ACDI Minor Dissertation

Capabilities and the Kuyasa CDM project: Exploring skills development and its contribution to work opportunities

MSc specialising in Climate Change and Sustainable Development

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Date: January 2014

Declaration

Minor dissertation presented for the approval of senate in partial fulfilment of the requirements for the MSc specialising in Climate Change and Sustainable Development in approved courses and a minor dissertation. I hereby declare that I have read and understood the regulations governing the submission of MSc specialising in Climate Change and Sustainable Development dissertation, including those relating to length and plagiarism , as contained in the rules of this University, and that this minor dissertation conforms to those regulations.

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Abstract

Human development and wellbeing are increasingly being merged with global efforts to address climate change. Additionally, questions are being asked about the role of skills development in environmental sustainability and local wellbeing. But how do these goals play out in complexity found at a local scale? This paper focuses on the Kuyasa CDM project, situated in a marginalised locality of South Africa, which upgraded low cost housing with energy efficient technology. It explores how skills development has contributed to opportunities for work, drawing on concepts from the capabilities approach. The skills development took the form of on-the-job training and, for some, one month of training at an accredited institution. Data was gathered through focus groups, semi-structured interviews and field observation. The analysis draws on concepts from the capabilities approach to explore the link between skills development and wellbeing through opportunities for work. Findings present a perspective of people whose lives and histories are bound in layers of complex social dynamics and power structures. Through this perspective there is a preliminary insight into what can be gained from skills development of this nature. The level of skill gained is now used in informal settings and is largely perceived as unsatisfactory. There appear to be severe obstacles the creation of jobs in energy efficiency technology in installations in low income houses. However, there are ways in which the project has provided subtle contributions to opportunities for work.

Acknowledgements

I would first and foremost like to acknowledge the participants of this study. It is my hope that, through this research project, they have contributed to a development discourse that is more effective in South Africa.

Secondly I would like to acknowledge those residents of Kuyasa with whom I have made friends over the time of this field work. Without this connection I would not have felt secure in my visits to Kuyasa. This friendship shall extend beyond the end of this project.

Thirdly, I would like to thank my supervisor, Holle Linnear Wlokas. Not only has she been an excellent advisor in terms of research, fieldwork and write up required for this project, she has also been an enthusiastic and inspiring support throughout it all.

Fourthly, I would like to thank Bradley Rink for his administrative and general research advice. His role in supporting our class is particularly challenging and he has done his job thoroughly without complaint.

Fifthly, I would like to thank Prof. Tim Dunne, who might have been a co-supervisor had this project taken an alternative methodological route, but who, nevertheless, contributed to a valuable journey and rich understanding of how methods speak to research.

Next, I would like to thank my housemates who have been my supportive social network without which this project most certainly would not be finished.

Lastly, but not least, I would like to thank my parents and grandparents who, through their efforts in my upbringing and investment in my education, have ultimately contributed to the completion of this research.

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List of acronyms

CDM	Clean Development Mechanism
CER	Certified Emission Reduction
DWEA	Department of Water and Environmental Affairs
EPWP	Expanded Public Works Program
HDI	Human Development Index
RDP	Reconstruction and Development Program
SWH	Solar Water Heater
UIF	Unemployment Insurance Fund
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VET	Vocational Education and Training
TVET	Technical and vocational education and training

1   Introduction

Due to the interrelated problems of climate change and development, there is a call to find solutions which simultaneously address these two areas (Halsnæs & Verhagen, 2007, p. 666). The international climate regime is providing avenues of support for development challenges through the Clean Development Mechanism (CDM) for example. South Africa is a country which faces particularly severe development challenges in terms of inequality levels which are to a large extent linked to high and increasing unemployment levels (Leibbrandt et al., 2010). South Africa's National Climate Change Response White Paper includes, in the overall approach, "[d]eveloping and implementing a wide range and mix of different types of mitigation approaches, policies, measures and actions that optimise the mitigation outcomes as well as job creation and other sustainable developmental benefits" (2011, p. 6).

Yet there is uncertainty as to how this increasingly active international regime and corresponding national policy shifts might impact South African development. Evaluations of Clean Development Mechanism (CDM) projects thus far have revealed that intended local sustainable development benefits are seldom reached (Crowe, 2013, p. 59). Additionally, while the creation of jobs has been highlighted as an intended outcome of South Africa's new green economy (DEA, 2011), the extent of this job creation and whether the necessary skills are available is uncertain (Aroun, 2012).

Skills development has the potential to address three dimensions of sustainability in the context of projects which target clean technology transfer. Firstly, skills need to be developed for the success of the technology installation (Thorne, 2008). Secondly, skills development can potentially provide human capital that is vital for the capability of employment and improved wellbeing (Mcgrath, 2012). Yet at the same time there is a challenge in how to use skills development to reduce poverty, support economies as well as support a move towards less resource intensive practices (Maclean, 2009, p. xvii). Thus, it is important to consider the potential role skills development efforts can play within the arising considerations of climate change and development in South Africa.

This research explores how the Kuyasa CDM project, through its skills development component, has contributed to opportunities for work. Despite the project being an early and shining example of CDM projects, the research questions the sustainable impact for the lives of those involved in it: people whose lives and histories are bound in layers of complex social dynamics and power structures. Khayelitsha is a severely marginalised suburb on the outskirts of Cape Town, facing challenges of poverty and unemployment (Ngxiza, 2012, p. 186). Kuyasa, a suburb in Khayelitsha, was formalized between 1999 and 2002 through a Reconstruction and Development Program[1] (RDP) subsidised housing development (Donaldson & Du Plessis, 2011, p. 102).

Between 2008 and 2010, the project upgraded 2309 RDP houses with energy efficient technology including solar water heaters (SWH), energy efficient light bulbs and insulating ceilings (Wlokas, 2011, p. 30). For this, 85 people were employed permanently along with others over the period of the project's duration from 2008 to 2010 (2011, p. 35). Those employed were residents of Kuyasa or neighbouring suburbs and most were unemployed at the commencement of the project (Goldman, 2010). Most permanent employees were given onsite training and a portion of them received training at formalised Further Education and Training (FET) colleges.

The project was the first CDM project to be registered in Africa (Wlokas, 2011, p. 34). The Kuyasa CDM project also preceded a nation-wide mitigation effort of the South African government; a mass solar water heater rollout launched in 2009 of which a desired outcome is the creation of employment along side mitigation of green house gas (GHG) emissions, provision of electricity and the alleviation of poverty (2011, p. 27).

The overall success of this project has been recognised locally and internationally. It was the first CDM project to be awarded the Gold Standard (Wlokas, 2011, p. 32). This standard encourages local development of carbon mitigation projects

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[1]RDP, an overarching policy framework of the first democratically elected government in South Africa in 1994, included a subsidy for a basic house with the potential for upgrading (Bradlow et al., 2011, p. 269). The expectation for upgrading has not been met partially due to the lack of technical support and the low-cost housing which now exists and as a result of this policy has been criticised as ineffective and not people centred (Huchzermeyer, 2001, p. 306).

(Nussbaumer, 2009). Despite this success, there has been no formal consideration of the post project impacts of the skills development and work experience received through Kuyasa CDM project.

The Kuyasa CDM project is an interesting case study around how technology transfer, spurred on by the international climate change regime and aligned with national government priorities, might interact with local development through the mechanism of skills development. This study uses a conceptualization of skills development described by Palmer (2007, p. 399) skills development includes; *"… education and training, occurring in formal, non-formal and on-the-job settings, which enables individuals…to become fully and productively engaged in decent livelihoods and to have the capacity to adapt their skills to meet the changing demands and opportunities of the economy and labour market".*

In the context of the CDM project, how has skills development impacted positively on the lives of those in Kuyasa, if at all? This research aims to explore the impacts of skills development which cannot be understood simply in terms of average household or income. What follows is an exploration, drawing on the capabilities approach, of a complex, historically grounded yet globalised community struggling to engage in "decent livelihoods", and how a development project might impact on this.

The structure of this thesis is as follows. Chapter 2 outlines the aims and objectives of this study. Chapter 3 reviews the literature informing this research. Literature on the relationship between mitigation projects and local development is reviewed, highlighting the concern around whether mitigation instruments such as the CDM might contribute towards development. South Africa's development situation is then reviewed. Next, literature on the link between skills development and jobs is discussed. This is followed by a consideration of South Africa's renewable energy policy with respect to its expected impact on job creation and skills development. Finally the capabilities approach is reviewed and its application in this study is explained.

Chapter 4 outlines the methods used to address the research questions.

Chapter 5 presents the background of the Kuyasa CDM project specifically with respect to the employment and skills development.

Chapter 6 presents the main findings of this study. This section includes an overview of work histories reported both before and after the project. This analysis includes a description of the work and training experience on the project. Lastly, two concepts from the capabilities framework - contextual constraints and resources - are used to interpret the experience of working and living in Kuyasa in order to inform an understanding of how the project might have contributed to opportunities for work.

Chapter 7 provides an overall discussion of key findings directly addressing the research question of how the Kuyasa CDM project has contributed to work opportunities for those who were employed on the project, and asks questions about how such a project might happen in a slightly more sustainable way. Finally, chapter 8 concludes this dissertation.

2   Research question and objectives

This study aims to explore how the skills development component of the Kuyasa CDM project has been perceived to contribute to opportunities for work in the long term.

Informed by the literature this study aims to answer the following question: What were the resources provided by the project to those employed by the project and, in the given context, how have these resources enabled or constrained opportunities to finding work?

The objectives of this research project are to;

1. Describe the nature and the experience of work and training on the project
2. Describe the contextual constraints which affect those living in Kuyasa and consider how the project interacted with these.
3. Identify the resources provided by the project to employees and consider these in light of the how different resource categories are valued and utilised.
4. From 2 and 3 the project's overall contribution to expanding opportunities for finding work is discussed.

3 Literature review

This section presents an overview of the literature informing the research project. Firstly, the literature on the local development contribution of mitigation projects is considered. Secondly, the overarching development status in South Africa is outlined with reference to inequality and unemployment challenges. This section includes a consideration of literature on Khayelitsha, the locality in which this research takes place. The third section considers literature on skills development and job creation while the fourth section considers trends in South Africa in renewable energy and job creation. The fifth section outlines the capabilities approach and how it is applied in this study.

3.1 Local development and the climate change agenda

As the concern about climate change increases, in a world where human development challenges are prominent and continue to worsen, efforts have been directed towards addressing these interrelated challenges simultaneously. A manifestation of this, organized at an international level through the United Nations Framework Convention on Climate Change (UNFCCC), are projects such as those under the CDM (Linnér et al., 2012). The CDM was introduced under the Kyoto Protocol in 1997 (Ellis et al., 2007, p. 16). Projects registered under CDM, have the two objectives of reducing GHG emissions and promoting local sustainable development (Sutter & Parreño, 2007, p. 75). Thus the CDM is seen as an opportunity to direct investment towards the transfer of technology (Ellis et al., 2007). On an international level, mechanisms have been created to address the dual challenge of climate change and development.

A large portion of research in the field of mitigation and its contribution to local development focuses on CDM projects, however the potential to contribute to development applies to a broader range of mitigation projects (Casillas & Kammen, 2012). In what follows, literature on mitigation and CDM projects will be considered with respect to their relationship to local development.

Several authors have concluded that CDM projects have not made substantial contributions to local sustainable development (Disch, 2010; Nussbaumer, 2009; Olsen & Fenhann, 2008; Sutter & Parreño, 2007). A recent study by Crowe (2013) looked specifically at the potential for CDM projects to provide benefits to the poor

and found this contribution to be marginal. Nussbaumer (2009, p. 91) reported the finding that CDM projects have been severely lacking in their impact on additional employment and social sustainable development. Thus, it is doubted whether CDM projects succeed in their objective of local sustainable development.

The failure of the CDM to meet its objective of development is attributed to a bias in its design as a market-based mechanism (Nussbaumer, 2009, p. 99). The market incentive to produce and sell carbon credits overpowers the non-market incentive to ensure that locally determined development is achieved (Disch, 2010, p. 51; Olsen & Fenhann, 2008, p. 2820). This failure is mirrored by the fact that there is a requirement to monitor the reduction in GHG, but there is no requirement to monitor sustainable development contributions (Olsen & Fenhann, 2008). A result of this is that tools used to evaluate mitigation projects do not quantify the direct and indirect impacts on local stakeholders (Casillas & Kammen, 2012, p. 691). The failure to meet the objective of local development is in part attributed to more attention being paid towards reducing emissions than ensuring local development benefits.

There have been global efforts to draw greater attention to the development impacts of mitigation projects but this has had unconvincing results. The Gold Standard was created to enhance the potential socio-economic side effects of CDM projects by awarding low carbon projects which have benefits for the poor (Nussbaumer, 2009, p. 93). However the difference in impact between those projects awarded with the Gold Standard and those not, has been found by some scholars to be insignificant if not negligible (Crowe, 2013; Nussbaumer, 2009). Efforts to inspire greater attention to the contribution of low carbon projects to the poor have had limited success.

Employment is examined in the literature as a component of CDM evaluation. Research on the local development impacts of CDM projects consider employment as a component (Olsen & Fenhann, 2008; Subbarao & Lloyd, 2011; Sutter & Parreño, 2007). However this research refers to employment during the project (Sutter & Parreño, 2007, p. 79) and does not necessarily refer to long-term or enduring employment (Olsen & Fenhann, 2008, p. 2822). In addition the above mentioned studies are quantitative and assess predefined indicators for local development impacts. Therefore the benefits in terms of employment are considered important, yet

the long term employment impact is not a focus of CDM evaluation. This lack of attention results in a limited understanding of how CDM projects might result in sustainable benefits for the local development context.

The Kuyasa CDM project features in a significant amount of literature. Cousins & Mahote (2003) conducted a pilot study prior to the project where they analysed how the installation of a solar water heater geyser, ceiling insulation and energy efficient lamps would be received by the residents of RDP or government supplied houses in Kuyasa, Khayelitsha. This study found that renewable energy would have a positive impact on the households who received it. This was confirmed by findings by Wlokas (2011) who considered, on a large scale, the impact of the project during and after its implementation. The installation of solar water heater geysers had the impact of reducing household vulnerability and adding to household assets (2011).

There has been limited and short term research into the impact of the skills development component of the Kuyasa CDM project. The jobs created in person months per Certified Emission Reductions (CERs) achieved on the Kuyasa CDM project was calculated, however this measure refers to employment during 'construction and operation' phase of the project (Sutter & Parreño, 2007, p. 79). There has been no investigation into how the employment and skills development component has impacted the lives of employees since the rollout was completed.

In conclusion, there is skepticism as to whether CDM projects succeed with respect to their objective of sustainable development. Additionally, there is limited investigation into the long term impacts of CDM projects. If these projects are to fulfill their objective of local development it is necessary to evaluate, review and adjust efforts towards this. This project will contribute to the field by exploring the post-rollout impacts of the work experience and training component of the Kuyasa CDM project in South Africa

3.2   Development, poverty and unemployment in South Africa

South Africa has experience high levels of poverty and inequality since the end of apartheid. Leibbrandt et al. (2010, p. 46) find a small increase in poverty from 56% of South Africans living under R515 per month in1993 to 54% in 2008. However this is alongside increasing levels of inequality. South Africa's Gini coefficient increased

from 0.66 to 0.7 over the same time period (Leibbrandt et al., 2010, p. 31). Adato et al. (2006) point out that the South African population can be divided into two groups with distinct Human Development Index[2] (HDI) measures: the one equivalent to that of Zimbabwe and the other between that of Italy and Israel. South Africa faces significant development challenges and high levels of inequality in the wake of the highly divisive apartheid policies.

South Africa's National Development Plan declares that one of the key challenges is that "[t]oo few people work" (2011, p. 25). The Quarterly Labour Force Survey for the second quarter of 2013 reveals that although employment has increased by 2%, but the increase in unemployment has outweighed this indicator by a 5% increase (Statistics South Africa, 2013, p. iv). Additionally, there has been a consistent increase in the number of those unemployed; from 3.9 million people in 2008 to 4.6 million people in the second quarter of 2013 (Statistics South Africa, 2013, p. xii). Of those households without members participating in the labour market, 80% are found to be below the R515 per month poverty line (Leibbrandt et al., 2010, p. 40). High rates of unemployment, linked to structural changes in the economy, ought to be addressed if South Africa is to reduce poverty and inequality.

As stated above, this study is situated in Kuyasa which is a suburb of Khayelitsha. Khayelitsha was established in 1983 under apartheid (Ngxiza, 2012). Settlements such as Khayelitsha, were designated by the apartheid government on city outskirts for citizens classified as black who were accommodated for the purposes of cheap accessible labour (Du Toit & Neves, 2007; Rogerson, 1999). This spatially and economically excluded legacy has persisted and left Khayelitsha's 900, 000 (approximately) residents largely unemployed, in poverty and facing significant social challenges (Ngxiza, 2012). Du Toit & Neves state that "poverty in the African

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[2] HDI is an index which represents a shift away from measuring human development and well-being using income and towards understanding a more multidimensional conceptualisation of development (Neumayer, 2001, p. 101). The HDI comprises of three broad indicators; the expected length of life, education and income (Anand & Sen, 2000, p. 86).

township of Khayelitsha seems to be patterned most above all by the political economy of racialised urban space" (2007, p. 16).

Unemployment is considered significant in Khayelitsha (Cousins & Mahote, 2003, p. 10; Du Toit & Neves, 2007, p. 18; Rogerson, 1999, p. 525). One of the reasons for the high rate of unemployment in Khayelitsha is the large distance (30km) from the central business district in Cape Town (Cousins & Mahote, 2003, p. 7; Rogerson, 1999; Thorne, 2008, p. 2835; Wlokas, 2011, p. 34). As well as being physically marginalised from the economic hub, residents in Khayelitsha are faced with challenges in terms of language as it was found in 2002 that only half of the population could speak either English or Afrikaans (Du Toit & Neves, 2007, p. 16). Additionally, a significant proportion of the Khayelitsha population are migrants from the Eastern Cape seeking jobs in the city (Cousins & Mahote, 2003, p. 7; Du Toit & Neves, 2007, p. 18; Ngxiza, 2012). This pattern fosters high concentrations of labour seeking people, increases competition for jobs and thus aggravates the multiple obstacles to employment for someone living in Khayelitsha.

Thus South Africa faces severe development challenges and high levels of inequality which are largely attributed to unemployment. In a context such as Khayelitsha there are enhanced challenges with respect to employment.

3.3   Skills development and job creation
The pathway from skills development to jobs is complex and somewhat unknown. King (2009, p. 175) warns that formal or informal jobs are not a certain outcome of skills development efforts which are particularly directed towards employers needs. McGrath (2012, p. 624) identifies this automatic link between skills and jobs as a 'productivist assumption' which aligns with the conceptualization of economic development as the overarching goal. The importance of understanding *how* economic and social development can be generated by vocational education is further stressed (Allais, 2012, p. 640). Towards this end, it is proposed that vocational education is situated within a broader consideration of human development (Mcgrath, 2012, p. 625). In considering the skills development, be it in relation to renewable energy projects or otherwise, it is important to consider the ways in which skills development can contribute to local development such as work opportunities.

The South African government has acknowledged that the country is short on skills and that support should be given to people with low skills living in marginalised areas (Aroun, 2012, p. 140). McCord (2005) reviews the South African government's Expanded Public Works Program (EPWP) which aims to address the lack of skills in providing short term (an average of 4 months) work experience and on-the-job training which is intended to contribute to the skills of those who participate. The EPWP projects are of a similar nature to the skills development on the Kuyasa CDM project. Through an empirical study of people who participated in various the EPWP programs, McCord (2005) concludes that these programs do not provide people with skills adequate to allow mobility from the low skilled to the intermediate skill segment. McCord's analysis suggests that there is a 'key skills threshold' which must be reached through training and skills development before South Africa's labour market can be improved (2005, p. 567). If people are employed after such a program it is likely that they have replaced someone else rather than decreased the rate of unemployment (2005, p. 572).

A significant issue with this type of training program is that skills are sometimes not perceived to have been gained. It reported that 38% perceived a skills development aspect while the rest claimed that no training had been received (McCord, 2005, p. 577). This lack of confidence limits employability.

In conclusion, in any effort to develop skills it is important to understand how these skills might lead to the opportunity for work. A consideration of EPWP skills development in South Africa has revealed that the training should be perceived as training and the level of skills provided cannot directly contribute to reducing national unemployment levels.

3.4 Renewable energy, employment and skills development in South Africa

Research has been done on the impacts of renewable energy and climate change policy on employment in South Africa. The National Climate Change Response White Paper states "[t]he climate change response will attempt to reduce the impact of job losses and promote job creation during the shift towards the new green economy" (2011, p. 32). Various estimates exist for the number of jobs that might be created

under various scenarios of shifting policy in renewable energy however, these estimates have been criticized as being "snapshots rather than time series" as well as "estimates and projections more than firm figures" (Aroun, 2012, p. 235). Given South Africa's unemployment challenge, it is important to consider how new and prominent policy developments such as that around renewable energy can impact on employment.

Skills development has the potential to marry the development of renewable energy technology and local development. Several authors have highlighted the importance of skills development for the success of projects at the community level. Thorne (2008, p. 2831) presents two requirements for the success of clean energy technology in developing countries; the enabling environment, provided by projects or policy, and the local skills. McGrath (2012, p. 628) points out that vocational education plays an important role in facilitating community projects for longer term development. Thus it is important to understand how skills development can be used to optimize projects directed towards clean energy technology and the creation of jobs.

The SWH industry is expected to have the potential to create jobs, especially for low income communities yet the extent of this is uncertain. The SWH industry has potential to create jobs in low-income communities in maintenance and installation (Prasad & Visagie, 2005, p. 12). However, the the quality of the jobs created is a concern given the unreliable, subcontracted and as a result unregulated construction sector (Aroun, 2012, p. 240). In her ethnographic study of a low income context in the Western Cape, Ross (2010, p. 104) described the experience of being a casual labourer as unpredictable and insecure as workers are randomly selected and contracted for a days work at a time.

3.5   The capabilities approach

This study will draw from the capabilities approach. The capabilities approach was first introduced by Sen (1980). Capabilities are the "freedoms or valuable options from which one can choose" (Robeyns, 2005a, p. 95). They can also be seen as opportunities (DeJaeghere & Baxter, 2014, p. 71). As a response to the criticisms of one dimensional poverty measures such as household income, this approach focuses on the opportunities an individual has through which to achieve a way of living they

consider valuable (Robeyns, 2006, p. 351). Through its consideration of opportunities as opposed to resources owned, the capabilities approach brings two important considerations to light; a consideration of what livelihood is valued and a consideration of the economic and social context in which an individual exists (DeJaeghere & Baxter, 2014). As such, the approach acknowledges the diversity and multiple dimensions of poverty and development (Powell, 2012, p. 464; Robeyns, 2005a, p. 111) which are absent in income poverty measures. It is stressed that the capabilities approach is not an explanation for poverty but, through the concepts situated within a framework, provides an appropriate conceptual and evaluative tool through which to consider the state of wellbeing (Robeyns, 2006, p. 353).

The approach has been further specified and used for a range of research purposes. Nussbaum (2003) has further developed this approach in the field of political philosophy with respect to social justice. Robeyns (2006) has considered the theoretical specifications of applying the capabilities approach in research or policy development. The capabilities approach has since been used in a variety of research and policy settings from econometric studies to participatory qualitative studies around project evaluation (Robeyns, 2005a).

The capabilities approach has also been considered in the field of skills development. McGrath criticises vocational education and training (VET) as being addressed within an "outmoded model of development" (2012, p. 624) and further argues that various VET forms can be considered through the capabilities approach in order to discover what is learnt and how learning happens (2012, p. 628) . Powell (2012) uses the capabilities approach to consider how VET relates to poverty alleviation. She argues that the contribution of VET to poverty alleviation is conditional upon an explicit consideration of the multidimensional nature of poverty, which is provided by the capabilities approach (Powell, 2012, p. 646).

The framework used and presented here is taken largely from DeJaeghere & Baxter (2014) and Robeyns (2005a). Broadly it consists of five components. Resources[3] are considered to be combined to form capabilities or opportunities which are then

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[3] Also referred to by DeJaeghere & Baxter (2014) as endowments

selected by the individual to achieve functionings. This flow from resources, through capabilities to functionings, is then governed by contextual constraints and choice or values.
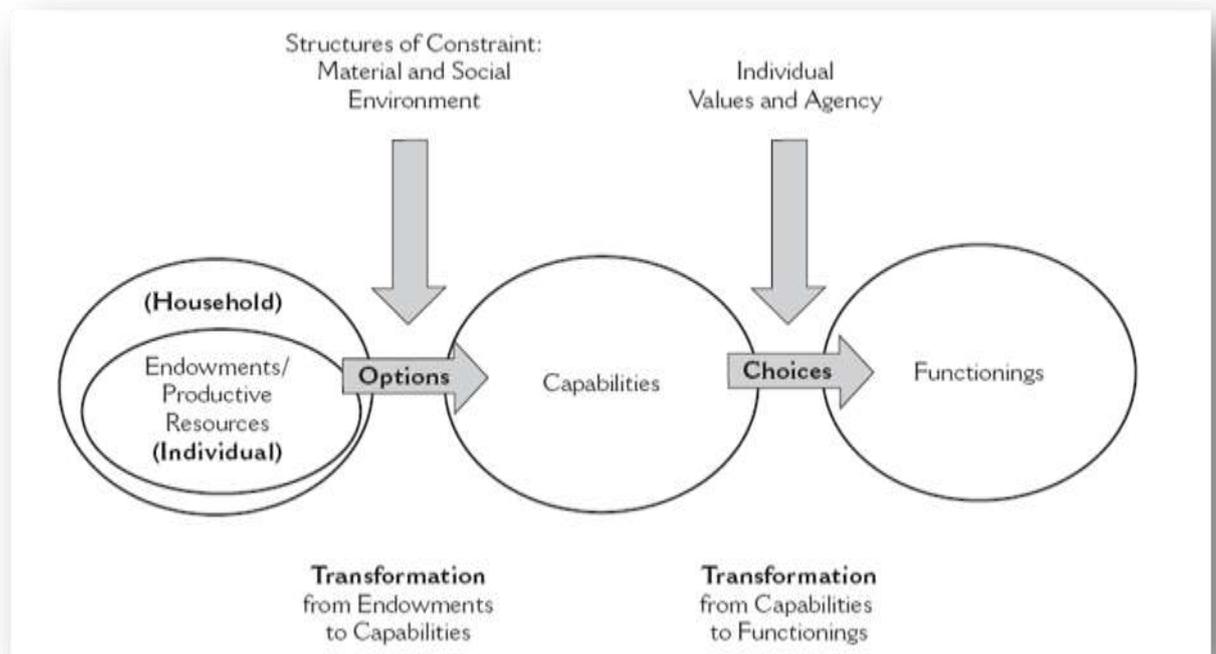
Figure 1: Diagram of the capabilities model (Source: DeJaeghere & Baxter (2014))

3.5.1 Resources

Resources contribute towards the capabilities of an individual (DeJaeghere & Baxter, 2014). Resources should not be focused on as an ultimate measure of wellbeing but should be focused on for how they might expand opportunities or capabilities of an individual alongside a set of other considerations (Robeyns, 2005a, p. 100).

The livelihoods approach is drawn on to complement the understanding of resource categories but is not applied in full. The livelihoods framework provides four categories of resources; human, social, financial and physical resources (Scoones, 1998). Another category of resources known as cultural capital which includes qualifications and training which gain their status as a capital or resource due to their

long standing tradition (Anheier et al., 1995, p. 862). Moser (1998) lists labour, human skills, household relations and social capitals as critical assets relating to the vulnerability of households in urban areas. DeJaeghere & Baxter (2014, p. 70), in their consideration of how entrepreneurial projects expand capabilities, note that a project aimed at developing skills increases human resources through skills, physical resources by providing equipment or developing social networks. Thus there are various categories of resources which might be considered in understanding skills development in an urban context.

3.5.2   Contextual constraints

The capabilities approach requires that the context in which one lives should be carefully considered as it plays a significant role in determining what opportunities are available and what choices are made towards functionings (Robeyns, 2005a, p. 99). This is one of the considerations which distinguishes the capabilities analytical approach from more simplified measures of wellbeing (DeJaeghere & Baxter, 2014).

Multiple elements of a context constrain or enable the opportunities one has by regulating how resources may be used. Robeyns (2005a, p. 99) refers to aspects which influence the flow from resources to functionings as 'conversion factors' of which there are three types: (1) 'Personal conversion factors' include aspects such a gender or health, (2) 'Social conversion factors' include aspects such as public policies, social norms, discriminating practices, gender roles, and societal hierarchies, and (3) 'Environmental conversion factors' include, for example, geographical location. Contextual constraints can include external factors such as legal institutions or regulations but also include within household factors such as differences in power relations or inequality between males and females (DeJaeghere & Baxter, 2014, p. 71). Thus, contextual constraints apply differently to people within a similar locality. For example, in one context there might be jobs available but only for those who can speak English. In this case a constraint is put on those people who do not speak English.

Ross (2010), in her ethnographic study on a marginalised group living on the outskirts of Cape Town, considered various barriers to employment. One was "culturally informed patterns of gender relations" (Ross, 2010, p. 115) which dictated that a wife

should remain at home and not seek employment. Ross (2010, p. 112) also noted that, in the community where she conducted her research, jobs were acquired through social networks and rarely ever through a job interview or application process. This example highlights how the context determines the value of endowments as social capital (networks) is more valuable than for example a qualification which would be used in an interview process.

The importance of contextual constraints or enablers is acknowledged in the literature on skills development and how it relates to poverty alleviation and development. Palmer (2007, p. 410) points out the World Bank's claim that an 'enabling environment' is an important factor to consider alongside skills development if it is to contribute to wellbeing. It is noted that further attention should be given to an ensured move from skills development to employment as well as the social contexts in which the trainees are situated (King, 2009, p. 181). Anderson (2009, p. 44) stresses that the complexities around societies and culture should not be ignored when considering the relationship between skills and employment. In considering technical and vocational education and training (TVET) from a human rights perspective, McGrath (2012, p. 626) notes that TVET can be internally exclusionary in terms of interactions among learners as well as between what is presented as knowledge in the curriculum. This exclusion implies that the content and experience of training may be discriminatory to some and can be extended to the employment realm. Thus if skills development is going to impact upon development is should be considered with respect to the contexts of those who are skilled.

3.6   Application of the capabilities approach in this study

The capabilities approach will be used to consider how employment and training on the Kuyasa CDM project might have impacted work opportunities. This study uses a qualitative mode of inquiry where the goal is to provide a descriptive analysis. With this epistemological goal, the capabilities approach is used to highlight complexities related to wellbeing (Robeyns, 2005b, p. 194).

The relevance of the capabilities approach extends to aid the conceptualisation of how skills development contributed to overall development (Mcgrath, 2012). This study does not attempt to make an exhaustive assessment of wellbeing. Rather it focuses on

two concepts of the framework to consider the skills development on the project and post-project work experience. Through this, the study distills ways in which such a project might have contributed to enabling opportunities for work.

The direct experience of stakeholders is seen to provide valuable insight into both the evaluation of CDM projects and skills development evaluation. The consideration of stakeholder perceptions in CDM project evaluation is limited, despite its importance in enabling local development (Parnphumeesup & Kerr, 2011, p. 3592). Powel (2012) notes that even training colleges in South Africa rarely consider the perspectives of their students. Therefore this study makes a unique contribution by drawing on qualitative research tools with which perspectives are gathered and then analysed with the aid of the capabilities framework.

4 Methods

This section outlines the methods used to address the research question. It describes the research design, research limitations as well as ethical considerations of the study.

4.1 Research design

This empirical study focuses on the recounted experiences of those who were employed on the Kuyasa CDM project between 2008 and 2010 to consider its contribution. Holloway & Todres (2003, p. 351) note that "no matter how much experiences are structurally prefigured by political, cultural and language contexts, it is how these contexts are gathered and lived out by people that is an important starting point for a qualitative inquiry". In conducting and writing up this research it is acknowledged that a context is never static but "always in process" (Raffles, 2002, p. 47). Due to the power of participants in determining what is presented to the researcher (Flyvbjerg, 2004, p. 294), it is not possible to present the full picture at anyone time. Thus drawing on semi-structured interviews, focus groups as well as field observation, this research aims draws on the lived experience of those living in Kuyasa to present one (of many possible) nuanced perspective of how the skills development effort has played out in this context.

4.1.1 Research participants

The participants of the focus groups and the semi-structured interviews are those who were employed on the Kuyasa CDM project. Additional informants were also interviewed. Table 1 presents the details of the two focus groups held with people who were employed on the Kuyasa CDM project. Table 2 presents the details of the semi-structure interviews also with individuals who were employed on the project. Table 3 presents details of the interviews held with additional informants who were not employees on the project yet had important roles to play with respect to the project.

Table of focus groups			
Focus group	**Number of participants**	**Language of focus group**	**Date of focus group**
Focus group 1	5	Xhosa	18 July 2013
Focus group 2	4	Xhosa	26 July 2013

Table 1: Focus group details: number of participants, language and date (Source: own compilation)

Table 1: Details of semi-structured interviews				
No.	**Male or Female**	**Language spoken by participant in interview**	**Date interviewed**	**Training received**
1	m	Xhosa	01 October 2013	no formal training
2	f	English	01 October 2013	no formal training
3	m	Xhosa	01 October 2013	no formal training
4	m	English	30 November 2013	no formal training
5	m	English	26 November 2013	no formal training
6	m	English	28 November 2013	Received formal training
7	f	Xhosa	21 September 2013	Received formal training
8	f	Xhosa	21 September 2013	Received formal training
9	m	English	21 September 2013	Received formal training
10	m	English	01 October 2013	Received formal training
11	m	Xhosa/English	21 September 2013	Received formal training
12	m	Xhosa	26 November 2013	Received formal training
13	f	English	28 November 2013	Received formal training
14	f	English	28 November 2013	Received formal training

Table 2: Semi-structured interviews with project employees: dates, language and training type (Source: own compilation)

Table 2: Details of of additional informant interviews	
Additional informants	Date
Kuyasa residents (various)	Over time of fieldwork (July 2013-January 2014)
Project stakeholder	08-Aug-13
Provincial government official	09-Dec-13
Local government official	09-Dec-13
Lecturer at Northlink	03-Dec-13

Table 3: Additional informants (not project employees) interviewed (Source: own compilation)

4.1.2 Data collection

Data collection was done through focus groups, semi-structured interviews and site observation. Fieldwork occurred over the period of July 2013 until January 2014. Translators were used in both focus groups and in four of the 14 interviews. All interviews and focus groups were recorded and transcribed by the researcher.

The capabilities approach partially informed the points of discussion used in the focus groups and interviews. For example all participants were asked what they thought was necessary for making a living in Kuyasa as opposed to being questioned on what they earn each month. The approach thus helps to consider the nuances of life and work in Kuyasa rather than distilling static facts.

Two focus groups were held with people who had worked on the Kuyasa CDM project. The focus group meetings took place at the CDM project headquarters in Kuyasa. The researcher and a translator were present at the focus groups. The discussions were guided by but not restricted to points prepared by the researcher.

The interviews took place either in the participants' homes or in the local soup kitchen. They varied from 20 minutes to one hour. The interviews were open ended and semi-structured, being guided by five over-arching topics for discussion and associated prompting questions (See appendix B).

Interviews with additional informants were conducted to gain an understanding of the Kuyasa CDM project. Field notes were taken after each site visit with which observations were recorded as well as concerns around the fieldwork process.

4.1.3 Data analysis

The transcripts were analysed using thematic analysis guided by Hahn (2008) and Braun & Clark (2006). Three levels of coding were done. First level was to select relevant sections from the transcripts which spoke to the research questions as well as memos. The second level of coding was to categorise the first level. This level produced the descriptions of experience of working and training on the Kuyasa CDM project.

The third level of coding was to apply codes relating to concepts from the literature on the capabilities approach, which form the sections on how the project impacted upon the different resource categories, contextual constraints and how the resources and the extent to which these factors enabled the expansion of opportunities or capabilities with respect to making a living.

4.2   Research limitations

All research methods have limitations (Creswell, 2003, p. 15). It is important to consider these limitations in order to validate research findings.

4.2.1   The researcher's position[4]

As a white, English-speaking female who introduces herself as being from the university, I hold a distinct position with respect to the participants. I was asked for money by one participant and I was asked for jobs by two participants. Additionally, when there was a taxi strike, I was called by one of the residents and told not to come to Kuyasa as it was not safe for me. These occurrences illustrate my distinct position characterised by a position of privilege but also powerlessness in Kuyasa. As a result of this, there is an unavoidable bias in the fieldwork.

4.2.2   Language

Both focus groups and five of the 14 interviews were conducted in Xhosa and translated. For all interview and focus group participants, English was their second language. Misunderstandings were rectified when they were realised however it is likely that meanings were lost or changed through the translation.

Additionally the translators were residents of Kuyasa. This had the advantage of access to the participants in terms of familiarity and showing me the way around the neighbourhood. However this had the disadvantage that some participants would feel uncomfortable revealing information about their situations.

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[4] This section is expanded upon in appendix C

4.3   Ethical considerations

So that is how you create a single story; show a people as one thing as only one thing, over and over again and that is what they become. (Adiche, C. 2009)

Before the commencement of this fieldwork ethical clearance was applied for and granted by Engineering and Built Environment Faculty.

All participants were given a consent form which explained in the language necessary before the interview or focus group. They were told that they could leave whenever they wanted, if they felt uncomfortable although discomfort was not intended in the interview or focus group.

They were told their names would be kept anonymous. While confidentiality is not possible between participants in a focus group, the participants were reassured that their names would be kept confidential by the researcher. The permission was asked of all participants before the use of a voice recorder.

On a more fundamental note, there are many restrictions with attempts to understand a phenomenon through lived experiences. There are significant limitations to the kinds of conclusions one can draw and equally significant problems about making recommendations. As such the purpose of this research is exploratory within its bounds of bias and interpretation with an aim of contributing to an in-depth and nuanced perspective of those who are often represented under the perpetuating and simplified, single story of poverty levels and unemployment. It claims to be nothing more.

5   Background on the Kuyasa CDM project

This section describes the set up of the Kuyasa CDM project. This is necessary for the reader to have an understanding of the nature of the work that was done at Kuyasa. The existence of a skills development component is largely due to the conditions of the project's funding. The local government official interviewed reported that the funds from national government (the Department of Water and Environmental Affairs (DWEA)) were originally sourced from Expanded Public Works Program (EPWP). In order to comply with EPWP's funding conditions, 30% of the project's budget was used for "local job creation and skills development" (Goldman, 2010, p. 11).

Drawing on a report written for the United Nations Development Program (UNDP) (Goldman, 2010) and additional informant interviews, this section describes the nature of the work on the project and the structure of the training.

The Kuyasa CDM project upgraded 2309 Reconstruction and Development Program (RDP) houses with energy efficient technology. The energy efficient technology installations are displayed in figure 2 and figure 3. They illustrate the solar water heater geysers, associated plumbing, insulating ceilings as well as energy efficient lighting (Moosa & Thorne, 2011).
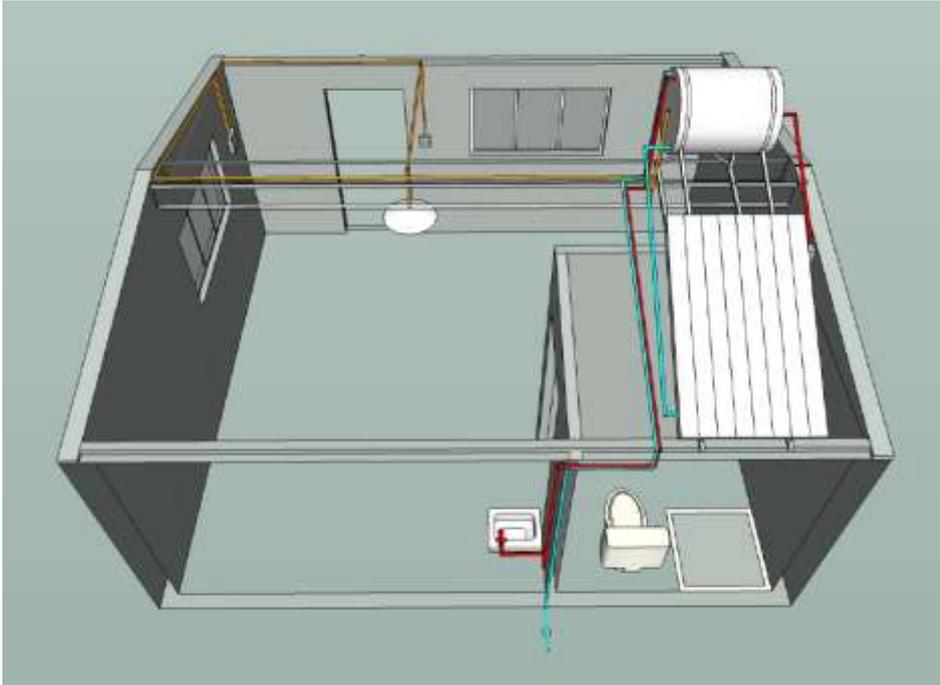
Figure 2: Illustration of installations including geyser, associated plumbing and electrical wiring (Source: Moosa & Thorne (2011); presentation for the Western Cape Provincial CDM workshop)
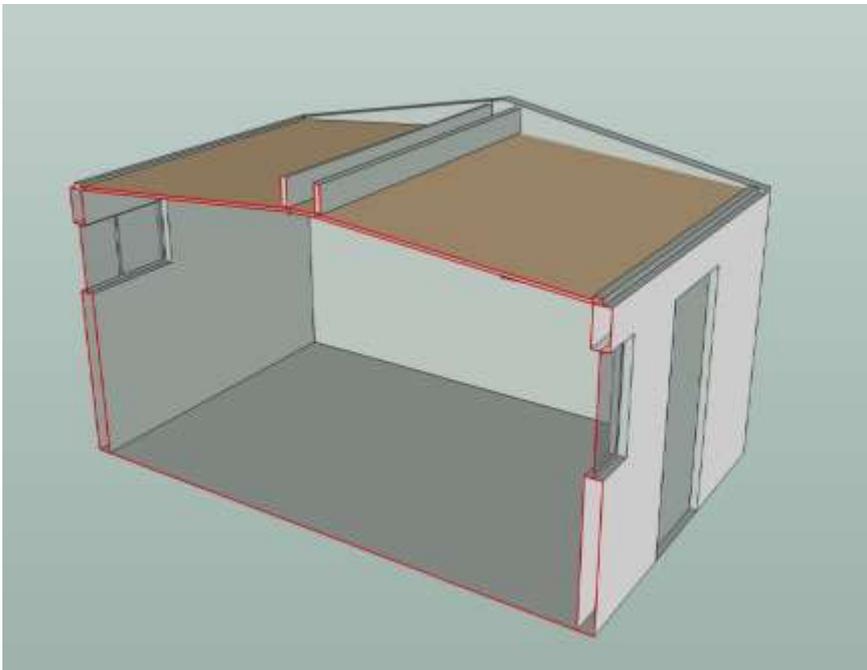

Figure 3: Cross-section of an RDP house showing the insulating ceiling (Source: Moosa & Thorne (2011) presentation for the Western Cape Provincial CDM workshop)

Those recruited for work on the project were said to be largely unemployed, members of the Kuyasa community (Goldman, 2010, p. 11). The training had two components. "[I]nhouse skills transfer" involved employees receiving training from "an in-sourced technical expert" in plumbing, carpentry and electrical skills (Goldman, 2010, p. 11). Teams were supervised by these experts for a week. The tree planting team was an additional component of the project which received funding from Woolworths according to the project manager. These 10 people were given onsite training in tree planting and each upgraded house received a tree.

Goldman (2010, p. 11)described the activities and corresponding team structure as shown in Table 3.

Activity	Team
Solar Water Heater steel frame assembly team	8 people
Electrical team completes wiring and electrics	5 teams of 2 people each
Carpentry team do steel frame for ceiling	5 teams of 2 people each
Geyser team install steel frame on roof to support geyser Ceiling team to ceiling boards	2 teams of 2 people each
Ceiling team to ceiling boards	5 teams of 2 people each
Female members of team to cornices of ceiling	4 teams of 2 people each
Plumbing team run pipes and install hot tap and geyser	4 teams of 3 people each
Tree planting team	10 people

Table 4: Activities comprising the installations for the Kuyasa CDM project and corresponding work teams required (Source: adapted from Goldman 2010 p. 11).

Accredited training was received from Northlink College "so that the skilled workers also gained a certificate in their specific skill" (Goldman, 2010, p. 11). Accredited training was received from other institutions as well such as Learn to Earn for office

administration or tourism at the Livingston Academy. A project stakeholder interviewed explained that accredited training was not necessary for the work on the project for which people could be skilled onsite. Thus the purpose of this accredited training was to provide formal proof of skills rather than impact upon the project work.

6 Findings: Skills development on Kuyasa CDM project, contextual constraints and resources derived

This chapter presents the results from the empirical research; interviews, focus groups and field observations. It includes five sections. The first three sections in this chapter are taken from the second stage of analysis where the relevant transcript extracts were organised into descriptive categories. The first section draws on the participants' accounts of work before and after the project and provides a general description of the different activities engaged in to earn a living. This section is complimented by the table in appendix A which presents the work and additional training histories of each research participant. The second and third sections present a description of the experience of the work experience and training on the Kuyasa CDM project respectively.

The final two sections present the final level of analysis which organised the data around two concepts from the capabilities approach; contextual constraints and resources. These two sections draw on accounts and perceptions gathered in the interviews and focus groups. They describe the contextual constraints affecting opportunities for work as well as the resource categories and their relevance to opportunities for work for residents in Kuyasa.

6.1 Work in Kuyasa

This section considers the work histories presented by participants and general perceptions around the work done by those who were employed on the Kuyasa CDM project. This includes work before as well as after the project. This section is complemented by detailed work histories presented in the table in Appendix A.

The conversations around work histories revealed the perception of a distinction between formal and informal work. Some participants reported that they had not worked before the project but later in the interview reported working as a domestic worker or as an electrician's assistant. 'Piece jobs' were frequently reported as a way of earning a living. 'Piece jobs', as the term suggests are informal and irregular jobs which include a wide range of tasks including gardening, cleaning, or doing electrical jobs for people in the surrounding areas. 'Piece jobs' were generally described as unsatisfactory and in one case a piece job was described as 'not a real job'. This

distinction between 'real' jobs and 'not real' jobs, aligned with a distinction between formal, contract based work and the informal work mostly done in an around Kuyasa.

Three participants reported having formal jobs currently although these jobs were not directly related to the work they were doing on the project. The two office administrators employed with one working as a saleswoman for Vodacom and the other a councillor for a TB clinic. A carpenter is working for the Golden Arrow Bus Company.

Six participants reported that they were unemployed. However three of these six participants admitted to getting informal work mostly 'piece jobs' through connections established with the Kuyasa project. This contradiction may result from an understandable dissatisfaction with insecure work as well as a desire to portray a need for a job in case the researcher might provide one.

For others the distinction between employed and unemployed was not so clear. These participants identified themselves as electricians, plumbers or carpenters, identities which were also held on the project. One electrician reported starting his own business. Despite this identification with a profession, the work had in these cases seemed to be informal and the business owner struggled to find jobs.

'[M]ost people are just skarreling[5] now' reflects a dominant perception amongst participants and Kuyasa residents. Once the jobs on the CDM were no longer, people did not have work. This perceptions is supported by evidence, both observed by the research and reported by participants that people were at the *shebeens* during the middle of the day on weekdays. However a few held that a lot of Kuyasa employees were working. It was reported that two plumbers have '*good jobs, government jobs*'. Another perception was that those who have jobs were doing work that was not related to the work on the Kuyasa CDM such as working as a security guard.

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[5] Skarreling as an activity for getting by was reported in the focus group as an unsatisfactory option remaining since the end of the project. This concept was not explored further in the field work, as further discussion on the term seemed to be insensitive at that point in time. Ross (2010) describes skarreling as a lifestyle where one just does what one can day by day to get by. It additionally has a psychological burden.

Overall these findings suggest that post-project work that is related to work done on the project seems to be irregular and in many cases considered unsatisfactory (i.e. not considered as work or referred to as 'piece jobs'). Those who consider themselves employed are working in jobs which are not directly related to the Kuyasa CDM project work, or the training.

6.2   Work experience

This section presents themes, arising from the interviews and focus groups, which describe the experience of working on the Kuyasa CDM project.

6.2.1   Selection for the project

The fieldwork revealed varied accounts of being selected to work on the project. One participant's name was randomly selected out of a box at a community meeting. Another reported that they were selecting unemployed people from the area and this was the reason he was selected. The two participants who did office administration were selected after submitting their CVs. One person explained that he was selected to work on the project because his house, adjacent to the office, supplied the project with electricity and water. Another account of selection on the project was by someone who had been a domestic worker for one of the managers and through this had demonstrated her ability to work hard. The participants who worked as supervisors, one for electricity and the other for carpentry said they were selected to work on the project because someone, who had witnessed their skills, had recommended them. These different selection experiences correspond to the differing positions as well as to the different times of the project.

Apart from those who were head hunted for their existing skills (the supervisors), those employed went through an interview process. The Kuyasa CDM management conducted these interviews in some cases, and the local manager conducted others. The project stakeholder reported that the interview included testing the applicant's knowledge of measurement through asking what a metre is. Some participants recalled that in the interview they were queried about what they would do in a situation of conflict and told sternly that they should report such situations and not start a fight.

6.2.2   Position on the project

Roles on the project were categorised according to the area of work as well as according to a hierarchy (see figure 4 below). There were electricians, carpenters, plumbers, office administrators and agricultural workers. Within these areas (besides agriculture) there were supervisors who were already skilled and instructed other workers. If someone showed particular skill on a task, they would stick to that task

and be given authority over that section of work. For example, for the electrical jobs, you became an operator if you could do the electrical wiring without instruction. Other participants, including those trained in agriculture, reported that they did a variety of the jobs or moved flexibly from 'doing ceilings', to helping with the stands, to helping with the electrical wiring. One focus group explained that they worked on teams and in order to work faster, they paid other people to help them. One participant indicated he was able to move from being in the general worker category to being an operator for electricity and which suggests that mobility appears to be possible between general worker and the specialised roles.
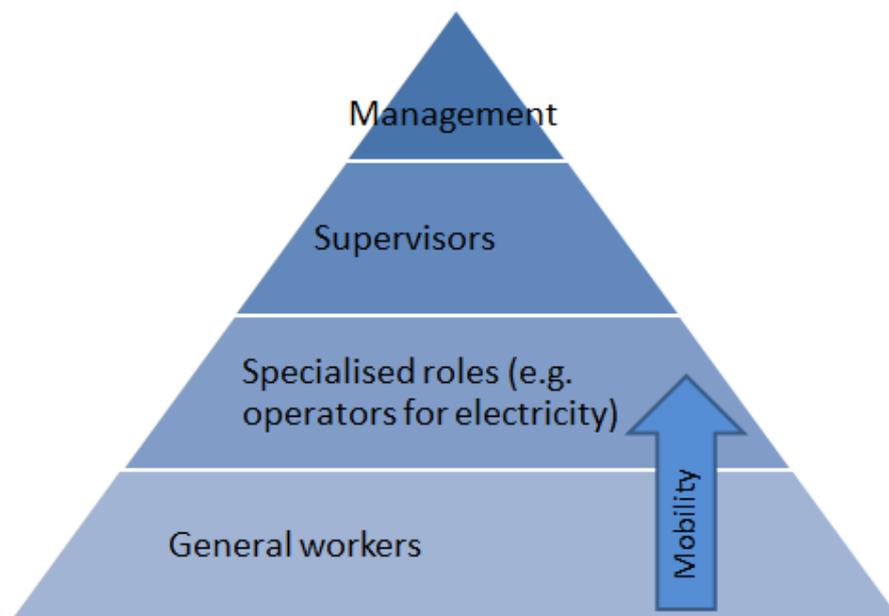
Figure 4: Diagram illustration hierarchy of positions reported by employees of the project (Source: own compilation)

6.2.3   Uniforms

Several functions of the uniforms were reported by the participants. One was to keep clothes clean as the work involved activities which caused clothes to become dirty or damaged. In addition the uniform was seen as a way to identify project employees if someone in the area had a query. Wearing a uniform was seen as helpful in gaining trust from the owner of the house being worked on and, linked to this, the uniform provided an avenue for accountability. If a job was not done well then the owner could lay a complaint at the Kuyasa office. Two participants identified the purpose of the

uniform to prevent people from visiting the *shebeen* during work hours as people would know they were avoiding work.

One participant worked for an extended period of time on what was described as 'probation' during which he was not given a uniform. This participant expressed that a uniform helped to create a sense of belonging. A different account held that the uniform transfers the dignity of the company onto that person.

6.2.4   Duration of work on project

Duration of work on the project varied amongst participants. An office administrator and an electrical operator reported working there for five years. Others worked from one to three years. Some residents who were trained in an agricultural component recalled being transferred to working on the houses towards the end of the project as there was an urgency to finish upgrading the houses. In their case the work only lasted a few months.

6.2.5   Salaries

The salaries differed according to the different positions on the project. Some workers reported being paid per house completed; others reported being paid per day. Those who worked flexibly between tasks in the project reported being paid R90 per day while others who did more specialized tasks reported that they were paid R90 per house. One participant explained that he was first paid per day and then per house, suggesting the possibility of mobility from the general worker group to the specialised worker group.

Some reported that they felt the salaries were too little and that they should be paid in the holidays. The supervisor interviewed expressed that the set up of being paid per house resulted in rushed and imperfect work. This he added was not good for learning skills.

6.3   Training

This section describes themes which arose in the interviews and focus groups around the experience of training on the Kuyasa CDM project.

6.3.1   Onsite training

Onsite training was experienced differently by the participants interviewed in terms of whether it occurred at all, its duration and its nature. Some denied that they received onsite training but were only shown what to do. Those who reported that there was onsite training reported varying durations. Four people experienced one to two days of onsite training. Another explained his onsite training as having worked along side a more experienced electrician for two months.

The method of onsite training also differed. Some recalled onsite training from the supervisors. One participant remarked that supervisors had to train people as the project hired people who were inexperienced, identifying the reason for onsite training. Agricultural training was done by someone from outside of the project and Kuyasa. One participant remarked that additional skills were gained through learning from others.

6.3.1.1 Perceived value of the onsite training

The onsite agricultural training was described as too short to create a new skill and instill confidence in how to plant trees. The supervisor remarked that teaching people onsite was '*not enough as they still need to get papers*', implying a limited value of onsite training. One participant who worked as a plumber declared that the onsite training was not enough to make him a '*qualified plumber*'. One participant expressed frustration with the fact that they were shown onsite how to erect geyser stands but using material that was different to the material they were required to work with when upgrading the actual houses.

Others saw onsite training as highly valuable and recall learning a lot. Support given for this notion was that onsite training allowed one to move between different roles. Also in support of the value of the onsite training was the observation that it was more practical than the training received at Northlink College. This view was supported by

a different participant who explained that onsite real houses were worked on where as at Northlink College they did not.

6.3.2 Northlink College Training

Amongst the 14 participants interviewed, seven of them went to Northlink College for accredited training. The training occurred over a month during which transport was provided from Kuyasa to the Belhar Northlink College campus. It was reported that the training took place from around 8am to 2pm each week day for a month. Participants were paid for that month and each day they received R30 for lunch.

The Northlink College lecturer reported that several modules relevant to the Kuyasa CDM work were chosen for CDM employees to complete. These modules were a small part of a qualification which could not be completed within the time allocated. It was understood by one participant that the project paid for two out of seven modules needed for a three month long electrical qualification.

Experience of the instruction differed amongst participants. The format of the training was described as being given a task at the beginning of the day to complete. Some reported that the instructor was around the whole day and available for questions. One participant perceived the instructor to be particularly knowledgeable. Others held that the instructor was never around and that they had not received enough instruction. A conclusion at a focus group was that there was no instruction and that they relied on senior students for instruction. The training was done in English and one participant who could only speak Xhosa relied on her friend to translate the instructions.

The content of the training was reported by some participants as '*how to do plugs*', '*how to connect globes*' by drawing and understanding circuits, the carpenters trained on small sample houses. Tips around safety were reported as part of the Northlink College training, for example, one participant reported that she had learned what to do if an appliance starts to shock you.

6.3.2.1 Perceived purpose of formal training

Four of those trained at Northlink claimed that the training was a way to formalise the skills or receive proof of skills which they had gained on the project. The two participants who did training at Learn to Earn and the Livingston Academy saw the

reason for the training as an opportunity to get a qualification. The purpose of the Northlink College training was also reported as a way to get jobs once the project was over. One participant who took part in the Northlink College training explained that is was the first step in a journey to further training. It is also seen as an introduction to the professions of a carpenter, electrician, and plumber.

6.3.2.2 Perceptions of Northlink training experience

Some hold that Northlink was useful and beneficial. Support for this claim across participants includes; satisfaction in taking time to learn something, learning new tricks around how to get jobs done and they were taught well. In explaining the skills gained at Northlink College one participant explained that before the project; '…*I was struggling. But after that I got some tricks and it was easy and then I make a lot of money after that. Because of per house; I used to do two and then I was tired. But after that, after the training, I have got some skills and then some tricks. I think I make 4. It was a lot of money for me.*'

Others were not so satisfied. Two participants described the Northlink training as being basic. A focus group presented the opinion that it was a waste of time and that the project fell behind because workers went to this training. Further discussion in the focus group led to the admission that the training was not totally useless but should have been more practical. The other focus group expressed the sentiment that they already knew what they were taught and that the training should have been longer and more comprehensive. One participant, who did not go to Northlink College for training, declared that he knew more than some of the people who had been through the training. This might originate from a sense of jealousy that he was not trained but might also indicate that those who came back from Northlink Training were not necessarily more skilled than those who did not go.

6.3.2.3 Perceptions of Northlink College training related to work done on project

Two participants received Northlink training in electricity but worked as carpenters on the project and therefore felt there was no value from the training for their work on the project. A focus group supported the opinion that the training was unhelpful with the statement that the materials used at Northlink were different to those worked with on the project. The other focus group concluded that they did not take anything from their

Northlink training as while working on the houses they used the skills they already had anyway.

On the other hand two participants explained that their work on the project had changed as a result of the Northlink training. One had learnt 'tricks' at Northlink which helped him to work faster and complete more houses in a day. As a result he could earn more money.

6.3.3 Other formal training

Two participants received training from alternative training institutions. The one attended for six months of training in office administration at Learn to Earn and the other went to Livingston Academy for training in tourism.

The Learn to Earn training was towards the end of her work as an office administrator and therefore did not have a direct link to her work on the project. After training at Learn to Earn the participant reported being set up with a job as a sales assistant. The tourism training was seen to complement her communication skills but she was not interested in tourism and also did not use it on the project. This view was held despite the opportunity being presented by tourists visiting the project at one stage.

6.4 The contextual constraints affecting work opportunities

This section reports on contextual constraints evident in field observations and participant accounts which influence opportunities to find work. People who live in Kuyasa are subject to the forces of history, economic systems, local as well as broader power structures and societal values – "…never still…always on the move" (Raffles, 2002, p. 47).

6.4.1 Geographical location

The geographical location of Kuyasa is perceived as a significant constraint for work opportunities. The expense of transport into Cape Town's Central Business District (R30 return by a taxi) or into another area of concentrated economic activity in Khayelitsha (R12 return by taxi) is perceived as a burden in terms of keeping a job as a large portion of income is spent on transport. Also, if one does not have a job then it is a challenge to find the money for transport to seek a job. This constraint related to geographical location is common to those living in Kuyasa.

In the creation of maintenance jobs or 'piece jobs' arising from the fact that there are now solar water heater geysers, electrical wiring and plumbing to maintain, the project has reduced this constraint, however it appears to have been lessened for very few and for those few, lessened only marginally as the jobs are infrequent.

6.4.2 Economic constraints

'All I can say is there is not work' was the reason given for high rates of those who worked on the CDM. This geographical constraint is related to local economic patterns such as the lack of jobs. The lack of jobs was a common reason given for unemployment. A local government official reported that the problem of unemployment in Khayelitsha was a challenge with which the City of Cape Town was making the least improvement.

This specific constraint of job scarcity would have been temporarily removed for those who were working on the project as jobs were created and positions needed to be filled. There is evidence that the project has had a longer term affect of removing this constraint through creating five jobs for people to maintain the houses which were

upgraded. However these maintenance jobs are considered as 'piece jobs' which are temporary and have terminated around the end of 2013.

The opportunities for creating work or starting businesses is constrained by the resources available to residents of the area. One participant found some jobs for installing ceilings in neighbourhoods adjacent to Kuyasa. However he said that his customers would be unable to pay him immediately for the job if they were able to pay them at all. He explained that '*you will never live like that'*. The project stakeholder reported that he had supported start up businesses by supplying materials and was doubtful that those businesses could sustain themselves. It was also expressed that jobs might be created for Kuyasa CDM ex-employees when people extended their houses. It was further noted that most were not able to pay to extend their houses, thus constraining this opportunity for a job. This suggests that lack of financial resources in surrounding areas is a significant constraint in starting a business for upgrading RDP houses as was done in Kuyasa.

Conversations with participants indicate the existence and involvement in the informal economy. Evidence of this informal economy exists in activities reported for making a living including, selling of sweets chips and chicken, *skarreling*, melting down of scrap metal and selling it, as well as piece jobs. What is considered as 'a real job' (more formal and perhaps contract based work) also suggests the operation of the informal economy. Furthermore, a significant portion of the work reported is part of the informal sector. Thus the informal economy is a prominent aspect impacting opportunities to find work despite its perceived inferiority of the jobs it provides.

6.4.3   Regulatory constraints

There was evidence of institutions to address unemployment by local government available to Kuyasa residents. A common strategy for job searching in Kuyasa, and the broader Cape Flats area, is adding their details (name and skills) to the municipal database. Many participants reported filling out of forms at the Ward Councillor's office. This process was expanded upon by a municipal official; when a contractor or company need labour they consult the database and select the required number of people from across different wards, based on the skills required.

A regulatory constraint identified in Kuyasa is the requirement of a licence in order to start a business at home. This requirement was perceived as a significant constraint to creating work for oneself as money was needed to apply for such a licence but until one is working, there is no money to purchase this licence. Frustration was expressed around this double message from the government; there is the expectation to be proactive and create work but simultaneously, with the implementation of this regulation, inhibits efforts to create work. This regulation also works against the informal economy which is heavily relied upon and could be seen as a reaction to the constraints of distance from jobs and job availability, thereby enhancing wellbeing.

6.4.4 Social constraints
There are a range of social structures which impact upon individuals in the context of Kuyasa and affect their work opportunities.

6.4.4.1 Power relations
In finding work as a resident in Kuyasa it is clear that there are some power imbalances which affect work opportunities. One participant reported that a job was given by the Ward Councillor to someone else before he even knew that the job was available. Favouritism by local Ward Councillors was also reported by the local government official who noted this as a reason for reassigning responsibility of the unemployment databases from the Ward Councillor to the sub-council.

Power relations were also perceived around work on the Kuyasa CDM project. Several political groups had to be considered in the selection of applicants for jobs on the project. Equal portions of applicants had to be brought forward by the local ward development council as well as several separate split groups within the South African National Civics Organisation (SANCO) in order to satisfy local politics.

6.4.4.2 Discriminatory practices
'[W]e respect our white people because….we know that if you want a white guy or lady to... [pay you a bribe] and then you are in trouble'

Other constraints are perceived in association with race. The above quote is from an interview with a participant who described his experience of trying for a drivers licence. He explained that in the Western Cape, black people are asked for a bribe of R2000. This bribe is not asked of white people for a fear of being reported. This story

suggests a degree of disempowerment associated with being a black person in the Western Cape, which entails a greater chance of experiencing corruption than a white person. The participant explained further that he went to the Free State to get a licence where there was less chance of being asked for a bribe.

The following extract presents a request a participant made to the researcher and illustrates the perception of race affecting work opportunities.

'Maybe you can advise me where should I go to get a job.'

'You know why I ask you. Yes you are the student. Maybe your father does have what I want. Maybe he is a manager in municipality because I know that it will be easy for me to get what I want. ...I know that if you believe you can do this for me then you can do it because I believe you can. Things are going easier for the white.'

This request directly articulates the perception of jobs being more accessible to white people. This interaction indicated an understanding that significant resources lie with white people and that entering into a white person's social network was highly beneficial for finding a job.

Discriminatory practices were perceived around the work on the Kuyasa CDM project. One participant indicated that he was told, when interviewed for a job on the Kuyasa CDM project, he was told that his job was conditional on the fact that he was not in conflict with the Amampondo people, who he explained are a distinct Xhosa clan. This account indicates that there are distinct groups in the area which allow for the development of power dynamics which impact on the ability to find work.

The project manager reported that two employees were threatened with murder as they did not live in Kuyasa but were still employed. As they lived in an informal settlement adjacent, it was strongly felt they should not have been given the job on the Kuyasa CDM. When jobs become available, equal portions of people, registered on the sub council unemployment database, are taken from different wards. Thus, finding work is also impacted by the position of where one lives within Khayelitsha.

6.4.4.3 Gender roles

Two of the women interviewed who were working on the project did not have jobs and did not indicate that they had been called for any piece jobs since the project. It is possible that due to demands of looking after children, they could not find jobs after the project terminated. In Kuyasa the Crèche[6], only opens around 9am in the morning which is too late for a parent to arrive at a full time job on time. Thus, with respect to work there is an additional constraint to finding work due to the need to care for children presumably affecting women to a greater extent than men.

The project has a varied interaction with this contextual factor. Through employing females the project might have broken through these distinct roles and illustrated that women can work in a construction context. However, the project stakeholder noted that he needed to employ people of a certain physical ability and these mostly included young fit males. Additionally, in assigning specific jobs to females (as seen in Table 4) this project might have created a certain distinction between jobs for men and jobs for women.

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[6] A facility which looks after very young children

6.5   Resources provided by the project

And his mother showed us a beautiful basket that his brother had made. I was startled. It had not occurred to me that anybody in his family could actually make something. All I had heard about them was how poor they were so it became impossible for me to see them as anything else but poor. Their poverty was my single story of them. (Adiche, C. 2009)

This section outlines resources that were received through working on the Kuyasa project and consider how they interacted with the context to form capabilities and functionings.

6.5.1   Human capital

Skills were perceived to be gained on the project through onsite and formal training as well as work experience. One man said that he knew nothing about electricity before the project. Another common opinion was that the project allowed them to learn a lot about different jobs and thus gained a variety of skills which was seen as valuable. For example, despite training in carpentry one could learn about electricity or plumbing too. There is also the notion that the formal training at Northlink College improved the quality of skills as quicker and safer methods were taught. Others attached value to being able to spend time learning something despite the fact that the skills gained were only useful for the purposes of fixing plugs in the house.

There is a clear perception of the level of the skill obtained through the training of the project. The lecturer at Northlink explained a factor which distinguishes between different levels of skill in carpentry, plumbing or electricity as being whether something could be built from scratch or simply repaired and maintained. This differentiation between skills level is also referred to by participants. One focus group member trained in carpentry said that she was not able to get a job she applied for at a furniture manufacturer because she could not show them that she could build a table from scratch. The skills reported in the piece jobs of someone who worked as a plumber were referred to as 'patch ups' suggesting that the skills used were mostly maintenance and fixing of things already there.

Two women reported that the skills they had learnt had enabled them to fix plugs in their own homes or in the homes of their friends. It may have been due to their

obligations as mothers however, that the skills they obtained did not contribute to expanding their capabilities in terms of finding a job.

The work experience in office administration was seen as highly valuable. One office administrator noted that the project was the first time she could get experience in office administration which complimented previous training she had in office administration.

6.5.2   Social capital

Social capital was identified as a very important part of finding work in Kuyasa. One participant ranked knowing someone above having a matric and computer literacy skills. Participants referred to being on the '*inside*' where one can illustrate one's abilities to do a job. If you are not on the *inside*, you need a friend who will recommend you to their boss. Employment after the project was attributed to knowing the right people. Thus social capital is identified as an important factor with respect to finding work.

Social capital gained on the project included the development of friendships which provided the opportunity for emotional support. The project provided the opportunity for a house owner to witness the skill of a worker. In the case that some thing goes wrong with a part of the installation the home owner knows of someone to call. Social capital gained through interaction with other workers on the project appears to have contributed to the opportunity for piece jobs. One participant, who does infrequent electrical jobs, says that if he gets a big job he calls on his previous Kuyasa colleagues to help him. Thus trust built while working on the Kuyasa CDM between employees and between home owners and employees has contributed to social capital.

On the other hand some of the participants explained that they were no longer in touch with people who worked on the project. In such cases social capital from the project was not sustained.

6.5.3   Physical capital

It was reported that the tools used on the project were given to the employees when the project finished. Some reported not receiving tools, however. One participant who worked as an electrician explained that he was given tools when he became an

operator. Another participant explained that he had paid for his tools through his project salary. From this it is suspected that tools were given based on the position on the project.

 In some cases tools were used for piece jobs which are generally reported to be temporary. Two people reported that their tools had been lost suggesting that there had been a time since the project where they have not had a use for the tools, and that they had lost track of them. Furthermore, as suggested by project management, many employees sold their tools. This might suggest that the use of the tools was less valuable than the money they could be exchanged for. One participant had a complete tool set to which he attached significant pride, however his main job was with Golden Arrow Bus Company. He stated that he could not make a life as a carpenter. Thus the physical capital provided by the project has not, in all cases, contributed to expanding the opportunities of those who worked on the project, but in some cases supplemented the use of skills.

6.5.4   Cultural capital

The lack of qualification, often referred to as 'papers', was identified as reducing work opportunities. It was reported by several participants that a prospective employer required 'papers' (or qualifications) which the participants did not have. Additionally, the lack of papers was identified as preventing one from getting a 'permanent job', showing qualifications to be important for entry into a formal job. The lack of papers or a qualification was the reason perceived by one participant for mistreatment in the work place. The lack of papers means that *'...like if you complain then you have to leave, because I don't have a skill'*. Qualifications are seen to provide more respectful and positions in work and greater empowerment.

Completing schooling was seldom referred to as important with respect to finding work. Participants held varying levels of school education which is consistent with the fact that the participant are of varying ages and would have been exposed to various schooling systems (under apartheid and post apartheid). Only two of the 14 participants identified finishing school (obtaining grade 12) as an important achievement for finding work and these two had finished school. Otherwise matric was not identified as a factor affecting the finding of a job.

6.5.4.1 Accredited Certificate

The certificate acquired from a recognized institution was intended to be an aid for CDM employees to find work at the end of the project. Many perceived the purpose of the formal training as obtaining a qualification which would provide a greater chance of finding work ('a head start') after the project. Given this, it is interesting to consider how the certificate from formal training provided by the CDM project is perceived to expand opportunities for those who were employed on the project.

Those who appreciated the certificate reported using the certificate as additive to various other qualifications. These participants were doing work unrelated to their formal training. This might suggest that cultural capital is enhanced if one has other qualifications.

Another view was that the certificate was unhelpful and even inhibited finding work. Another reason in support of this opinion is that the certificates include a statement which states that it is not complete. One participant said that the certificate would do him disfavour in applying for work because it would give the employer the idea that he wanted to be paid more money. Another limiting fact was that the certificate only listed a few modules in one specific area of work (e.g. electricity or carpentry) when most people, from their experience on the project could do multiple tasks across multiple areas.

'Never use certificate to look for a job because he will look like a fool the only proof he has is to illustrate what he can do'.

A member of a focus group stated that '*the certificate cannot work for you*' further highlighting the limited value that a certificate of that sort holds in the context with respect to finding a job. That it is perceived one would look like a fool using the certificate to look for work, suggests an extremely low value attached to the cultural capital of a certificate for some in Kuyasa. It is clear that demonstrating skills is more valuable than presenting the certificate for some.

The recognition of the importance of qualifications and the contradictions around how useful the accredited certificates are, illustrates the complexity around the value of a cultural asset within the Kuyasa context.

6.5.5 Financial capital[7]

The focus group relayed that they can pinpoint the things that they were able to pay for during the project but are now no longer able to pay for. A Kuyasa resident reported that the project was a time when employees could put food on the table. Added to this was that when the project ended there was a sense of shame at no longer being able to provide food. Another comment along this theme was;

'You know when Siyazenzela (the Kuyasa CDM project) *ended there are a lot of changes in our children. And these are my children. There are a lot of changes, a lot of changes. Because they* (the project) *just stop'* (Kuyasa resident).

Several of the participants believed that they were owed money from the unemployment insurance fund (UIF) at the end of the project. One person reported that their pay slip had shown a deduction for the UIF which they should have then had access to at the end of the project. Several participants believed that project management had told them they were going to get UIF. However, project management explained that due to the fact that Kuyasa CDM was a (temporary) project, there was no UIF. So there was no financial support for those working on the project for when the project finished.

Two of the participants reflected on saving money earned on project. One person held that he did not save; *'because we didn't know that we get it all. It was wasteful. We thought there was insurance'*

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[7] Information on income was particularly difficult to obtain. Eleven of the participants suggested having an unstable work situation and it would not have been possible to describe something like a monthly income. Secondly, the nature of this data collection was a conversation sometimes in the home of the participant. Just as one would not ask someone who you had just met how much they earned each month, I did not feel it was appropriate to push this with participants. I did however inquire as to how they made their living or where there income came from and sometimes I was told an amount but other times participants would just shrug their shoulders. This might have been due to a possible participant bias with the purpose of portraying unemployment in the hope that it will find them a job as if they did not have an income or might be linked to other reasons unknown at this point.

Another participant held that he could not save because; *'it was my start to work so I was supposed to make my house right'* He went on to explain that he was able to buy clothes and food for his wife and his child which he explained he *must* do.

The perceptions gathered in the project suggest that the contribution in terms of financial assets were not lasting in the longer term.

7 Discussion on work opportunities created by the Kuyasa CDM project

This section will reflect on how the work and training experience provided by the Kuyasa CDM project has enabled opportunities for work. The discussion which follows draws on the experience of the skills development project, the resources and the understanding of the context in which it takes place, as presented in the previous chapter. Some questions which arise from the findings thus far include: Did the Kuyasa CDM training result in little formal employment only or were there more subtle and indirect ways in which the participants found their feet in the informal economy once the project ended? Did the skills they were training in lend themselves to get better jobs or was it more subtle skills-like confidence- gained by those who took part which contributed to finding formal jobs?

7.1 Work opportunities created through Kuyasa CDM skills training

The project has provided the opportunity for small jobs involving fixing houses and maintaining the project's installations. These small jobs were largely made possible through the social capital built up over the project duration, the skills acquired and presumably the equipment received. This was further enabled by the fact that the technology installed provided the demand for maintenance jobs. Five people were kept on to work on maintaining the installations and others reported doing informal maintenance jobs. However these jobs appear to be infrequent and only available to a few people. Additionally the maintenance jobs continued by the project are no longer being funded. Overall, the perception put across was that work of this nature is not considered sufficient for living.

The evidence from this study suggests that the skills acquired on the project are not enough to enable the beneficiaries to cross a key skills threshold (as described by McCord (2005)). This is clear from an understanding of the nature of the training provided (not a complete qualification or simply onsite training). Only one participant indicated that he had added to the basic formal training provided by the project. The inadequacy of the skills or qualification obtained is also prominent in the perceptions of the employees interviewed for this project. This is similar to the findings of McCord (2005), where the beneficiaries of EPWP projects were not able to reach a skills level necessary for moving out of the unskilled labour pool. As found with a

large number of EPWP projects, the Kuyasa CDM project seems to have a limited impact on employment in the formal sector in relation to those skills. This brings into question the purpose of skills development in the form it was provided and whether it has indirect contributions to work opportunities.

Attempts to start businesses doing similar jobs, perhaps servicing RDP houses in surrounding areas seem to be unsuccessful. As such, work of this nature remains informal and insecure. RDP houses were designed to be incrementally upgraded. The lack of transport, capital to buy materials and inability of potential customers to pay enough, appears to have prevented these efforts from being profitable. As such there is no indication that the work done upgrading Kuyasa RDP houses has perpetuated past the suburb's borders.

7.2   Indirect contributions of skills development: social and cultural capital

With a few reported exceptions (the two plumbers with '*good jobs, government jobs*'), the formal jobs acquired since the project are in different industries to the skills trained. Both of the office administrators both currently hold formal jobs. On the one hand, it might be due to non-project related influences that these jobs were found. On the other hand it is possible that implicit knowledge of working in a formal office environment, using computers and having to communicate over the telephone provided them with a certain cultural capital which enabled the opportunity of finding a formal job.

For those who worked on the houses, the formal nature of the job on the project may have also provided subtle social and cultural capital contributing to opportunities for finding a job. Several participants consider the Kuaysa CDM job was perceived as the first job. The experience on the project could have introduced the etiquette required for a formal job such as arriving on time or how to engage with colleagues. It is also possible that, through interactions with organisations such as Southsouthnorth, social networks were extended outside of Kuyasa and this would provide greater opportunities and connections to other work. Those who gained formal jobs in a different area to the skills trained might have utilised social and cultural capital built up in the experience of a formal job.

Another dimension of the social capital is a greater sense of familiarity and cohesion between Kuyasa residents. The interactions between employees and between employees and house owners over the time of the installations might have also created valuable social capital in terms of community cohesiveness. The extent and benefits of the social cohesiveness developed over the project is interesting to consider in light of the often fragmented social networks of RDP settlements. Social cohesiveness would have benefits in terms of emotional support and most likely play a role creating opportunities for finding work. Some participants indicated forming supportive friendships however other participants admitted to being out of touch with other Kuyasa CDM employees. This is an area for further research.

The accounts of social capital gained on the CDM project points to a more nuanced side of skills development. DeJaeghere & Baxter (2014, p. 74) , who considered entrepreneurial projects specifically, point out that enhancing social relationships support capabilities of project participants. Despite this these projects often do not reach their full potential in building social relationships (2014, p 74.). Despite being directed towards technical skills, knowing how to keep in touch with people and knowing how to use your connections and capitalize on your social capital is an implicit skill. Given skills development in a context such as Kuyasa, is it perhaps important for a greater focus on expanding social networks beyond the highly constrained locality of the Kuyasa?

7.3   Motivational effects of the project

The dissatisfaction of both the project ending and the informal jobs held since alludes to a motivational effect of the project. The security provided by a formal job with the Kuyasa CDM project is clear. The contrast experienced in the wake of the project would then contribute to a sense of dissatisfaction. However, the experience of working on the project might have raised ambition for work and a particular lifestyle. If one was only engaged in informal work before, working on the project might have increase the wish, and possibly the self confidence, to be in a formal job. One participant explained that '*at least now our minds are open to more skills*' indicating renewed awareness of what can be done or achieved. This could have effects such as placing more importance on children's education.

On the other hand, the raised ambition together with the termination of the project might result in a negative effect. The project provided the taste of security, respect and purpose for someone who was otherwise informally employed or unemployed, resulting in an increased wellbeing (during the project). If this sense of ambition is not met with an avenue to use their skills and find regular work, it might have evolved into a sense of disempowerment, helplessness and depression. A significant challenge in Kuyasa is substance abuse. Young men can be seen at the shebeens in the middle of a week day and there are reports of resident drug lords who hold positions powerful to intimidate a policeman. The resident who said that '*something in our children has changed… because they just stop*' eluded this negative effect. Increased depression might lead to an increase in substance abuse and a pull in the direction of drug activity which is where a significant amount of power resides. This would have severe repercussions in terms of household wellbeing as well as wellbeing of the greater community.

7.4   Missing foundations for enhancing skills development in the context of Kuyasa

The skills at the level at which they were provided may not be the most useful or pressing need for people in the context of Kuyasa. Put differently, this capital can only be made active by addressing higher and more urgent priorities and thereby creating an enabling environment (referred to by King (2009)) in which these skills could be put to use. These might include; security from violence, lower impact of drugs, food and nutrition, reliable care for children. These aspects should be considered as foundations which can support the use of skills development towards a greater wellbeing.

This is not to say that skills should not be provided and this study has illustrated the ways in which the skills development component has contributed to opportunities for work. However, this study has lead to some interesting questions about how to optimize or compliment the impact of the level of skills provided, directed at creating jobs in a particular industry, in a context such as Kuyasa. One of the most significant effects of the project was creating jobs and creating them close to the Kuyasa residents, albeit to a small and dissatisfactory extent. In order to enhance such an opportunity for jobs, other forms of support might be well suited such as; providing

business start-up capital support and micro finance projects to support potential customers of these businesses, lessening the burden of transport as well as considering the improving the impact of regulatory structures. These might contribute to a more enabling environment for not only the opportunity of employment but the creation of jobs which could perpetuate the upgrading of energy efficient technology in surrounding low cost houses around Kuyasa.

7.5 Skills development in Kuyasa and the capabilities approach

This study presents evidence to support the claim that the impact of skills development can only be fully understood with respect to the surrounding environment or socio-economic context (Anderson, 2009; King, 2009). At first glance it appears that the skills development did not have a major impact in terms of finding jobs related to the skills trained. On the one hand there are more subtle ways in which the project has contributed to the opportunities of finding work (creating informal work, providing ambition and implicit knowledge). On the other hand, the reality appears to be that skills development in the form it took on the Kuyasa CDM is not enough to overcome the significant contextual constraints with respect to finding work and thus contributing to wellbeing. This leads to the question of whether development projects, subject to external funding and institutional requirements, are able to deal with the complexity of the context in which the participants continue to live once the project has terminated.

The use of the capabilities approach has provided a useful frame through which attention is drawn to the nuances of how a skills development project may impact opportunities for finding work. Drawing on the capabilities approach has encouraged a consideration not only of resources had but of the ways in which one is able to utilise those resources based on given contextual constraints. This lens allowed for the unpacking of different elements of the skills development experience and it is clear that resources hold different levels of importance when it comes to work opportunities. The importance of a particular resource is, in part, determined by contextual factors. For example, social and cultural capital contributed to obtaining formal work, indicating that these resources might hold more value than the skills gained, given the extent and nature of skills developed on this project.

8 Conclusion

This study has explored the contribution of skills development to opportunities for work. This investigation falls into a broader interest of how projects aligned with climate change mitigation and the development of renewable energy might positively affect marginalized communities in South Africa. The research is informed by recent thinking around the link between skills development and wellbeing and draws on concepts from the capabilities framework.

The overall objectives of this study were to: (1) capture the experience of the skills development component of the Kuyasa CDM skills development component, (2) consider how this experience interacted with the local context, (3) described the resources provided by the project and (4) to draw on the previous objectives to consider the overall contribution to work opportunities. These objectives were addressed through qualitative methods which aimed to focus on the experience of those who benefited from the skills development component.

The main findings show that the skills development in question was not enough to lead to formal employment in the area of skills trained. A combination of a lack of jobs, the low level of skills provided and the contextual constraints has inhibited opportunities for work. Additionally, attempts by participants after the project to start small businesses, thereby perpetuating the work at Kuyasa in surrounding housing developments, have not been profitable. This skills development effort has had little effect in terms of perpetuating job creation in energy efficiency technology. The severity of the external constraints is brought into question as even though resources were combined towards entrepreneurial initiative, these efforts were rendered useless.

There were, however several subtle contributions which the skills development made to work opportunities. These include enhancing social capital amongst the Kuyasa residents, providing the opportunity for infrequent maintenance jobs. Additionally, the knowledge gained through the project in terms of working in a formal environment appears to be a significant contribution to work opportunities. Motivational effects of

the project in terms of finding work were reflected upon. Skills development of this nature, situated in a context with significant constraints to opportunities for work, should be combined with initiatives of support, if the effort is to effectively contribute to improved wellbeing and development. Through these findings, this study suggests ways in which future skills development efforts located in marginalized communities might be supported.

By considering skills development as a component of an energy efficiency installation project, through the capabilities framework, this study has highlighted two points. Skills development efforts in a context such as Kuyasa can have subtle benefits which might not be finding a job. Secondly, the potential of skills development might be stifled in the absence of certain critical supporting factors. It has aligned with the idea that when considering the link between skills development and opportunities for work, multiple dimensions of the local context should be taken into account.

Further research might draw on these findings in informing larger scale impact evaluations of skills development in marginalized contexts. These findings might also inform the design of projects which integrate skills development. In doing so we might increase the potential of skills development efforts to contribute towards addressing multidimensional development challenges in marginalized contexts of South Africa.

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10 Appendix A: Table illustrating work histories and training (excluding work and training on the Kuyasa CDM project)

No.	Previous training	Training through Kuyasa	further training	Position on Kuyasa project	Currently working?	Work prior to project	Work post project	other income sources
1	•	No training recieved		General worker and became carpenter doing geyser stands	no	• Sales at shoe shop in Cape Town CBD • Assistant on construction site	• Ceiling company (6 months)	
2	•	Agricultural training		agriculture and general worker	no	• Cleaning streets for the municipality • Domestic worker for 8 years • Made own small business selling chicken sweets and chips (Stopped because not profitable).	• Sold biscuits and chips outside a school	Family (sometimes)
3	• worked as labour for a plumber	onsite training		Plumber	General worker as subcontractor- doing patch ups.		• piece jobs fixing people's toilets; • subcontractor; • maintenance jobs through Kuyasa; • installing geysers	
4	• Cartpentry through Northlink (previous job)	None (he was a supervisor)	none mentioned	Supervisor	private jobs doing ceilings around Khayelitsha	• Worked for a carpentry company	• maintenance for Kuyasa CDM; private jobs doing ceilings	
5	• None	Onsite (agriculture and general)	none	Planting trees to general worker and became an assistant to an electrician	Piece jobs-fixing electrical problems in people's houses.	• None; volunteer campaigner for the ANC	• Piece jobs-helping neighbours and surrounds with electrical problems.	None mentioned
6	• Training in carpentry (non accredited) • Computer course			carpenter	Yes (Bus driver for golden arrow)	• Worked for flexi-sale answering cellpones • Worked as unqualified carpenter for a company called quick space • Worked as a gardener	• Bus driver for Golden Arrow	·
7	• Computer training on windows 98 (not useful)	Electricity		General worker-doing corners and ceilings	No	None mentioned	None mentioned	Child support grant
8	• None mentioned	Electricity (northlink), Onsite (general)		General worker	No (was expecting to start a job cleaning on a beach)	Domestic worker for Kuyasa resident		Husband (learnt carpentry with Learn to Earn) who does part time jobs

No.	• Previous training	Training through Kuyasa	further training	Position on Kuyasa project	Currently working?	Work prior to project	Work post project	other income sources
9	• Incomplete degree at Cape Town College in Building and Civil Engineering.	Northlink (electricity), onsite (carpentry and electricity)	Updated electrical certificate at the electrical construction association in Woodstock.	General to electrical operator	No (but survives through piecejobs)	• None mentioned	• Piece jobs; electrical jobs; help father who is a brick layer; do jobs with sewing machine	Variety of income sources but not considered a job
10	• None mentioned	Northlink (Carpentry), onsite (ceilings)		Ceilings	No	• (Considers himself unemployed but reported..)Worked for 2 years in Cape Town; Worked in Parrow at a temporary job	• None mentioned	None mentioned
11	• None mentioned	Northlink (electricity), Onsite (working under another electrician)	None	Electrician	No	• Building maintenance for a building in Sea Point	• None	Melting down scrap metal and selling to scrap yard
12	• Learned electrical skills from his brother	Northlink (electricity); onsite (none really he was instructing others)	None	Electrical operator	Piece jobs-fixing electrical problems in people's houses.	• Private electricity jobs	• Piece jobs-helping neighbours and surrounds with electrical problems.	None mentioned
13	• Short computer course	Learn to Earn-office administration	None	Office administration	Yes (saleswoman for Vodacom selling airtime and sim-cards)	• Piece job helping to clean	• Sales assistant at Foshini; • Assistant at Dona Claire (organised through Learn to Earn); • Sales assistant at Vodacom selling sim-cards and airtime.	Support from mother some times
14	• Office admin at cape College	Livingston Academy (Tourism)	Trained to council people with TB and AIDS	Office administration	Yes; councillor for TB patients	• Customer services at Edcon (a collaboration of clothing stores); field worker for social services; fieldworker for statistics SA	• Working as councilor for clinic	None

11 Appendix B: Questions guiding semi-structured interviews

Semi-structured interview discussion points on impact of skills development component of the Kuyasa cdm

Name (Confidential):
Surname (Confidential):
Age: 15-19   20-24   25-29   30-34   35-39   40-44   45-49   50-54   55-59
60-64   65-69

1. Broad overview of employment history and livelihood history, try to distil the skills and resources and how they relate to livelihood strategies.

1.1 What is most important for making a living in Kuyasa? *(Understanding what capabilities are perceived as important for making a living.)*

1.2 What is most important for getting a job? *(Leif Peterson (Sustainable livelihoods foundation) highlighted the point that a job is not the same as making a living in informal contexts).*

1.3 What have you done in your life to make a living? (road map diagram, This diagram can constantly be referred back to when considering before, during and after the project)

1.4 What do you do currently to make a living?

1.4.1   Can you identify specific skills used in doing this?

1.4.2   Can you identify any specific equipment or tools used in doing this?

1.5 Are there people who you rely on to get work or food or money?

1.6 How do you look for work?

1.7 Do you have skills for which there are no jobs? What are these?

1.8 What barriers lie in the way of getting a job in Kuyasa? *(Understand the job market or perceptions of the of the job market available to the participants.)*

2. Aim to understand the role of participant working on the project, how they perceived the different components they were involved in

2.1.1   Can you tell me a bit about your experience of working on the project?

2.1.2   How did you get selected to work on this project?

2.1.3 Which components of the project did you take part in? Northlink training? Onsite training? (diagram of different project components) (if participant did not complete Northlink training **skips section 2.3**. According to my current understanding from Carl, Zuko and project reports, all those who were employed on the project did the onsite training although there may be exceptions to this.)

2.1.4 What was your role on the team?

2.1.5 How was it working in a team with others? Was it easy to work on the team?

2.1.6 What did you think about wearing the uniform? *(discuss around a photograph)*

2.1.7 What skills did you use to perform your role?

2.1.8 What equipment did you need to perform those skills and complete your role?

2.1.9 How did you learn those skills? *(Trying to gauge how the skills used for work were gathered. The focus groups suggested that some of the skills used were had already. Carl refers to skills needed as cookie cutting. Training to skills might not be straight forward)*

2.2 The onsite training

2.2.1 Could you tell me a bit about the onsite training? *(Questions below used as prompts).*

2.2.1.1 What was the purpose of this training? *(expectation)*

2.2.1.2 Who taught you?

2.2.1.3 How long was it?

2.2.1.4 What did you learn?

2.2.1.5 Did you learn skills you did not know before?

2.2.1.6 Were you exposed to new equipment or materials?

2.2.1.7 Did you learn non-practical training such as life skills? What stood out from this?

2.3 The Northlink training

2.3.1 Could you tell me about the Northlink training?

2.3.1.1 What was the purpose of this training? *(expectation)*

2.3.1.2 What was it like? Describe the course of the day.

2.3.1.3 What skills did you learn?

2.3.1.4 Which of those skills did you use to perform your job on the project?

2.3.1.5 Are you happy that you did this training?

2.3.1.6 Did you get a certificate?

2.3.1.7 Have you used the certificate to look for a job? How was it received?

  2.3.2   Which training was more relevant to you? (in terms of project and in terms of post-project).

3   Post project

3.1 Did your strategies for finding employment change at all since the end of the project? For example:

  3.1.1   Through skills you now have which you did not have before.

  3.1.2   Equipment acquired.

  3.1.3   The certificate *(only if they attended the Northlink training).*

  3.1.4   Did your social connections from working on the project help you to find work?

3.2 Compared to someone who did not work on the project do you think you have an advantage in terms of finding further employment?

4   Perception of others and broad project impact in terms of jobs.

4.1.   How many of those who worked on the project are now employed?

4.2.   How did they get jobs?

4.3.   What are the reasons for people getting or not getting jobs?

12 Appendix C: My position

Each time I went to Kuyasa I was surrounded by a deep, heavy and dark feeling. That the destitution and desperation experienced in that place was part of a system from which I had benefitted. The more I visited the more I realised that my research had minimal power to change anything and despite the amount of authors I read on participatory research or giving back, my on my own with the limited time given by the ACDI program really could not do much. I can confidently say that the only way I can escape this feeling is by pushing it out of my mind and thinking about other things, spending time with my middle class friends in their middle class suburb. Working with children at the soup kitchen has been useful but it is like paying for carbon credits and then polluting. I do not know how to stop polluting as my position is society is a result of this pollution and relies on it.

This has boiled down to a sentiment of frustration towards (boarder on hatred for) the academy. The fact that a situation exists that one person feels that people are disadvantaged and furthermore, is in a position to spend time writing about them is tragic. My hope is that this sentiment can be channelled somewhere beneficial after my masters degree.

This experience has resonated with a TED talk by Chimamanda Adiche, the Nigerian author called *The danger of a single story.* She said some very powerful things. Two are:

"So that is how you create a single story; show a people as one thing as only one thing, over and over again and that is what they become."

"The consequence of the single story is this; it robs people of dignity, it makes a recognition of an equal humanity difficult, it emphasises how we are different rather than how we are similar"

After watching her video I wrote the following paragraph and in doing so found a new sense of purpose to this work.

"Stories hold power in who gets to tell them and when. I acknowledge that my position at a university has given me substantial power in comparison to my

participants simply because I have been provided with time, resources as well as a platform (albeit open only to a certain type of "story"-academic research) with which to tell a story. It is my hope that this story can at least contribute to a "balance of stories" and not to a perpetually reiterated representation of people who live in Khayelitsha and can now too easily be assigned qualities of unemployed, impoverished, struggling or on drugs before anything else. However, it is also not my aim to contradict the prominent narrative of enormous struggle in the locality. "The problem with a single story is not that they are untrue. It is that they make one story become the only story." I will hope to highlight that people who live in Kuyasa are subject to the forces of history, unforgiving economic structures, local power structures and broader societal values. Yet they draw on the resources available to them subject to external forces, just like most people. While, like all human beings, the research participants are active agents of their own fate, they are subject to external forces which include more of the snake variety than the ladder variety.

 If my story has already been filed away into a pre-existing category defined by mainstream media and catastrophe and solidified through indifference and avoidance, I hope that this final paragraph inspires a search for more stories."