mLearning and MOOCs, specifically calling for “more representation from developing nations” to “add depth to the dialogue” (2012, p.44). Additionally, Waard et al. state that “more research should be undertaken into the realities, benefits, and challenges of MOOCs and mLearning in order to map all of their contributing dynamics” (2011, p.112).

**Concepts and technologies**

**INCENTIVES**

The key aspects to be addressed for formalizing non-formal learning are recognition, validation, and accreditation (RVA). As Singh (2012, p.8) states, “Recognition, Validation and Accreditation (RVA) of all forms of learning outcomes is a practice that makes visible and values the full range of competences (knowledge, skills and attitudes) that individuals have obtained in various contexts, and through various means in different phases of their lives.” Furthermore, Singh (2012, p.3) states “the RVA of non-formal and informal learning is a key lever in making lifelong learning a reality.” Singh (2012) defines these three concepts accordingly:

- Recognition is a process of granting official status to learning outcomes and/or competences, which can lead to the acknowledgement of their value in society.
- Validation is the confirmation by an approved body that learning outcomes or competences acquired by an individual have been assessed against reference points or standards through pre-defined assessment methodologies.
- Accreditation is a process by which an approved body, on the basis of assessment of learning outcomes and/or competences according to different purposes and methods, awards qualifications (certificates, diplomas or titles), or grants equivalences, credit units or exemptions, or issues documents such as portfolios of competences.

Validation of non-formal and informal learning is becoming a key aspect to lifelong learning and the “purpose is to make visible the entire scope of knowledge and experience held by an individual, irrespective of the context where the learning originally took place” (Colardyn and Bjornavold, 2004, p.69). Validation of non-formal and informal learning is often connected to formal education by providing a certificate or diploma and links the assessment of any form of learning to the validation proposed in formal education systems (Colardyn and Bjornavold, 2004). Werquin (2012, p.270) calls the concept of recognition of non-formal and informal learning outcomes (RNFILO) a promising approach and states that “The growing focus on learning outcomes and on non-formal and informal learning is a strong incentive for non-education actors and stakeholders to become involved in the definition
of standards.” Additionally, Abramovich et al. (2013) found that participation badges increase motivation and that different types of badges can affect learning performance.

MOOC
The term MOOC (Massive Online Open Course) was created by Dave Cormier in 2008 when analyzing a course offered through the University of Manitoba in Canada entitled Connectivism and Connective Knowledge (Mackness, Mak Sui Fai and Williams, 2010; Weller and Anderson, 2013). This course had 24 participants enrolled for credit and more than 2000 informal participants. Since this meager start, 2012 was recently crowned “The Year of the MOOC” and is now more loosely defined as a free, non-credit, massive course (Pappano, 2012). Despite MOOCs being a direct open and free competitor to traditional online courses that charge a tuition and provide credit, many traditional institutions have created MOOC platforms such as edX from Harvard and MIT and Khan Academy (Pappano, 2012). There are now private portals that aggregate various MOOC offerings under one umbrella, such as Coursera and Udacity, and Coursera is growing faster than Facebook (Pappano, 2012). The growth and popularity of MOOCs is enormous, and they are highly disruptive for higher education (Weller and Anderson, 2013). Shirky even asserted that MOOCs will be equally disruptive to higher education as the MP3 music file format was to the music industry, by stating “Higher education is now being disrupted; our MP3 is the massive open online course (or MOOC), and our Napster is Udacity, the education startup” (Shirky, 2012, p.1). Shirky further elaborates that “MOOCs expand the audience for education to people ill-served or completely shut out from the current system” (ibid.).

Participation and examination rates for distance courses are notoriously low and MOOCs are extreme cases. For example, a recent study showed that the average examination rate for MOOCs was 6.8% and for courses with active examination only 4.8% (Parr, 2013). Some key issues with MOOCs are assessment on the one hand; and recognition, validation, and accreditation (RVA) on the other. Regarding RVA, the use of certificates of accomplishment and digital badges are two of the most common ways for participants to show that they have completed a course or obtained a specific skill. Accreditation is a challenge for MOOCs, especially in determining how MOOC credit fits into the higher education landscape (Pappano, 2012).

XMOOCS, CMOOCS AND QUASl-MOOCS
MOOCs have evolved over time into three different variations: xMOOCs, cMOOCs and quasi-MOOCs. Traditional learning institutions typically use an xMOOC, where the teacher is the expert and the learner is the consumer. These MOOCs primarily consist of little external materials and mirror traditional learning by using video lectures, quizzes, and exams. (McGreal, Kinuthia, Marshall and McNamara, 2013). A cMOOC is based on a connectivist pedagogical model. cMOOCs are largely open and decentralized
with limited structure, and learners are autonomous and view knowledge as generative with a focus on sharing and connecting with other participants through blogs, forums, and LMS. (McGreal et al., 2013). A quasi-MOOC provides web-based materials as open educational resources (OER) and intends to support specific learning tasks. They provide little or no social interaction or grading, and a representative example is Khan Academy (McGreal et al., 2013).

**Results**

**COURSE CONTENT**

As previously stated in the methods section, the design and development stages resulted in design guidelines that focused on providing relevant knowledge and facts about human rights with multimedia in addition to text, providing the ability to discuss and deliberate human rights dilemmas and issues, and providing the content in both English and Kiswahili to reach as many as possible. From a research standpoint, the course was developed utilizing various aspects of the different types of aforementioned MOOCs. For example, the course utilized educational material from university professors and examinations as outlined in xMOOCs, social interaction as outlined in cMOOCs, and unscheduled access and OER resources as outlined in quasi-MOOCs. The Haki Zangu course consisted of 14 sections. Each section contained short quizzes to assess fact retention. In order to complete the course successfully, the participants were required to access all factual portions of the course, successfully complete all quizzes, post and be active in all the mandatory forums, and successfully complete the final examination. Each section contained textual content as well as a voice recording of that content in English. Finally, the translation of the course content began shortly after the release of the English version, and the original plan was to release the Kiswahili version of the course in January of 2013. Due to a variety of setbacks and unforeseen complications with the translation, the Kiswahili version is to be deployed in January of 2014. Two graduates of the English version of the course have translated the entire content for free in accordance with crowdsourcing principles.

**RECOGNITION AND VALIDATION**

The Haki Zangu course utilized two incentives to increase and encourage participation for learning as well as provide proof of course completion: a certificate of completion and a digital badge. Both the certificate of completion and the digital badge for completion were coupled to Stockholm University. The digital badge was delivered from basno.com as Moodle 2.4 lacked a native badge implementation. See below for examples of the certificate and the digital badge:

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21 The four forums had the following topics or instruction: “Introduce yourself”, “Post a positive and negative experience”, “The hamburger” and “Island dilemmas.”
ACCESSIBILITY

Another key research aspect was that the MOOC should be accessible from any device. Device ubiquity was made possible because the Haki Zangu course used the Moodle 2.4 LMS to deliver the course content. A Moodle mobile theme was used that utilized CSS and media queries to enable a responsive web design, so that the course content adapted to the type of device that accessed the course. An example of the difference can be seen in the two figures below:

The use of responsive web design principles increased the accessibility of the course content because essentially any device from a wide-screen TV to a small smartphone could view the course material without hindrance. As previously mentioned, the entire text-based content of the course was available as audio files for download and offline use. These voice recordings further increased accessibility to the course material and enhanced learning opportunities by making offline-learning possible and by accommodating different learning styles.
COURSE ENGAGEMENT

The second aim of this effort was to explore the viability of MOOCs, incentives, and mobile access as well as create engagement in human rights. Six months after the course started, the current status of the course, such as number of participants, examinations, activity, and questionnaire answers were summarized and analyzed from the log data in the Moodle platform. After six months 160 Kenyans had enrolled in the course. Ten participants had completed the course, received a certificate of completion, and claimed their digital badges from basno.com. Additionally, four more had handed in the final assignment.

The activity in the course was significant and Table 1 shows the total sum of all forms of activity (views/posts/updates etc.) for each section during the first 6 months.

<table>
<thead>
<tr>
<th>Section</th>
<th>Total Involvement (View/Post/Update)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Guide</td>
<td>468</td>
</tr>
<tr>
<td>Introduce Yourself</td>
<td>1796</td>
</tr>
<tr>
<td>Human Rights Card Game</td>
<td>804</td>
</tr>
<tr>
<td>Human Rights Everyday Life</td>
<td>917</td>
</tr>
<tr>
<td>Human Rights Education – Why Study Human Rights</td>
<td>277</td>
</tr>
<tr>
<td>What are Human Rights</td>
<td>412</td>
</tr>
<tr>
<td>Kenya and Human Rights</td>
<td>193</td>
</tr>
<tr>
<td>How can I enforce my Human Rights</td>
<td>193</td>
</tr>
<tr>
<td>History of Human Rights</td>
<td>412</td>
</tr>
<tr>
<td>Inspirational People and Organization</td>
<td>604</td>
</tr>
<tr>
<td>Dilemmas – Hamburger and Island</td>
<td>476</td>
</tr>
<tr>
<td>Where are Human Rights found?</td>
<td>115</td>
</tr>
<tr>
<td>Final Assessment</td>
<td>509</td>
</tr>
<tr>
<td>Evaluation</td>
<td>166</td>
</tr>
</tbody>
</table>

Table 1 - Activity for each section of the course after 6 months

Activity in the forums was especially noteworthy. All the forums had lively and extensive discussions by numerous participants and 73 unique participants were active in the Introduce Yourself forum, 35 in the Human Rights Card Game and Human Rights Experience forums, and 22 in each of the dilemma forums (“Hamburger” and “The Island”). These participants posted/edited in the “Introduce Yourself” forum 1329 times, in the “Human Rights Card Game” 559 times, in the “Human Rights Experience” 764 times, in the “Hamburger Dilemma” 213 times, and in the “Island Dilemma” 144 times.

Figure 4. How the same content appears in a mobile web browser
COURSE EVALUATION
19 participants voluntarily completed the course evaluation (all the names mentioned below are pseudonyms). 70% of the respondents were under the age of 30, 20% were women, and 75% of the respondents had a college or university education. Therefore the respondents were primarily young, college-educated men. Regarding ubiquitous access, 75% used a desktop computer to complete the course and the remainder used a smartphone (15%) or tablet (5%). Only one respondent reported any technical difficulties, and that was to create an acceptable password. The respondents stated that on average they spent a little over 30 hours working on the course. Regarding ubiquitous access, 70% stated that the course certificate positively affected their decision to follow the course and 52% stated that the digital badge positively affected their decision. The participants explained their desire for certificates/badges in various ways: “…because I will be able to show others that I learned about human rights” (John); “It meant that the course was well researched and competitive” (Esther); and “I was curious to acquire this coveted badge as a symbol of my participation in Human Rights course” (Sam). Those who did not find it important to have a certificate/digital badge claimed “it did not affect since I have longed to do a human right based course” (Mary). 73% stated that the fact that the course was free affected their decision to follow the course as well. Finally 100% of the respondents stated that the course will be useful in their daily life and that they would like the opportunity, using the same format, to study other courses in different subjects such as computer studies, health issues (AIDS/HIV, maternity care, etc.), environmental issues, gender equality, etc.

DISCUSSION
Although 160 participants is not quite “massive”, the concept of a MOOC still applies and because the course is ongoing, growth is slow but continuous. Course enrollment was less than desired but reasonable considering the nominal efforts made to advertise for the course. Dissemination primarily took place virally through social media, and enrollment numbers after six months as well as activity and discussions were acceptable. Examination rates were poor despite participants stating that the certificate and badge affected their choice to follow the course, and that they were very satisfied with the course in general. The responding participants highly valued both the certificate of completion and digital badge as a means to recognize and validate their knowledge about human rights. The achievement of finishing the course and this inclination is entirely in line with the concepts presented by Singh (2012).

As previously mentioned, the completion rate of MOOCs is around 7% for courses with automatic grading and around 5% for courses with manual grading. Thus the 6% completion rate of the Haki Zangu MOOC is actually above average and especially promising in that the result occurs in a low-in-
come country. Despite this low but promising result, the question remains as to what the possible reasons are for poor completion rates in the Haki Zanggu effort. One important aspect of this educational effort was that only educated Kenyans completed the course, and the majority of all participants were well educated. Advertising via newspaper, TV media, and word of mouth promotion via Facebook and Twitter had a limited reach among the poorer or less-educated segments of Kenyan society. A possible solution to this issue could be to advertise in media that reach the poor and marginalized which at this point in time is radio, as this medium is generally available in Kiswahili and/or local vernaculars. Another aspect that might have influenced the lack of enrollment by impoverished segments of society is that the course was not available in Kiswahili yet.

Another factor in the low completion rates is the cost of Internet connectivity. During the course, the teachers contacted all participants via email to encourage course completion. A typical response was basically “we want to complete the course and are trying to, but we do not have money for data minutes (i.e. Internet connection) or money to buy time at Cyber (Kenyan Internet café).” This fact is also supported by the findings in the study made by the Kenya ICT Board that found that barriers to ICT usage were a lack of available computers, high costs of buying/renting computers and high costs of Internet connections (Kenya ICT Board, 2011). The participants’ enthusiastic responses to the dilemmas and discussions used in the course suggest that the implemented course design was appropriate. Additionally, in the active participation in the course, the posting and editing of posts was significantly more extensive in the “Forums” and “Dilemmas” compared to the simple acts of viewing informational content.

A key factor limiting completion of the course was money, not for the course itself, but for computer and/or Internet access. In order to reach the course content, one must have a device with an Internet connection. Many participants had very limited finances, so that accessing the course via a mobile phone or an Internet café was so cost-prohibitive that studies either ceased or took a very long time. Therefore, a micro-financing model that is frequently used in developing countries in the form of financed Internet time could be a viable means to provide monetary support for access to the content. This micro financing model is a retrospective “pay for performance” incentive. This means that once a participant has successfully completed a specific module, a scratch card code will be made available to the participant in order to pay for the time spent online. In this way, the participant can finance his/her studies while the content providers can be assured that the money is actually being used for its intended purpose. Technically, such a

23 Despite the fact that many live below the poverty line, the poor seem to prioritize Internet usage. Cyber cafes and computers/tablets/smartphones, if owned, receive a large portion of any disposable income. For example, many “poor” Kenyans have Facebook accounts and check them weekly. The idea for advertising via social media came from Kenyan partners as a cheap way to reach many Kenyans.
solution can be easily achieved by utilizing the widespread mobile payment system (M-PESA). An ideal solution would involve the local ISPs (Internet Service Providers) that could provide Internet scratch cards upon the achievement of a digital badge and thus subsidize educational efforts.

Another way to address the poor completion rates of the course is to utilize digital badges in a more comprehensive manner. For example, each section or each mandatory forum in the Haki Zangu course can implement a separate badge to show incremental achievement towards the ultimate goal of finishing the course. Additionally, a leader board or progress board can be made visible for all participants that shows badges achieved by all participants in order to improve motivation to complete the course. A similar study by McDaniel et al (2012) showed that incremental badges and a leader board can be motivational and improve progress. The achievement of each incremental badge can even be used as indicators for the micropayment model suggested above.

CONCLUSIONS
The Haki Zangu course fulfilled to a certain extent both aims of this research project. The first aim of empowering and engaging Kenyans in human rights was reached based on the discussions and level of engagement in the course, especially in the forums and dilemma assignments. The respondents in the course evaluation also expressed increased knowledge and engagement for human rights. Even though only 6% completed the course, the majority of the participants actively expressed opinions and showed critical knowledge about human rights. The second aim was partially fulfilled because the course demonstrated that from a technical perspective a MOOC using the Moodle platform with mobile themes in combination with certificates and/or badges was a viable platform to give and validate non-formal educational efforts and has further potential to disseminate education in developing countries. Participants had few problems accessing the course from a variety of devices and they appreciated and valued both the certificate and badge and expressed tremendous interest in partaking in additional educational efforts. Certificates and digital badges could be crucial in developing countries in making non-formal knowledge and skills more acceptable and portable. While there were no technical issues encountered regarding device type, similar efforts must take cost into consideration to increase access regardless of device and improve the probability of reaching all citizens, even the poor. Therefore, the second aim of this research effort was not practically fulfilled because electricity and the cost of Internet access were still insurmountable hindrances. However, these results provide increased dialogue to mobile-centric MOOC efforts in developing countries as called for by de Waard et al. (2012). Simply stated, this research effort suggests that MOOCs using responsive web techniques in ICT4D countries can be a fundamental tool for combating educational shortcomings and poor graduation rates, for encouraging lifelong learning, and for blended learning efforts.
FUTURE RESEARCH

The researchers intend to take advantage of open badge integration in Moodle 2.5 and the positive response and outcomes experienced so far from the Haki Zangu effort by creating a Kenyan Cloud School. This is the working name for a comprehensive educational effort that intends to be a completely free, ongoing MOOC that consists of the entire core curriculum studied at the secondary level in Kenya. This Kenyan Cloud School is envisioned as a way to maximize the use of the MOOC concept to make a real impact in developing countries and be used as both a non-formal educational resource for individuals who cannot afford traditional schooling as well as a complementary resource for blended learning in existing secondary school institutions. The goal is to use MOOCs and digital badges with ubiquitous device access to combat the extremely low secondary school graduation rates and all the societal problems that a lack of education eventually leads to, such as unemployment, poverty, etc. The purpose is to help learners to fill the gap between demands of study and formal practices. This broader effort offers online, self-paced learning, so there are fewer barriers, such as time and place. Hopefully, this extension of the Haki Zangu effort will further the impacts on empowerment and provide a platform to continue efforts such as those by KHRC.
REFERENCES


Study Circle Outcomes: An Evaluation Of An Adult Education, ICT And Livelihood Project Among Self-Help Groups

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Mathias Hatakka
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ABSTRACT
This chapter presents the results of an evaluation of a project offering capacity building in adult education, ICT and livelihood options to communities through study circles in self-help groups. The purpose of the project was to make basic literacy available, introduce ICT as a practical everyday tool and promote income-generating livelihood options. The evaluation investigates the capability outcomes enabled through the study circles together with the factors which enable or restrict those outcomes. The evaluation was conducted during the second phase of implementation and is based on the capability approach. Using this approach we were able to compare the project goals with implemented activities and the participants’ experiences. A series of interviews were conducted with study circle members, government officers, private service providers, and the project team. These were transcribed and coded during the analysis process. Results showed that the study circles had enabled strengthened capabilities, including direct income generation, indirect income generation, gains in education, community development, improvements in individuals’ well-being and improved health. However, the extent of achievement of the capabilities varied amongst individuals and across groups largely due to the effect of conversion factors. Additionally, involvement of the project team in the research process enabled the direct feedback of evaluation findings into project activities which strengthened the success of the project.
INTRODUCTION
Education is often seen as a prerequisite for development and as a key factor for the improvements of individuals and regions development (Bada and Madon, 2006; UNDP, 2006; WSIS, 2008). In the field of Information and Communication Technologies for Development (ICT4D)—broadly defined as the development and use of ICTs to foster national and/or individual development (Heeks, 2008; Unwin, 2009)—use of ICT in education is well studied. Common themes in ICT4D in education are learning resources (Hatakka, 2009; Willinsky, Jonas, Shafack and Wirsiy, 2005), pedagogical issues (Andersson, 2010; Andersson, Hedström and Grönlund, 2009) and training and IT literacy (Carte, Dharmasiri and Perera, 2011; Lynch and Szorenyi, 2005). In education, ICT can aid in the quality of the education as well as the ability of individuals to gain access to education (Semenov, 2005; UNESCO, 2007) and education can have both instrumental and intrinsic values for the individuals’ development (Drèze and Sen, 2002; Robeyns, 2006; Unterhalter, 2003).

This study was conducted in the Kwale region on the Kenyan coast which has higher poverty levels and lower literacy rates than the national average in Kenya (UNICEF 2010). This increases the vulnerability of the coastal communities who also have to deal with dwindling marine and fisheries resources, increasing population and the challenge of climate change. The study is part of an evaluation of a CORDIO East Africa project. CORDIO East Africa has been carrying out research on various aspects of the marine and coastal resources and initially focussed on working with fishermen who are predominantly male. Since 2007, through funding from Spider, women and youth have been incorporated into programme activities so as to build their capacity and help secure their livelihoods.

The research that this chapter is based on was conducted during the second phase of a project addressing the coastal challenges through the use of study circles, ICT and livelihood options. In the first phase of the project, activities were carried out with women’s self-help groups while the second phase targeted youth self-help groups with participants of both sexes. Project activities included provision of literacy and numeracy classes through the study circles, in addition to other topics of interest to study circle members. The study circles are adapted from the Swedish adult education model of “folkbildning”24 which is a model for participatory adult learning (Hatakka, Ater, Obura and Mibei, 2013). Topics of interest varied from health and environment to business and marketing. The second area of focus in the project was provision of ICT training and resources while the third area of focus was improvement of livelihood activities. Apart from the target group involved, the second phase of the project differed slightly from the

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24 “Folkbildning” is a participatory approach that involves interaction and cooperation within the study groups. It emphasizes dialogue and learning from each other’s experience and focuses on the future possibilities of the participants and their inherent power and potential for development.
first phase in that objectives were clearly outlined at the onset and ICT focus was on provision of learning resources rather than infrastructure to support the establishment of ICT services.

The aim of this study was to evaluate and compare the project goals (expected outcomes) with what was implemented (enabled outcomes) and how the self-help group members experienced the outcomes (realized outcomes).

![Identification of prioritized topics at Tiwi Massive Group. Photo by CORDIO.](image)

**METHODS – CASE DESCRIPTION, DATA COLLECTION, ANALYSIS**

During Phase I of the project, women self-help groups were identified through a participatory process involving the community. The criteria included having been registered with the social services department and having a vibrant ongoing livelihood project. Ten such groups were identified, trained on the study circle concept and were engaged in different activities over a three-year period. Phase II of the project ran over a period of 18 months during which focus was on four new youth groups and also continued incorporation of at least two of the groups from the first phase. Phase II groups were similarly trained on the study circle approach; offered facilitation while choosing, prioritising and covering topics of interest; provided with mobile phone, computer and Internet equipment, training and learning resources as well as offered hands-on skills to improve their livelihood projects.

The evaluation was based on the capability approach which focuses on choices that individuals make and how opportunities are created for individuals (Robeyns, 2005; Sen 1999). The advantage of using this approach is that it goes beyond analysing use and access and focuses on the actual outcomes for the individuals (Hatakka, 2013). It also enables the evaluation of
conversion factors\textsuperscript{25} that enable and/or restrict the outcomes. The objectives of this research was thus to compare the expected outcomes with implemented activities.

Data collection was carried out during two field trips. During the first period of data collection, an exploratory approach was employed and study circle participants were allowed to express their needs and wishes, as well as the factors that made it difficult to attain full project benefit. The second period of data collection was carried out five months later, after initial analysis. The second set of data collected was useful in getting a deeper understanding of outcomes and factors that hindered attainment of the outcomes.

The main mode of data collection was interviews. Fifteen group interviews and nine individual interviews were conducted to reach a total of 130 respondents. 109 of the respondents were study circle members, with the remaining composed of government officers, public Internet access point workers, institutions providing ICT services and the project implementation team. During the interviews, notes were taken, or a recorder was used if the interviewee gave consent. These were later transcribed and the capability outcomes identified in the responses were categorised iteratively based on what the factors were.

RESULTS – STUDY CIRCLE CAPABILITY OUTCOMES
Results indicated that the study circles have enabled several outcomes for individual members. However, the outcomes were further determined by the actual activities that the groups focussed on and the conversion factors which determined choices those individuals could make. These are presented in the following tables.

\textsuperscript{25} These are factors that enable and/or restrict the individuals’ ability to make choices. Examples of conversion factors are the individuals’ literacy level and economy, the arrangements that society makes for individuals such as public health-care and education, and so on.
STUDY CIRCLE CAPABILITY OUTCOME I – DIRECT INCOME GENERATION

These are outcomes that help the study circle (SC) participants generate an income.

“If they use the computer they must pay because the printing and Internet cost money. That is how we can make some money if we have a computer, because if you are printing one page as an example it will cost me to go to the shopping centre and Ksh50 to print one page.”

(study circle participant)

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<tr>
<th>SC member expectations</th>
<th>SC outcomes</th>
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<tr>
<td>– SC education will help community members increase the profit from their income-generating activities by getting more information, e.g., methods for agriculture and fishing as well as knowledge on budgeting and accounting.</td>
<td>– Most of the groups have an income-generating activity related to their SC activities, e.g., soap making, fishery, agriculture or eco-tourism. While some of the groups struggle to make a profit from their projects, all groups agreed that the projects could serve as a means for an income.</td>
</tr>
<tr>
<td>– Provide their communities with services, e.g., access to computers, Internet and photocopying services.</td>
<td>– The access to computers, Internet and supplementary equipment (printers) has also enabled the groups to directly generate an income. The computer and Internet access in most of the areas for the SC groups is very limited and the access to a computer has enabled the groups to provide services to the rest of their communities. Common services are photocopying, document typing and access to computers and Internet.</td>
</tr>
<tr>
<td>– Improved skills (e.g., literacy, professional and IT skills) gained through the SC should make it easier for them to find employment.</td>
<td>– One of the groups has also chosen to share their resources within the groups. If one of the members is struggling the others contribute a small amount to aid the member. While this does not generate new incomes, it redistributes resources.</td>
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<td></td>
<td>– The skills that they have gained in the SC increase their chances of getting employed, e.g., due to improved literacy.</td>
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<td>– Many of the participants also think that IT skills are needed for job opportunities. The increased IT literacy has thus made it easier for them to find employment.</td>
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Table 1: Direct income generation
STUDY CIRCLE CAPABILITY OUTCOME II – INDIRECT INCOME GENERATION

These are activities that do not directly generate income but increase the participants’ opportunities to raise their incomes.

“We have a camp in the village and we want to interact with the tourists and to get them to visit us. We have to contact them via Internet and to do that we have to travel to where there is Internet and that is costly in terms of traveling and time”
(study circle participant)

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<thead>
<tr>
<th>SC member expectations</th>
<th>SC outcomes</th>
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<tr>
<td>Increased ability to market their products and to gain knowledge on how to run a business.</td>
<td>The activities have provided the SC groups with access to experts that could teach them skills needed to improve their chances to earn an income. The most common was that experts came and taught them the necessary skills for the groups’ existing projects. The experts could be, e.g., government officers or CORDIO EA staff. Through this the groups can learn the practical skills needed to be able to make a profit from their projects.</td>
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<tr>
<td>Gain knowledge about how to be successful with the projects.</td>
<td>By learning literacy, numeracy, and basic economics, participants also learned how to better manage their projects’ budgeting and accounting.</td>
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<td>SC will open up new business opportunities for them as they get access to more information and skills that they can apply in income generating activities.</td>
<td>They could keep track of the expenses and the incomes.</td>
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<tr>
<td>Get access to market information so that they can maximize the profit that they get when they sell their products.</td>
<td>The groups have also learned skills that enabled them to seek additional funding from other organizations.</td>
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<td></td>
<td>Just as the SC enabled the groups to learn professional skills so did the ICT use. Through the computer and Internet the groups obtained access to electronic material that can inform them about the skills they need to make a profit.</td>
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<td>The groups used the computer and Internet to promote and market their services and products, e.g., they advertised their businesses and use e-mail to communicate with potential customers. The latter is essential for the groups that offer tourism as an income-generating activity.</td>
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<td>The technology was also used to label their products. For example, one of the groups uses the printer to print labels for their soaps.</td>
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<td></td>
<td>The groups aid the groups in their budgeting and accounting. By using spreadsheets they made the accounting easier and made it easier to keep track of the economic aspects of the projects. The computer is also used to store business documents for easy retrieval.</td>
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<td>Since most funding opportunities are only accessible online the computers and Internet were also used to find organizations to apply to for additional funding, write funding proposals and to submit the proposals to funding organizations.</td>
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Table 2: Indirect income generation
STUDY CIRCLE CAPABILITY OUTCOME III – EDUCATION CAPABILITY

These relate to outcomes essential for the participants’ education, e.g., the ability to learn, or access to resources needed for education.

“By using ICT when they are having a discussion on a particular topic they can find information. For example if they are talking about a particular crop they can use the facility on the ICT to find more information about that particular crop, to benefit and get access to more information.”

(CORDIO Staff)

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<th>SC member expectations</th>
<th>SC outcomes</th>
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<tr>
<td>Gain access to an affordable education that they are unable to get elsewhere.</td>
<td>The format of the SC, following the “folk-bildning” concept, enables the SC groups to be self-sustained in their learning. They have found a way to learn by themselves utilizing the skills and knowledge of the groups’ members. In the SC they share their knowledge and, compared to their prior formal education, they do not have to rely on a teacher to tell them everything they need to learn.</td>
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<td>The SC would provide them with another opportunity to get an education.</td>
<td>The groups decide by themselves (in consultation with CORDIO EA) which skills they need to learn. They do not follow a pre-defined curriculum but can tailor the education to their specific needs, making the education more relevant for them.</td>
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<td></td>
<td>Several of the SC participants do not have any previous formal education (or only attended formal education for a few years) so the SC has made it possible for the participants to actually get an education. The participants thus get a second chance and they can get an education that they can afford.</td>
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<td>While most groups are aware that they can find educational material online, few do so. Electronic and interactive educational material is, however, valued by the participants.</td>
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<td>Some of the groups used to have access to XO computers with educational material that were designed for their needs (e.g., environmental and language topics) and the material was valued by the groups. They found that the material was easy to use and that it presented the topics in an accessible manner.</td>
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<td>The applications in the computers can also be used for their learning; they can, for example, use Word to learn how to write and the calculator to learn numeracy and mathematics.</td>
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Table 3: Education capabilities
STUDY CIRCLE CAPABILITY OUTCOME IV – COMMUNITY DEVELOPMENT

In addition to the group members, the SC and ICT use is also considered potentially beneficial to the whole community.

“The project is a success; it has benefitted the community. Added electricity, knowledge of computers, some have got an employment, some have learnt how to read and write.”

(Government officer)

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<th>SC member expectations</th>
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<td>– They expect that the information that they learn in the SC will benefit the whole community through knowledge sharing. This, in turn, will help with the community relationship and make the communities more unified.</td>
<td>– The SC benefitted the whole community in two ways. First through the knowledge and skills learned by the SC groups, and second through the dissemination of these to other members of the community, either by word-of-mouth or by some groups allowing non-group members to attend the meeting if they wanted to. Hence the whole community was involved, directly or indirectly, in the education.</td>
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<tr>
<td>– One group expected the SC to help the community to solve its problems. By using the SC as a vehicle for problem solving they can come up with solutions that can benefit the whole community.</td>
<td>– Some groups felt that the SC groups helped build positive relations in the community and also between communities, e.g., the youth are becoming more involved in the communities and groups from neighbouring communities can meet and share experiences.</td>
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<td>– From a technological perspective, the introduction of computers has provided access to people that previously did not have it. By paying a small fee community members can now use a computer for their everyday needs. For example, one group’s computers were also used by school teachers who came and printed lecture notes that they had prepared for their students.</td>
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Table 4: Community development
STUDY CIRCLE CAPABILITY OUTCOME V – BASIC HUMAN CAPABILITIES

These relate to individuals’ needs and are connected to well-being rather than a specific activity.

“Previously when I was sitting beside someone who used a computer I felt a bit inferior, but now, since I can use a computer, I feel confident. Computers make you have confidence.”

(Study circle participant)

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<th>SC member expectations</th>
<th>SC outcomes</th>
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<td>The groups have to become literate and IT literate, i.e., they expect to learn how to read and write and how to use a computer or mobile phone.</td>
<td>One of the major outcomes from the SC was that individuals have learned how to read and write. Many of the SC participants were previously illiterate but they now have at least basic reading and writing skills. Instead of signing documents with a thumb print they can now write their names. Many have also learned enough to do other daily tasks such as read the signs on the buses.</td>
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<td>That SC participants become role models in their communities. By becoming literate and learning how to use computers, etc., they can become an inspiration and motivation for the other members of their communities. In addition the same group also expect to develop themselves to become more self-confident and educated.</td>
<td>Another related capability is numeracy. Many did not previously know how to use numbers but they have now attained numeracy and some basic mathematics. Some can now calculate the cost of produce in the stores and how much they are expected to get back in change.</td>
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<td>One of the women’s groups also expected to learn about legal rights and the Constitution so as to learn about the rights that they have as women. This will also help them to become more empowered in their communities.</td>
<td>The new skills that the participants have mastered have increased their self-confidence. They now have the courage to do things that they previously were afraid of doing or previously felt ashamed that they couldn’t do. Through the improved reading skills they find it easier to understand provided information and use services that require basic literacy such as health care. The SC has thus helped to empower the participants.</td>
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<td>Only few of the SC participants had used a computer before the SC. A major outcome is therefore that many have now gained IT skills and have become IT literate (at least on a basic level).</td>
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<td>The groups have learned how to use mobile phones and services such as mobile banking or money transfers (using M-Pesa). They can now use basic service for their everyday needs.</td>
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<td></td>
<td>They have learned how to use the computers and mobile phones to communicate with friends and family through social media and other formats. For example, some are on Facebook and communicate with friends, family, CORDIO staff or visitors from other countries, for example, Sweden.</td>
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<td>They are also more self-reliant and do not have to rely on others for technology use. Access to information through the computers and Internet can also aid in strengthening the role of the women, in that they can empower themselves by getting access to relevant information, e.g., women’s rights.</td>
</tr>
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<td>Participants valued the access to computers because they felt more modern. The rest of the world used computers and by learning basic computers skills and getting access to a computer they now feel they are part of the world and they feel more advanced.</td>
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Table 5: Basic human capabilities
STUDY CIRCLE CAPABILITY OUTCOME VI – HEALTH CAPABILITIES

These are opportunities that have been enabled for participants to improve their health.

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<th>SC member expectations</th>
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<td>– Several of the groups expected to learn about health information and disease prevention methods on subjects such as malaria, HIV/AIDS, child care and nutrition, and reproductive health.</td>
<td>– The study circle has enabled the participants to get information about diseases, methods for treatment and how to prevent getting infected. The information supports them in their struggle to keep themselves and their families healthy and it helps them to prevent getting infected by such threats as malaria and HIV/AIDS. The groups that have focused on health issues find it very valuable and want more information and experts to come and help them.</td>
</tr>
<tr>
<td>– Talking about issues such as HIV/AIDS in the communities is, however, seen as problematic and SC hence expect experts and professional health workers to come and help spread the knowledge.</td>
<td>– Some members in one of the groups also got access to and funds for health treatment (eye treatments) so as to be able to benefit from the SC education.</td>
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Table 6: Health capabilities

DISCUSSION AND CONCLUSION

A comparison and overlap of the study circle participants’ expectations and the project outcomes show that many of the expectations were met. This is due to the fact that participants’ needs were placed at the core of the project objectives. However, there are areas where opportunities available were not fully achieved due to restrictions related to conversion factors. For example,
very low literacy levels in the women’s group affected their confidence in using computers and they concentrated only on the use of mobile phones. Another example is the fluctuating Internet service provision in some areas that limited participants’ ability to access and use the Internet.

The results also show that study circles can be used as a tool to support and enable various capabilities especially in disadvantaged communities. As the area of project implementation was faced with low literacy levels, the SC provided an opportunity through which participants could access alternative education through non-formal means. The study circles provided opportunities that directly or indirectly boosted income, increased knowledge in livelihood and health matters as well as improved individual and community well-being. Hence, the SC served both to improve basic literacy and to provide education for improving participants’ livelihood options.

The evaluation was useful during the project implementation as the findings were applied during the implementation process and improved the project results. The involvement of project staff was beneficial to the project in helping the staff identify limitations that hindered access to various capabilities and ways in which they could be addressed. The involvement of project staff was also important in building their capacity for research and publication.

For practitioners, the study shows how the capability approach can be used for evaluation of development initiatives as an alternative to more result-focused evaluations. In addition the study shows 1) how ICTs can enable individuals to improve their lives and 2) the most important challenges in this process. The chapter expands our understanding of the implications of adding ICT in informal education so as to improve the capabilities of individuals and it provides us with the tools needed to evaluate the effect of an ICT implementation.
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About the publication

This publication is the first product of Spider’s Research Related to Projects initiative. This was devised and first implemented in 2011, to establish a closer connection between ICT4D research and ICT4D practice. ICT4D researchers in Sweden, in collaboration with researchers and practitioners in partner countries, carried out research on ongoing Spider-supported projects. This cross-breeding between ICT4D research and ICT4D practice has generated research that can contribute more directly to development work, and provide a substantial contribution to poverty reduction and other development goals.

Closer collaboration between researchers and practitioners contributes to ICT4D research that is grounded in reality, while at the same time allowing practitioners to draw on expertise that surpasses a particular project. The combination of research and practice is thus fruitful not only for future implementation, but also to improve ongoing activities.

The contributions to this publication cover projects in East Africa in three thematic areas: anti-corruption, democracy, and education. Each chapter can be read independently but they also resonate as they elucidate different of common aspects in ICT4D initiatives.