ICT Skills Training in Marginalised Communities: A Gendered Journey with Lessons or Not?

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Abstract

Information and communication technologies (ICTs) skill training is an absolute imperative for bridging the digital divide, especially when working with disenfranchised communities that have limited, but steadily growing exposure to ICTs. In this paper, we reflect on our experience having conducted numerous training sessions within the Siyakhula Living Lab (SLL), an ICT4D project in the rural and peri-urban areas of the Eastern Cape in South Africa. We leverage the results of an initial survey, which we conducted for purposes of improving training, to aid us in our reflection. Firstly, and rather unsurprisingly, we note that the majority of participants in training are women. This is unsurprising since in rural (and indeed peri-urban) spaces, women are typically drivers of development, in part, because men are pushed for economic reasons to go in urban spaces in search for employment. Secondly and more importantly, we note in a historical sense how the women in present and previous SLL training sessions have consistently shown enthusiasm towards learning. This, over the years, has caused us to think deeply about how we can engender ICT use that maintains and not reverses this trend, especially in cultivating skills for innovating and/or creating ICT services. Or to put it differently, to ponder how we can avoid the normalisation of women weaning themselves out of the possible roles of being producers of ICT-related services: to be just consumers, as is the case on the developed side of the digital divide, where many women actively avoid, say, being software developers. This is not a new question or problem; we look at it anew, as ICT4D research practitioners and educators in the higher education sector, with the intention of drawing lessons from our skills training experience in SLL. It is through this intention that we hope to contribute insights that may eventually help to resolve the gender question(s) within the ICT sector.

Keywords

E-Skills, Gender, Inclusion, Siyakhula Living Labs
Introduction

As part of a broad inclusion agenda for all people to live a life of dignity and (relative) comfort, efforts have intensified around the world to tackle the developmental challenges. The United Nations Millennium Development Goals (MDGs), for example, communicate the gist of this agenda, which is important to us for two reasons.

First, because of the obvious importance of building an inclusive and just society, where people understand, at a bare minimum, that a life of dignity lies in peacefully existence and having food to eat. Second, because the agenda centralises the importance of information and communication technologies (ICTs): this fact can be gleaned directly from the International Telecommunications Union, ITU (2009) report, which indicates that before the signing of the Millennium Declaration “world leaders reiterated their belief that ICTs would be instrumental to meeting all eight MDGs”.

With this clear acknowledgement that ICTs play a pivotal in the broad agenda of inclusion, there is an urgent need to ensure that communities, especially the already disenfranchised, receive ICTs skill training. This is an imperative for bridging the digital divide, which as noted in multiple scholarly and non-scholarly works, has the potential to exacerbate existing inequalities in our society.

ICT skills’ training is thus central to the work we do in the Siyakhula Living Lab (SLL) initiative (Terzoli, 2010). SLL is an ICT4D project, which as aptly echoed in the name, pursues its goal of growth with communities using Living Lab principles: co-creation and co-innovation with empowered users.

SLL comprises of two sites both in the Eastern Cape Province: one in a rural area and the other in the peri-urban area. The rural site consists of a number of communities in the vicinity of Dwesa that are geographically located in proximity of each other, while the peri-urban site consists of a community in Alice. The two sites, while different in some regards, share similar (troubling) socio-economic characteristics.

We conducted a ‘nuanced’ survey within these two sites. The questions were essentially the same but asked differently in some instances. The purpose of the survey was two-fold: to assess the levels of satisfaction with the training and to substantiate some of the reasons for attendance from the anecdotes shared with us, which we duly noted since we use ethnography to gain insights—this means we try as much as possible to be tuned in, listening and observing.

Prior to the survey, we had long observed that more women than men tended to attend training. To a degree, this was expected given the long-standing trend of men migrating to the urban spaces in search for work. But, of course, this trend on its own does not fully explain why the ratios are as they are (or have been); more so given that there are men within these sites who can potentially attend training, but do not.

So, what makes training more appealing to women than men within SLL communities? This question can be reviewed in a number of ways. For example, it may be tackled from the vantage point of bringing more men to the fold—albeit in this paper we do not.

In this paper, we focus on the question of how to keep the women in our site interested in ICTs. This question is also centre-stage in the mainstream, and has birthed many remedial programmes, which we support, that are designed to attract/retain women within the ICT sector, as creators of services. These programmes include, for example, the ‘Girls in ICT’...
initiative of the ITU (2010), which attempts to challenge the so-called ‘geek culture’ in order to do away with stereotypes that may dissuade females from exploring how their talents and capacities can benefit the ICT sector. Fundamental to our enquiry is: how do we cultivate sustained interest in ICTs, such that we avoid the reversal in numbers when we get to a point where we can push the boundaries beyond the basics?

This question is prompted by our experiences in the higher education sector, which in many ways speaks to why we support the remedial programmes for women in ICTs. Based on these experiences, the question we have is: are there any lessons we can import from the less developed side of the digital divide?

Training in Siyakhula Living Lab

As we have alluded to before, equipping people with e-skills is an absolute imperative for bridging the digital divide. Training is thus one of the core activities of SLL (Gumbo et al., 2012). Without training, given the low digital literacy among many community members within SLL, efforts to facilitate digital access and participation in knowledge society would bear little fruit. Mainly because true access is multidimensional and necessarily includes epistemological access—the latter can be gleaned, particularly, from the many failed initiatives of ‘technology-dumping’.

The training curriculum has three distinct components to it: 1) basic familiarisation of the computer and its environment; 2) use of office suite applications—to be exact OpenOffice Calc and Writer; and 3) internet basics combined with an exploration of real life uses that may unveil, for example, the cost-saving nature of receiving services without journeying.

Researchers are generally responsible for conducting trainings within SLL. Basically, researchers are encouraged to participate in literacy training to forge relations and share their knowledge with the community members. This has been a very crucial consideration from the very early days of SLL operations: to ensure that there is some giving back activity that tangibly communicates the dialogic nature of research.

The above withstanding, it may be argued that the researchers enlist their services to participate as trainers motivated by two major reasons. Firstly, to gain understanding of the needs of the community, in part, to identify problems that may, on the one hand, align to their specific skillsets or research interests, and, on the other, grow the SLL project for impact and sustainability.

Secondly—and of equal importance—the motivation of researchers can be located directly in the fact that they have chosen to use the living lab methodology. As such, to varying levels, they understand that their role is not simply that of teachers, but as Freire (Freire, 2000) puts it in the Pedagogy of the Oppressed, they are ‘teachers-students’ and the trainees are the ‘students-teachers’; this is to say, in teaching they are learners themselves learning from the students who in their own right are teachers. This reciprocity is paramount to the living lab concept, which advocates for co-creation and co-innovation of solutions by involving users in a real life context, as partners, at every stage of developing what might be deemed a fitting solution (Ballon et al., 2005, Directorate-General for the Information Society and Media, January 2009, Eriksson et al., 2005).

Determining Reasons for Training Attendance

Evaluation is an integral part of all activities in SLL—as it rightfully should be for any project. As part of the evaluation on the impact of SLL training efforts, we conducted a preliminary survey through a questionnaire to gain an understanding of some of the reasons why people attend training.

The questionnaire administered in the rural area differed slightly from the one administered in the peri-urban area: it explicitly excluded questions that may allow us to profile trainees based on employment and education. The nuances were well thought of. For instance, in considering the employment question, we engaged with ideas from intellectuals like Teffo (Teffo, 1999), who remind us that the African concept of a ‘worker’ requires us to sometimes be delicate; because as he puts it:

[W]orkers are not exclusively those people who are formally engaged or contracted to an employer in return for payment. A worker is rather any able-bodied and mentally sane person who contributes to the welfare and advancement of the family, community, and nation.

With Teffo’s definition in mind, one question to ask is: what does it mean to be ‘unemployed’ in the mainstream South Africa? This question is pertinent in appreciating why the inclusion or exclusion of the employment question in a questionnaire can be a point of consideration. Marais in his book, *South Africa Pushed to the Limit: the Political Economy of Change* (Marais, 2011) offers a glimpse into the complexities inherent to the employment question; unequivocally he tells us that:

South Africa has now settled on an official (or ‘narrow’) definition of unemployment. The official rate […] is a fanciful barometer of reality. Since it […] it allows statisticians to remove from their tally of the unemployed those citizens who are too demoralised, penniless or marginalised to line up at factory gates at dawn or tread the suburbs for piecemeal work. [These citizens] are simply deemed ‘unemployed’ [including] those persons who report earning an income from ‘hunting’, ‘begging’ or growing their own food.

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Table 1: Key Scoping Questions
We hope the above has provided some insights in why it was necessary to a degree to administer slightly different questionnaires. To us, the two SLL sites are different in ‘character’ to warrant some distinctions to be made.

Notwithstanding some of the differences that were deemed necessary, Table 1 captures the key questions of the survey. Or, to be accurate, the table captures anecdotes used to assess the reasons for attendance of training.

**Making Sense of the Reasons for Training Attendance**

As previously stated, training in SLL is about empowering community members: to activate their participation in the knowledge society with a specific goal of co-creating solutions that may ultimately improve their quality of life. Achieving this objective is no small feat, especially for the rural site, where for practical reasons, training has to be more spaced out and carried in stints over a period of six months: one week in a month, starting from 1pm – 4 pm, to accommodate as much as possible other activities in the lives of the individuals involved.

We conducted a survey with mostly quantitative questions as part of making a determination on the impact of our training efforts. With communities in the Dwesa vicinity, the questionnaire was administered to 20 participants while in Alice there were 38 participants. As seen in Figure 1, the female to male ratio is comparable.

![Gender Distribution in Dwesa](image1)

*Figure 1: Gender Distribution*

Notwithstanding the socio-economic circumstances of where the sites are located, one question of concern in this paper is: why do we have more females interested in training than males? Does (un)employment play an important role in this apparent interest?

A glimpse at Figure 2 does suggest there is a strong correlation between ‘unemployment’ and attendance. This fact we already knew—given we are part of the community—and indeed, this informed the occupation categories that were included.

What really was insightful was looking at this connection from the vantage point of trainees in the Dwesa vicinity, where, as stated before, there was no direct question on employment asked. As shown in Figure 3, more than half of the surveyed people (65%) refuted that their participation in training was linked to them not being busy. This in a sense resonates with Teffo’s concept of work—a reminder that sweeping, gardening, herding cattle, etc. count as legitimate work, albeit not the case in some contexts where work is narrowly linked to wages.

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So, given that ‘idleness’ might not be a strong factor, what else acts as a motivator? The results of the survey indicate that 90% of individuals were in strong agreement with the statement that they came for training to enrich themselves. Does it mean there is value proposition in our ICTs training initiative?

Frankly, we cannot provide definitive answers, particularly at this stage—for the survey itself was not comprehensive, but also because we work in an environment where many other initiatives are required before we can even engage with issues of value proposition. Still, the perception of value by the people is very clear. As a consequence, we can speak to the reality of people seeking to have agency over their lives and willing to explore how ICTs, in particular, can be useful.

Of course, insofar as the results of the survey are concerned, there is a looming question about the presence of men in the picture. From the point of view of inclusion, this is a fair question to ask, but one that concerns us only to a small degree. Firstly, because the men

in the areas we work in, in comparison to the women, tend to immigrate in their large numbers to urban spaces in search for employment. And those who remain are either disinterested or, as established anecdotally, are very engaged in other activities (usually of leadership) to have time to join training—the extent to which the former or latter can be proved is arguable.

Secondly, and relating only to the Dwesa site, the disproportionate numbers between men and women, is a result of the strategy employed by SLL community committee, which is responsible for mobilising a cohort to be trained. The committee, using the principle of fairness, extends an invitation for training to each of the 17 schools participating in the SLL Dwesa site (Macgregor, 2013) with a stipulation that a nomination of three names must be made while ensuring that at least one nominee is not an educator. This translates to a ratio of two educators to one community member outside the education sector. And because women educators outnumber men educators this already means that in each of the two designated training sites we are likely to not ever have a ‘50/50’ representation.

So fundamentally the question for us is about how do we possibly increase the ratio of men to women from ‘1:4’ to ‘1:3’? This question itself is significant since it invites us to explore why it would seem like women are more enthusiastic about making time for training despite being confronted by what may count as invisible work—their domestic chores.

An analysis by Heeks (2014) on how use of ICTs—outside the enterprise and ICT sector—en enhances livelihoods may be instructive on the matter. Heeks (2014), drawing also on the work of other researchers, basically weaves an argument that shows how training cultivates hope, which in turn facilitates creation of new livelihood strategies. He argues:

Although [ICT use is] more generally seen just as the precursor to enaction of new livelihood strategies, the intensive interaction with technology during an IT training course can itself create a livelihoods impact for excluded groups (Khan & Ghadially 2010). This is seen not just in the formation of skills (human capital), but also in empowerment (political capital); instilling a belief that many more things are now possible; with that belief having been shown to enable new livelihood strategies.

The embedded hope in Heeks argument resonates with us; and puts into perspective why it would seem, in energy terms, that there are more women than men in relative terms who are enthusiastic about learning. Of course, we do acknowledge there are other plausible explanations. But for us, it is hope and the overall perception of value that we believe underpins the women’s interest in our training initiative. Precisely because their reality compels them to take the lead in the formulation of livelihood strategies—be it only to be able to literally ensure there is bread for the household.
Lessons in Reflecting Across the Divides

As we have alluded to above, beyond the numbers, there is a narrative of enthusiasm that is linked to women in our ICT training space which we find very refreshing. Although the comparison may not be on an even playing field, the learning energies of these women compared to those in the higher education classrooms has inspired us to give some new thought to the gender question(s) in the ICT sector. But also to meditate about whether we can possibly glean lessons from the developing side of the digital divide: to contribute a suggestion or two on how we can achieve the goal of increasing the number of women in roles that extend into being producers and/or innovators of ICT services.

As it might well be accepted as the norm, in the developed side of the divide, there are more men than women actively pursuing careers in ICTs such that it may not at all be surprising to learn that three out of four active SLL researchers are male. The question is, in a country where the ratio of males to females is almost 50/50, why do we struggle to achieve equity within the ICT sector, despite many commendable efforts?

In the spirit akin to one that underpins the ITU ‘girls in ICT’ initiative, we believe the responsibility lies upon us all to find ways to do away with the blatant stereotyping ingrained in the fabric of the ICT sector, which, in many instances, explains the exclusion of women. To this end, based on the SLL experience, we draw two important lessons which we believe are instrumental to reinforcing existing initiatives aimed at creating a more inclusive ICT sector.

First, we, too, affirm—like many have done before us—that role modelling is critical. While the number of female researchers in SLL is very representative of the developed side of the digital divide, this is balanced out by the naturally high ratio of female to male educators. The latter is significant in that our ICT champions—i.e. resource persons, responsible for e-skills training and maintenance duties of the lab—happen to be women educators. The correlation is not necessarily unexpected, for teachers/educators are typically regarded as resources and standing members of the community; thus they have gravitas—or rather because they are constructed as having gravitas, their participation has been fundamental in cultivating interest and giving women the confidence that through ICTs they may have agency over their own lives.

Second, in the very early stages of cultivating interest in ICTs, it is essential to consider revising the approach and/or perspective in which we want to root the big picture of ICTs. We came to this conclusion in thinking broadly about how our approach to teaching and learning has been useful or useless in securing the interest of women in the ICT sector. From this process, we realised that the ICT4D outlook provides a wider frame of reference that breeds an understanding that ICTs are but tools that can be used to solve all manner of problems.

This outlook, because it aims to open up multiple ways in which people can value ICTs, differs profoundly to, say, the e-skilling strategy employed in higher education. As it might be known, initially there is a sense of a narrow focus on instilling programming skills almost at the expense of creating a monolithic view of what it might mean to be an ICT professional or enthusiast. In our opinion, this leads to the perpetuation of existing stereotypes that are very problematic by virtue of being exclusionary. But, at some level, the problem lies with not being able to create responsive curricula—that may be radical enough not only in reducing gender bias in learning, but in encouraging organic cultivation
of ICTs knowledge. (A radical proposition in our context would be something akin to having the departments of computer science and media studies combining under one unit.)

Conclusion

ICTs skills training is paramount, especially in the context of existing socio-economic inequalities in our society, which, unfortunately, continue to widen despite sustained efforts by different societal actors to curb them. Conscious of this fact, SLL provides ICTs training to e-skill people, who, for all intents and purposes, live among the ‘have-nots’ of the digital divide.

As we reported in this paper, majority of trainees are women. And, may we add, women, who irrespective of age are enthusiastic about learning and being digital literate. Enthusiastic to the levels that have indeed led us to seriously ponder the question: how do we maintain women in their large numbers interested enough in ICTs to be producers of services and not just consumers?

Historically, the oldest among the authors has seen the normalisation of men being regarded the default ‘producers’ of ICT services on the one hand; and on the other, women in the very early stages of their learning journey, weaning themselves out of the opportunity of acquiring skills and knowledge to also participate in production activities. Without doubt this is one of the many problems of inclusion that requires a remedy—for any notion of males in a non-sexist society being regarded a prototype of a role that can equally be played by females is itself a blatant perpetuation of sexism. As such, in concert with all other existing efforts, there is a need to find ways to open ourselves to different ways of seeing, hoping, of course, that we may retain both the male and female talent in the ICT sector, in part, to help bend the arc of time towards achieving the goals of inclusion that include, for example, the MDGs and beyond 2015 goals for a just and fair society.

References


