

# Non-formal adult education for self-employment: the importance of post-training support for micro-enterprise development in South Africa

Celestin Mayombe

*(Received 30 March 2016; accepted 22 February 2017)*

---

## Abstract

The concern that informed this article is that adults who face long-term unemployment due to a lack of marketable skills remain unemployed after completing adult non-formal education (NFE) programmes in South Africa. The purpose of the article is to investigate major challenges trainees of NFE programmes for self-employment encounter in starting and growing small businesses, and the types of post-training support they receive from public and private institutions in KwaZulu-Natal (KZN) province. While the structure of the South African economy is at fault, the findings reveal that weak institutional linkages result in trainees not having access to essential post-training support, community resources, public goods and services. The author concludes that centre managers did not take into consideration the importance of institutional linkages and the socio-economic background of the trainees who have faced long-term unemployment and poverty leading to social isolation, which then further reduce the likelihood of self-employment.

## Introduction

It is widely acknowledged today that many unemployed adults are hindered from entering into labour markets due to a lack of marketable skills. Since its inception in 1960, adult non-formal education (NFE) was intended to be a tool to create opportunities for marginalised social groups in order to bridge unemployment and employment (Georgiadou, Kekkeris and Kalantzis, 2009). Kedrayate (2012, p.12) points out that NFE is perceived as a “second chance education” to those who have been “pushed out” from the formal system. According to Langer (2013) and Kyndt, Dochy and Nijs (2009), adult NFE centres in Sub-Saharan countries have been able to develop holistic and integrated approaches to contribute to unemployment reduction. The

significance of NFE in poor communities is that where jobs are scarce, people learn to earn a living as self-employed.

Adult NFE can be seen as being related to the concepts of recurrent and lifelong learning. Scholars in the field (Kamil, 2007; Kedrayate, 2012; Jjuuko and Kwiri, 2010; Ololube and Egbzor, 2012) suggest that whereas recurrent and lifelong learnings have to do with the extension of education and learning throughout life, NFE is about acknowledging the importance of education, learning and training which takes place outside recognised educational institutions. In this article, NFE reflects a combination of the terms 'non-formal', 'education' and 'training' and refers to skills programmes carried out outside the framework of the established education system that involves foundational knowledge, technical and manual skills, entrepreneurial skills and competencies tailored to the specific requirements of a gainful employment or self-employment (DVV International, 2011; McKay, 2007; Erasmus, 2010). Furthermore, NFE is linked to self-employment for people who are currently not self-sufficient and who are at or below the poverty line, and to the informal sector where jobs are scarce (Rogers, 2004).

Adult NFE distinguishes itself from the formal education and informal education on basis of its purpose and approach. Weyer (2009) notes that NFE is an educational system outside the recognised framework that typically provides occupational access only to the lowest-level jobs because it does not have the legitimacy to grant school-based diplomas and credentials required to gain access to white-collar and professional jobs. For the NFE programmes to achieve this purpose, great attention is taken to ensure that training is tailored to a specific requirement of employment or income-generating activities (International Labour Organisation (ILO), 2009). The programmes are provided not only in technical skills but also in business, organisational and management skills to facilitate an adult trainee to become self-employed or to run a small business, most often a micro-enterprise.

In the context of South Africa, non-formal education is any education that carried on outside the formal school and higher education system and not certificated (Aitchison, 2007). Non-formal education (NFE) was an important part of the anti-apartheid struggle in South Africa. It helped prepare people for democracy, something formal education did not do. Prior to 1994 NFE was provided by religious groups, NGOs/CBOs, civic associations, workers organisations, political parties and social movements (Mckay, 2007; Aitchison, 2007). The provision of formal technical training was in the former

White technical colleges and some schools of industries for Coloureds and mission schools for Black students (Aitchison, 2007).

The adult NFE in South Africa took a new conceptualisation during the post-apartheid era. McKay (2007, p.286) points out that “after the first democratic elections in South Africa, the new government faced a number of challenges, not the least being the high number of adults who were functionally illiterate”. The poverty reduction process was challenged by the fact that there were many unemployed people whose levels of literacy were such that they were virtually unemployable due to the competition for the small number of available jobs requiring a certain level of education (grade 12 certificate) and skills training. There was a need to add the word ‘training’ in order to conceptualise adult education programmes relevant to socio-economic needs of unskilled and unemployed adults (McKay, 2007). It is important to mention that the letter ‘T’ of training in NFE was added to refer to a wide range of skills and expertise including technical skills such as plumbing, dressmaking, beadwork, and other crafts (McKay, 2007).

Previous studies attempted to explore the dynamics of the relationship between adult NFE programmes and employment. Other researchers investigated the learning conditions for non-formal education (Kyndt, *et al.*, 2009); job-related non-formal education and training (Kaufmann, 2015); the relevance of NFET for income generation (Islam, Mia and Sorcar, 2012; Blaak, Openjuru and Zeelen, 2012); and socio-economic empowerment of poor adults (Morton and Montgomery, 2011; Akpama, Esang, Asor and Osang, 2011). Similarly, Georgiadou, *et al.* (2009) and Islam, *et al.* (2012) report practical skills acquisition by graduates but without mentioning the conducive factors. However, little is known about the effectiveness of the external factors in fostering links for skills utilisation in self-employment of graduates. Research shows that NFE graduates continue to experience challenges due to the insufficiency of enabling environments, both internal and external (Islam, *et al.*, 2012; Blaak, *et al.*, 2012; Georgiadou, *et al.*, 2009). As a result, adults who face long-term unemployment due to a lack of work-related skills, remain unemployed after graduating from NFE centres.

The NFE centres under investigation are run by not-for-profit organisations and provide work-related skills training programmes for unemployed adults. These NFE centres are not the same as the recently referred to Public Adult Learning Centres in the National Policy on Community Colleges (Republic of South Africa (RSA), 2015). They are private skills training programmes in

non-profit training centres managed by non-profit organisations; in the public Adult Education and Training (AET) centres, are also non-accredited skills training courses funded by private sectors or organisations. These are vocationally related skills programmes for income-generation activities in the form of non-formal vocational training and rural and community development in South Africa. The programmes intend to respond to the learning needs of adults who did not have access to formal education, to increase their employment opportunities, and to improve social inclusion (Aitchison, 2007).

While previous studies addressed the issue of effectiveness of NFE programmes in skills acquisition by graduates, the importance of post-training support for self-employment in micro-enterprises of graduates has not been sufficiently studied. In the context of this article, the linkages of NFE centres involve a collaboration with public institutions and agencies, private sectors, NGOs, self-help associations, community leaders, local businesses, business development services, financial institutions and private enterprises. These linkages aim at fostering skills utilisation in self-employment; or assisting graduates to establish micro-enterprises and co-operatives.

The purpose of the article is to investigate major challenges trainees of non-formal adult education for self-employment encounter in starting and growing small businesses, and the types of post-training support they receive from public and private institutions in KwaZulu-Natal (KZN) province. The following questions are addressed:

- What are the main sources of start-up capital for trainees' small businesses?
- What are the main causes of trainees' small business failure?
- What types of post-training support for small business development trainees received?

In this article, self-employment is a situation in which an individual works for himself instead of working for an employer that pays a salary or a wage (Meager, Martin and Carta, 2011; Fields, 2013). Self-employed trainees are here defined as persons operating individual enterprises, plus persons operating or working in household enterprises. Enabling environments to refer to internal and external factors of the NFE centre which create conducive conditions for skills acquisition and skills utilisation in wage- or

self-employment (King and Palmer, 2006; World Bank, 2004). The article begins with the conceptual framework guiding the study. Next, the focus is on the study's context and methodology. The presentation of the findings is followed by discussions of the findings. Finally, conclusions and recommendations are presented.

## Conceptual framework of the study

Adult NFE programmes for self-employment in micro-enterprise need external factors to the NFE centre which create conducive conditions for helping trainees start their own micro-enterprise in a sustained and effective manner. The existence of supportive factors will influence the skills acquired through adult NFE centres to contribute to the self-employment and poverty reduction of a given target group. This is because a conducive factor allows skills to be utilised effectively (Palmer, 2007; Palmer, Wedgwood, and Hayman, 2007). Among the critical factors external to the adult NFE centres that foster the utilisation of business skills in self-employment are the linkages they have with public and private institutions including agencies, and the social networks which provide or enhance post-training support programmes (Dunkley, 2008; White and Kenyon, 2005).

Likewise, Adams (2007) argues that skills training programmes alone are unlikely to address the problems of unemployment or meeting all the needs of underprivileged adults. Without enabling factors, skills training for adults may lead to higher educational achievement that has to be valued for its own benefits and not to immediate self-employment.

There are debates today around linking adult training to self-employment and poverty reduction in poor communities. Palmer (2007), in his article "*Skills for work?: From skills development to decent livelihoods in Ghana's rural informal economy*", argues that "It is acknowledged that skills training alone is not sufficient for developmental outcomes to materialise". Palmer's view infers that skills acquired from NFE centres are only a part of the package in the process of self-employment and poverty reduction. Likewise, King (2012) points out that skills acquisition is very different from skills utilisation in the labour market, and especially for the poorest who can only access basic education of very low quality. King's argument also suggests that NFE requires an enabling environment for the skills to be utilised in the labour

market. Similarly, King (2012), Pantea (2016) and Preece (2010) note that adult NFE alone, as a strategy of poverty reduction, is not enough. It does not create employment, nor does it guarantee better living conditions or income-generating activities in micro-enterprises or co-operatives of trainees. There is no automatic connection between business skills training for adults and self-employment.

### The linkages with public and private institutions

The linkages of the NFE centre to public and private sectors are crucial and the key to success in skills utilisation in self-employment. An adult NFE centre does not operate in a vacuum, but in a given community with social and political entities. Therefore, a quality NFE programme is aware of the resources and needs of the community in which it is located (World Bank, 2005). It establishes and maintains links with various referral sources and community agencies as well as other relevant educational programmes and organisations. It regularly reviews its community, sectoral and organisational relationships (Freedman, 2008). According to Freedman (2008), the collaboration should be between the NFE centre and the agencies at local and national levels and keen involvement of social partners.

However, linkages may still not be sufficient for trainees to become self-employed if there are structural problems in the economy that perpetuate unemployment. Allais (2014) notes that the problem is not lack of skills, but insufficient demand. If the problem is bound up with the nature of economic development, the solution accordingly lies in changing the pattern and character of the growth path. Similarly, Vally and Motala (2014) argue that unemployment in South Africa is caused by skills shortage or gap and limited economic growth. The figure 1 is a conceptual framework presenting the key concepts and then how they are linked together.

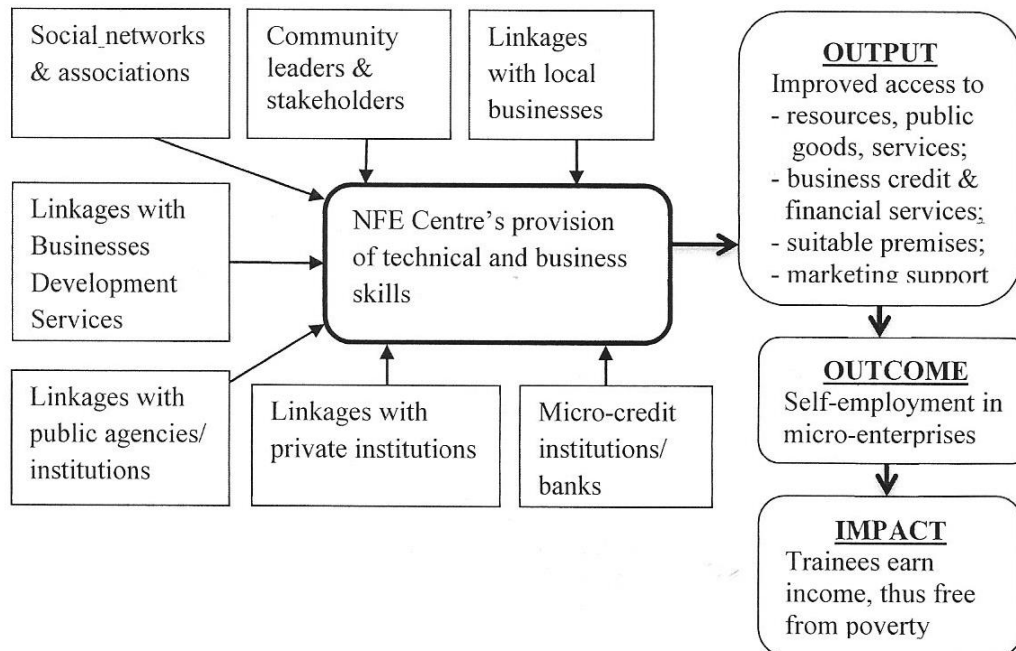


Figure 1: Conceptual framework of the study

## Post-training support for self-employment in micro-enterprises

New entrants into micro-enterprise need support from both the NFE centre and other stakeholders in the public and private sectors. Successful entry into self-employment and establishment of a micro-enterprise requires much more than delivering skills training to adults. According to Dunkley (2008), White and Kenyon (2005), Hasanov, Biybosunova and Hasanova (2009), the post-training support for trainees who are interested in self-employment in micro-enterprise entails the service to start a small business; accessing credit, suitable premises for production purposes, equipment and tools, marketing support, support for the formation of groups or forming enterprises/co-operatives, follow-up advisory services or technical assistance; support to access business development services and financial assistance. The support will help overcome the disabling factors outside of the NFE system at macro-level (Stevenson & St-Onge, 2011). The present study was an attempt to ascertain if there were these post-training support services as result of centre institutional linkages.

## Study context

The study was conducted in communities where many people have difficulty in generating enough incomes in order to become self-sufficient and enjoy a reasonable quality of life. The study focused on assessing the effectiveness of the centre linkages with public and private institutions in fostering post-training support in self-employment of trainees in KwaZulu-Natal (KZN). The provision of educational and training opportunities for adults is rooted in social empowerment and transformation strategies. Central to the provision is ensuring that all unemployed adult citizens of KZN are either wage-employed or self-employed (KZN, 2013; KZN-DoE, 2011).

The sample of the NFE centres was drawn from the education districts of Umlazi, Pinetown, ILembe and uMgungundlovu (Msunduzi) in KZN province. The NFE programmes target out-of-school and socio-economically vulnerable adults (such as street youths and domestic workers) from marginalised communities. In order to empower vulnerable and marginalised adults, both KZN government and NGO-based NFE centres provide vocational and livelihood training, and entrepreneurial skills to poor adults to enable them to take up self-employment or wage employment in urban and rural areas (KZN-DoE, 2012; KZN, 2012). All these endeavours aim at:

- Creating sustainable learning opportunities that nurture adult empowerment;
- Providing adults and out-of-school youths from marginalised communities with marketable livelihood/vocational skills in order to enhance their employment (formal and/or informal) opportunities, or venture into business enterprises;
- Empowering poor adults to establish viable income generating projects (Aitchison, 2007; KZN-DoE, 2012).

## Research methodology

Mixed research methods were used for the study which consisted of a combination of both qualitative and quantitative methods. In support of Weyer's (2009) view, measuring only quantitative results of an assessment of



the effectiveness of entrepreneurial training for self-employment can fail to provide a full picture of the programme. Therefore, this study used survey questionnaires as the primary source of quantitative data. The reason for using the survey was based on its primary purpose which is to determine cause-and-effect relationships or comparability (Creswell, 2013). The method used for qualitative data collection was semi-structured interviews. In support of Creswell's (2009) view, the qualitative method was beneficial to the study because it helped to present the data from the perspective of the trainees, trainers and managers on the effectiveness of the centre linkages with public and private institutions in fostering post-training support in self-employment. Semi-structured interviews provided an understanding of the mechanisms which link particular variables, by looking at the explanation and account (Creswell, 2009).

The researcher also used documents related to the training programmes of the centres under investigation. For the focus of this article, the documents included the monitoring and evaluation documents and annual reports. From a descriptive content analysis point of view, the researcher identified information linked to variables such as training design and implantation, and post-training support for self-employment. Then the data were compared with responses from questionnaires and interview schedules.

### Sampling technique and sample size

The study sample was drawn from the 326 adult training centres in KZN province. Following the explanation of Nieuwenhuis (2012) on sampling methods, out of 326 centres, the researcher used a purposive sampling of a non-probability sampling method to select 21 centres. A centre was selected if it provides technical and entrepreneurial skills to enable an adult to take up wage or self-employment in the field of agriculture, industry, services and small business activities. From the selected 21 centres, the sample size consisted of 420 trainees. The sample from each of 21 centres depended on the number of trainees who enrolled on skills training programmes. The sampling method for trainees (420) in the quantitative study was purposive. A trainee was selected if he/she had completed the technical and/or entrepreneurial programme and became wage or self-employed.

The sample consisted of adult trainees from both urban and rural settings from the public and private training centres.<sup>1</sup>

The manager of each of the selected centres also completed the survey. Therefore, the sample consisted of a population of 21 managers. For the purpose of the one-on-one interview, five out of 21 managers were selected for one-on-one interviews. They were selected if their centres make provision for at least one of the following additional criteria:

- Post-training follow-up and support programmes for self-employment;
- Linkages with public institutions and agencies or private sectors;
- Linkages with social networks, associations and employers;
- Having mentorship and psychological support programmes for self-employed trainees.

In addition to the centre manager and trainees, 31 trainers also completed the survey. The trainer (instructor) sample for the quantitative element of the study was drawn from the total number of trainers in the selected 21 training centres. The researcher used the purposive sampling method to select 31 trainers; two or three trainers per centre. The selection of trainers was based on the following criteria:

- He/she must have a minimum of 2 years of experience in training technical and/or entrepreneurial skills at the specific training centre;
- He/she must be the most senior at the centre so to provide the needed information for the study.

For the qualitative interviews, the researcher selected six self-employed trainees out of 420 for one-on-one interviews. To ensure representation from urban and rural areas, with an equal number of males and females and an equal number from private and public training centres, the selection of self-employed trainees was based on the following criteria:

---

<sup>1</sup> In this paper, 'private centre' means a non-profit training centre managed by non-profit organisations (NPOs), community-based organisations (CBOs) and church or other faith-based organisations (FBOs).

- Currently self-employed whether in informal business area or services area;
- Reputable for excellence in their small businesses;
- Selected according to the type of technical and/or entrepreneurial course obtained on one side and type of micro-enterprise activity on the other;
- One trainee from each four districts, gender, areas (urban and rural) and the nature of the centre.

Based on the selection criteria, only one male and five females were interviewed.

### Data gathering and analysis

The data collection involved survey questionnaires and semi-structured interviews. Using the approach mentioned in Delpont and Roestenburg (2011), Nieuwenhuis (2012) and Maree and Pietersen, (2012), for the quantitative data, three types of self-completed questionnaires were administered respectively to trainees, trainers and centre managers. The questionnaires included a mix of both qualitative (open-ended) and quantitative (closed-ended) questions. The closed-ended questions used in the study were binary with 'yes or no' responses and multiple-choice questions which allowed the respondents to tick all answers that apply.

The interviews with the centre managers aimed at getting information on training delivery, post-training support for micro-enterprise development and the types of the factors that enable/disable the trainees entering the self-employment in KZN province. Other semi-structured interviews were conducted with six successfully self-employed trainees. The interviews mainly concentrated on trainees' sources of start-up capital and the post-training assistance (financial and non-financial) received from the centre and government agencies.

The quantitative data was analysed using Statistical Packages for Social Sciences (SPSS) software. Using the method of data mentioned in Creswell (2009), Nieuwenhuis (2012), Fouché and Bartley (2011), semi-structured

interviews were used for data collection in the qualitative study, and data was analysed through thematic analysis. Data was coded, then sorted and classified to find common themes and sub-themes to be matched and compared with the findings on the sections and sub-sections of the quantitative findings.

## Findings

The quantitative findings are presented first, followed by the qualitative findings on the related themes which emerged from the interviews. The quantitative and qualitative findings are then jointly interpreted in order to shed more light on the views and concerns of managers, trainers and trainees in an integrated manner. The presentation starts with a socio-economic profile of the trainees.

### Socio-economic characteristics of the trainees

The majority of the sample were females (83.6%, 351/420) as compared to males (16.4%, 69/420). The finding indicates that adult training programmes constitute a second chance for women, who are more vulnerable and unskilled (KwaZulu-Natal Province, 2013) to complete their basic education and gain skills in order to overcome unemployment. Half of the respondents (50.5%, 212/420) had been unemployed for more than five years. The analysis of the type of work before joining NFET centre reveals that almost half (48.8%, 205/420) of trainees were unemployed during the time of application for skills training at adult centres. Only 8.1% (34/420) had full-time jobs in the formal sector. Very few had part-time jobs (16.7%, 70/420).

The analysis of the highest level of formal schooling<sup>2</sup> reveals that only 20.7% (87/420) of trainees in the sample had completed the final year of schooling (Grade 12). More than a quarter (27.4%, 115/420) of respondents had completed Grade 11 and 20.47% (86/420) left school in grade 10. Less than

---

<sup>2</sup> In the South African formal education system, primary school encompasses Foundation Phase (Grades R–3) and Intermediate Phase (Grades 4–6). The secondary school involves Senior Phase (Grades 7–9) and Further Education and Training (FET) Phase (Grades 10–12).

quarter (11.9%, 50/420) left school in grade 10, and 9.8% (41/420) of trainees completed Grade 8. The lowest school achievers were those who only completed primary school (5%, 21/420) and 4.8% (20) completed some primary school.

### Types of small businesses of trainees

Exploring post-training activities of the graduates in the labour market was a paramount focus of the empirical study. This is because trainees entered the training programmes with very high expectations of finding a job or opening an own small business. Some trainees studied small medium and micro-enterprise (SMME) as a course on its own as part of business skills training. Yet others, in the case of most of the private centres offering technical skills training in tailoring, handicraft, agricultural technology, poultry and co-operatives, the provision of business skills training was taught alongside technical skills or at the end of the training programmes. The findings on post-training activities reveal that of those trainees who were unemployed (49.04%, 206/420) before registering to the NFE programmes, 41.25% (85/206) became wage- or self-employed immediately after graduating from their respective adult centres.

In the survey, self-employed graduates were asked to mention the types of small business that they were mostly involved in. Since the researcher could not reach all self-employed trainees, it was important to ask the managers and trainers about the types of small business their graduates were likely to start and manage successfully. The responses are presented in Table 1. The findings on the side of managers and trainers are from the records of the monitoring and evaluation documents of each centre.

**Table 1: The distribution of trainees' current types of small businesses**

Types of small businesses	Responses from Trainees (n = 147)		Responses from Managers & Trainers (n = 48)		Total (n = 195)	
	n	%	n	%	n	%
Small businesses area	63	42.86	15	31.25	78	40
Small services area	46	31.29	22	45.83	68	34.87
Agricultural projects	38	25.85	11	22.92	49	24.13
<b>Total</b>	<b>147</b>	<b>100</b>	<b>48</b>	<b>100</b>	<b>195</b>	<b>100</b>

Graduates were involved in three main types of small businesses after being trained in their respective centres. The analysis of Table 1 reveals that 42.85% (63/147) of trainees became entrepreneurs in small business areas such as tuck shops, food and co-operatives. The other types of small businesses were small services areas. Trainee respondents (31.29%, 31/147) became entrepreneurs in the small services area mostly in tailoring micro-enterprises. This finding on the small services area was also confirmed by the managers and trainers (45.83%, 22/48). Very few graduates became involved in agricultural projects such as vegetable gardens and cooperative farming. With regard to whether or not trainees' small enterprises were related to the skills training programmes that they enrolled for at NFET centres, a great majority (91.83%, 135/147) said 'yes' and only 8.16% (12/147) said 'no'.

### Sources of start-up capital

The availability or provision of start-up capital is an element of enabling environments for self-employment. Findings revealed that more than half of the respondents (50.5%, 212/420) had been unemployed for more than five years, thus they were chronically poor. Furthermore, almost half (48.8%, 205/420) were not working during the time of application for skills training at adult centres. These findings are an indication that trainees needed external funds and equipment to start small businesses. In the survey questionnaires, self-employed graduates were asked to mention more than one source of start-up capital for their small businesses. A similar question was asked to the centre managers and trainers, but they had to refer to their records of the monitoring and evaluation, and annual reports. Table 2 presents the main sources of the start-up capital for small business.

**Table 2: Sources of start-up capital for small business<sup>3</sup>**

Source of start-up capital	Responses from Trainees		Responses from Managers & Trainers		Total	
	n	%	n	%	n	%
Own money (savings)	105	61.76	24	36.36	129	54.66
Stokvel <sup>4</sup>	17	10	20	30.3	37	15.67
Spouse (husband or wife)	6	3.52	8	12.12	14	5.93
Gifts from parents/relatives	34	20	8	12.12	42	17.8
Organisation	2	1.18	2	3.03	4	1.7
Loans from bank or a friend	6	3.52	4	6.06	10	4.24
<b>Total</b>	<b>170</b>	<b>100</b>	<b>66</b>	<b>100</b>	<b>236</b>	<b>100</b>

According to the total respondents (trainees, managers and trainers), as reflected in Table 2, the major source of start-up capital was trainee’s own money raised by savings (54.66%, 129/236). The majority of the trainees (61.79%, 105/170) reported having started a small business with own money raised by savings. Only 3.25% (6/170) of trainees mentioned having received loans from a bank or friends. Very few of them obtained start-up capital from relatives (20%, 34/170) or stokvel involvement (10%, 17/170). The difference of responses between trainees (61.76%) and managers and trainers (36.36%) on savings as a source of start-up capital indicates that centres have no effective tracking system to the graduates in order to provide post-training support in starting and growing small businesses.

Interviews with self-employed trainees and managers confirmed the quantitative findings on difficulties to find start-up capital. They reported that the lack of start-up capital was one of the major causes hindering trainees from starting micro-enterprises or progressing in small businesses after graduation. In this regard, a self-employed graduate reported the following:

<sup>3</sup> Frequency in the above Table 2 was a multiple question and refers to the number of times each source of start-up capital was mentioned. Although few trainees, managers and trainers mentioned only one of the six sources of start-up capital, there were many who mentioned in the questionnaire more than one source of start-up capital.

<sup>4</sup> **Stokvels** are invitation clubs of twelve or more people serving as a rotating savings scheme in South Africa where members contribute fixed sums of money to a central fund on a weekly or monthly basis. Each month a different member receives the money in the fund, which was collected during that period. The members can use the collected fund for payment or investment purposes.

*Our training centre always organises workshops as a post-training assistance. We meet twice a year to attend a seminar on technology and marketing support. But as an entrepreneur, the type of support I need to improve my small business is business money. The most needed support is money to buy good quality machines and to purchase fabrics. By my own savings, I cannot, it is very hard to buy machines.*

Another self-employed graduate said:

*Business skills are not a problem because we were taught intensively how to manage a small business and finance. We also attended SEDA [Small Enterprise Development Agency] business plan workshop which took us about a month. During the training, they used to give homework like at school. The only type of support I need is finance. The money I saved helped me buy the business equipment, materials and to pay five-month rent of the room.*

A centre manager also reported the same financial challenge facing the trainees by saying:

*A lack of start-up capital for our trainees is the real problem in self-employment. I thought the government was bringing in Khula [a Micro-Finance Institution] system which was meant to help the poorest of the poor. First of all, they charge a little percentage of interest. Since Khula was closed, it is now hard to get a soft loan. As a result, it is so hard to start a business. The main problem is that there is nowhere for the poorest of the poor to get start-up capital at reasonable interest rate. Our trainees are keen to open small businesses. Educators are trained to teach entrepreneurship skills because they attend workshops organised by an institution like Rotary Club and others. The problem resides on how to enable our trainees to start small businesses while there is no start-up capital.*

As a solution to the lack of start-up capital, all five managers interviewed reported that the majority of those who succeeded to start a small business with their own savings were working in the centres' workshops. Certain centres were using training equipment and materials to help trainees earn an income. This is the way trainees managed to save money during the training period and start a micro-enterprise. Self-employed trainees were still facing the financial challenge to sustain their small businesses because of using their



own savings. The lack of start-up capital from any other sources was one of the leading causes of small business stagnation or failure as the findings reveal in Chart 1 below.

### The main causes of trainees' small business failure

Some graduates reported that they had started small businesses that failed due to various factors. Chart 1 below presents the causes of trainees' business failure according to both types of centres. The responses are from trainees, managers and trainers grouped according to public and private centres in order to ascertain whether the causes of business failure depended on the type of the centres.

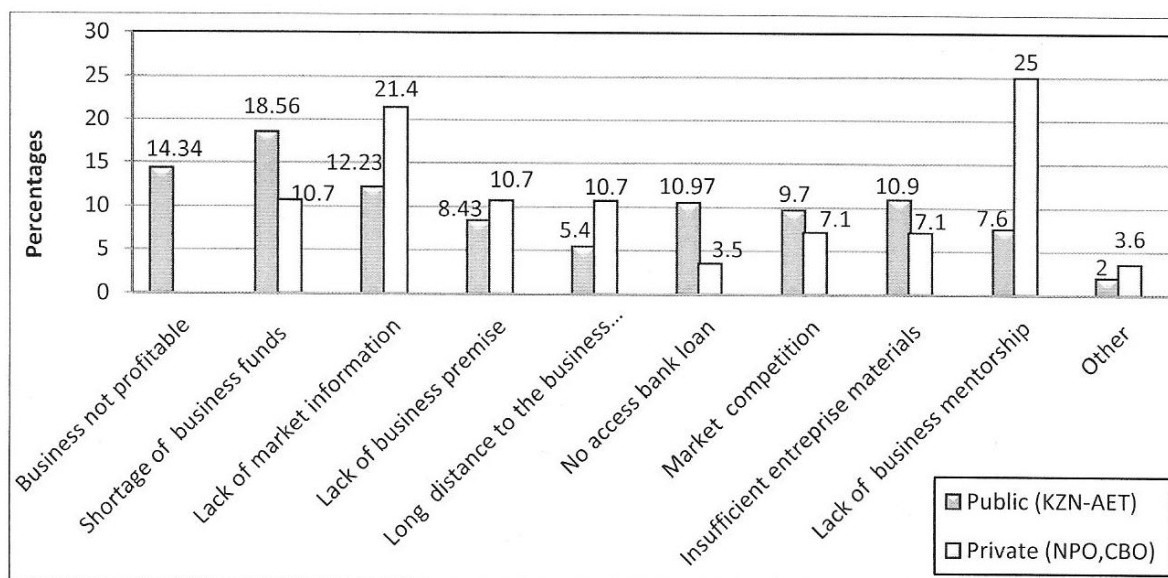


Chart 1: Causes of business failure by type of the centre

Firstly, in the public centres, the highest cause of business decline was the shortage of business funds (18.56%, 44/237). The next main cause was the fact that business was not profitable and little (14.34%, 34/237), followed by the lack of access to business market information (12.23%, 29/237), no access to credit services from banks which in turn impacted on insufficiency of materials for the small enterprise (10.97%, 26/237) and lack of business premises (8.43%, 20/237). Secondly, in the private centres, there were two main causes mostly mentioned, namely the lack of business mentorship (25%, 7/28) and poor access to business market information (21.42%, 6/28). The

shortage of business funds (10.7%, 3/28) and lack of business premises (10.7%, 3/28) were equally important in the third instance.

The findings in Chart 1 above reflect that there is a link between the causes of trainees' business failure and the type of centre where they trained. The link concerns the extent to which the type of the centre works in partnership with local institutions and agencies, financial institutions and NGOs that provide or enhance the post-training support for trainees who are interested in self-employment in micro-enterprise. The support entails the service to start a small business, suitable premises for production purposes, equipment and tools, support for the formation of groups or forming enterprises, technical assistance; support to access business development services and financial assistance. As Chart 2 below reveals that private NFE centres have more linkages than public centres.

In connection with the main causes of small business failure, trainees were asked to suggest possible solutions allowing them to start and develop a sustainable business. Table 3 reports the main themes which emerged from the graduates' responses in an open question in the questionnaire and which they regarded as important for start-up and sustaining small businesses. The number reflects the frequency of times a theme occurred as opposed to the number of graduates (106 out of 420) who responded to the open question.

**Table 3: Themes for small business sustainability**

No.	Themes as suggested by trainees to sustain their businesses	n = 106	%
1.	Provision of start-up capital for small businesses after graduation	72	67.92
2.	Provision of financial and material assistance in business	63	59.43
3.	Partnering with banks to offer financial assistance	40	37.73
4.	Training in small business loan application from the banks	57	53.77
5.	Provision of marketing assistance to attract many customers	35	33.02
6.	Provision of business guidance/mentorship	83	78.3

The analysis of Table 3 reveals that the provisions of business guidance/mentorship (78.3%), start-up capital for small businesses after graduation (67.92%) and financial and material assistance in business (59.43) were paramount for poor graduates to start and develop a small business. It is noteworthy to mention that the training centres could not provide these types of post-training support for micro-enterprise development. Trainees would

benefit from post-training support from the linkages of the centres with public institutions/agencies, NGOs, business development services, financial institutions/banks and private enterprises. Chart 2 displays the extent of the centre linkages with public and private institutions according to the responses from managers and trainers.

### **Chart 2: The extent of the centre linkages with public and private institutions**

The analysis of quantitative data in the Chart 2 reveals that 60% of the managers and trainers agreed that their centres had linkages with community leaders. The general findings also reveal that less than half of respondents reported that their centres had linkages with NGOs and self-help associations, local businesses and private enterprises, public institutions and agencies, business development services (BDS), financial institutions/banks, and employers within their local communities. It is evident from Chart 2 that the training centres had weak linkages with other external stakeholders who could foster skills utilisation in self-employment, or assist graduates in establishing micro-enterprises or co-operatives.

In the interview data one centre manager reported on the lack of provision of business guidance/mentorship as the cause of business failure as follows:

*Small entrepreneurs are not remaining in the business after starting it because there is a lack of mentorship. In business, sales depend on the marketing of the business. Both sales and marketing depend on the customers. The reason why South Africa has such a poor record of SMME development is because there is very little mentorship of a start-up business. We believe that every new business must have a mentorship programme for at least two or three years. A mentor is able to make a follow-up of the trainee's business and monitor the progress.*

Both quantitative and qualitative data confirm that the shortage of business funds and lack of business mentorship or assistance were the two major causes of business failure. The study also examined the types of post-training support for micro-enterprise development graduates received from their centres and other external role-players.

## Post-training support for micro-enterprise development

Some trainees could not start an own small business and others found it difficult to sustain theirs because of a lack of internal and external post-training support. In one-on-one interviews, four out five managers reported that there were no mechanisms utilised to assist a graduate with establishing a micro-enterprise or co-operative. Stressing the necessity of the post-training assistance for small business, a private centre manager argued that his centre works in accordance with the principle that entrepreneurship training is a process. This particular centre had mechanisms in place to assist a trainee graduate with establishing a micro-enterprise or co-operative. The manager said the following:

*In business, a trainee never graduates. We start a training programme which produces an entrepreneur who can work independently. The training is a process which starts from lower stage to higher stage in business. At the end of the training programme, the centre trained how to articulate a business plan and present it to possible funders. Every trainee was given an opportunity to orally present his/her business plan in a workshop attended by different delegates from micro-finance institutions such as ABSA Bank, Ithala Bank, and Capitec Bank, NGOs and local businesses. After the training, the centre used stakeholders to facilitate the transition from training to small business implementation.*

However, six successfully self-employed graduates were asked to indicate the types of assistance received from any institution, agency or municipality to develop their micro-enterprise or co-operative. One female graduate in a peri-urban area angrily said:

*I have come to realise that there are a lot of things to know in order to start a business. But in the classroom, our educators [trainers] were just telling us, “start a business, start business”; and then what? We train them and then leave them!”*

Another self-employed trainee with a tailoring micro-enterprise reported:

*I have not received any assistance from any private or public institution beside the one from our NGO [training centre] which gave me a new sewing machine and start-up capital. I don't receive mentorship in the business. So, I just use the skills and knowledge acquired from the*

*training programme to sustain my business. However, in case I have a technical problem with the machines or how to sew a certain style of fashion, I just walk to my trainers for more advice. The other problem is that I do not know where to get supplementary assistance outside my training centre, whether from institutions, agencies or local municipality.*

The qualitative findings from these two selected quotes suggest that a major problem to access external post-training support was the unawareness about agency or municipality programmes for micro-entrepreneurs. The problem of unawareness about external post-training support is evident in the document analysis. There are in KZN agency and municipality programmes in small business or co-operative incubation available. Qualitative findings confirmed that trainees benefit from support and advice of agencies or the municipality with regard to their small businesses. This is evident in the views of three self-employed trainees. A first successful trainee in the tailoring micro-enterprise reported the following:

*I have not yet received any material or financial supports from my training centre. But I usually receive help from other agencies and my local municipality to develop my small business. For instance, the municipality has a workshop furnished with industrial sewing machines. The purpose of the workshop is to help poor residents involved in sewing and fashion self-employment to use the machines for their customers' clothes. We use the municipal machines for free and get some advice on our small business.*

A second successful trainee working in a group of five graduates who formed a poultry and agricultural co-operative echoed the support from the 'inside out', referring to assistance from the municipality and SEDA:

*The training centre helped us to form a co-operative. After that, we have not yet received any support in terms of money from any institution or agency. We use the same money received from member contributions and our customers to buy chicken food, medicines and equipment. The Municipality has offered us a premise for the agricultural project, and we have now started planting vegetables. The municipality has again promised us to give more support[s] for the success of the project.*

A third successful trainee in small business who received continual post-training support from SEDA said:

*Financially I only dealt with SEDA [Small Enterprises Development Agency]. Since I have attended several pieces of training in small business development, they continue informing me about other relevant business workshops on business and financial management, business plan and marketing. They have been a great help to me in marketing strategies such as producing business cards, flyers and advertisements. SEDA has also helped me with renting a place.*

In summary, the findings reflect that centres' inadequate post-training support is seen by self-employed trainees as not linking them with available business incubation programmes provided by local agencies and municipalities. Most self-employed trainees expected post-training support to derive from the centre and thought only in terms of money for business, forgetting technical, financial management and legal aspects of the business.

## Discussions of findings

In this discussion section, the key findings are presented under themes in relation to enabling and disabling environments in fostering links for skills utilisation in self-employment of trainees. Next, a brief discussion and integration of literature follow. The research findings are analysed in line with the conceptual framework of the study.

The training delivery approach enables graduates to save money as a major source of start-up capital following by group members' contributions. The approach consists of 'learning by earning' training delivery. These findings are in contrast with King and Palmer's (2007) study on STEP trainees who could not utilise the acquired skills in micro-enterprise due to the unsuccessful loan applications. In connection with the present study's findings, Langer (2013) and Preece (2010) point out that in a community where social welfare systems fail, people need to learn how to take the initiative to organise self-help. In a similar vein, Blaak, et al. (2012) argue that the NFE centres should empower individual trainees to realise their own ability to produce goods and services in the informal sector.

A lack of reliable sources of start-up capital was one of the major disabling factors for self-employment in micro-enterprise. The problem is that trainees are not told about options for accessing funds for small businesses. The first cause of the problem is the weak linkages with micro-financial institutions and agencies, and the second is that NFE centre managers and trainers who knew about these institutions and agencies in KZN were poorly informed about the application processes of start-up capital in terms of a soft loan. However, it is vital to mention that at the centre level, there is a disjunction between training delivery components and the pursuit of self-employment in micro-enterprises. There are no formal mechanisms in place designed to assist NFE trainees with establishing a micro-enterprise or co-operative. These findings correlate with those from NFE programmes for Roma women in Greek Thrace reported by Georgiadou, et al. (2009). There were still large numbers of NFE activities that were designed without taking into consideration the post-training support for self-employment of the graduates.

Weak institutional centre linkages with public and private sectors constitute disable factors hindering the utilisation of skills into self-employment. In relation to this finding, Langer (2013) and Pantea (2016) argue that non-formal training programmes are most successful when centre managers carefully assess training needs together with other stakeholders within the community. Most of the managers did not visit the private sector operators in order to find out whether they might be interested in providing post-training support to graduates willing to start micro-enterprises.

Furthermore, the weak institutional linkages of the NFE centres may be one of the causes of low application for post-training support available on government SME schemes. Due to weak centre linkages, most of the managers and trainers lacked information and knowledge about possible post-training support provided by local agencies and municipalities. The findings of this study confirm Mahembe's (2011) argument that most SMEs are not aware of the financial products on the market (or other support available) in the community. In KZN this information on these support initiatives is publicised in the local municipalities and business development services (BDS) such as SEDA.

## Conclusions and recommendations

It is evident from the findings that at the centre level, the disabling factor is that there are no mechanisms designed to assist graduates interested in self-employment. While the structure of the South African economy is at fault, weak institutional centre linkages result in trainees not having access to essential post-training support, community resources, public goods and services. The study demonstrates that technical and business skills training alone, as a strategy of adult education and training for self-employment are not enough. Due to the existence of structural problems in the economy that perpetuate unemployment, the type of adult training does not create self-employment in micro-enterprises.

The author concludes that centre managers do not take into consideration the importance of institutional linkages and the socio-economic background of the trainees who have faced long-term unemployment and poverty leading to social isolation, which then further reduce the likelihood of employment. Without linking the NFE programmes to stakeholders who provide post-training support to graduates, adult trainees will continue finding it difficult to be integrated into the labour market which perpetuates unemployment and chronic poverty.

Based on the findings and conclusions, the paper provides four major recommendations. Firstly, centre managers should consult public, private agencies and local leaders from the planning stage of the training programmes. Secondly, centre managers should put great effort into post-training support and have an employment co-ordinator who will maintain contact with partners and trainees. Thirdly, centre managers should link self-employment programmes to credit schemes of banks and financial institutions so that graduates can access business funds in terms of soft loans at reasonable interest. Fourthly, centre managers should find out, and inform their graduates about all forms of support available including government SME schemes.



## References

- Adams, A.V. (2007). *The role of youth skills development in the transition to work: A global review*. Washington: World Bank.
- Aitchison, J. (2007). South Africa: Non-formal education. Country profile prepared for the All Global Monitoring Report 2008: Education for All by 2015: will we make it? 2008/ED/EFA/MRT/PI/26. Paris: UNESCO. Available at <http://unesdoc.unesco.org/images/0015/001555/155520e.pdf>. Accessed: 12 August 2015.
- Akpama, S.I., Esang, O.U., Asor, L.J., & Osang, W.O. (2011). Non-formal education programmes and poverty reduction among young adults in Southern Senatorial District, Cross River State, Nigeria. *Journal of Educational and Developmental Psychology*, 1(1), 154–161.
- Allais, S. (2014). *Selling out education: National Qualifications Frameworks and the neglect of knowledge*. Rotterdam: Sense Publishers.
- Blaak, M., Openjuru, G.L., & Zeelen, J. 2012. Non-formal vocational education in Uganda: Practical empowerment through a workable alternative. *International Journal of Educational Development*, 33(1), 88–97.
- Creswell, J.W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Los Angeles: Sage Publication, Inc.
- Creswell, J.W. (2013). *Qualitative inquiry and research design: Choosing among five approaches*. Los Angeles: Sage.
- Delport, C.S. & Roestenburg, W.J.H. (2011). Quantitative data collection methods: Indexes and scales. In A.S. De Vos (Ed.), H. Strydom, C.B. Fouché, & C.S.L. Delport. *Research at grass roots: For the Social Sciences and Human Service Professions* (4th ed.). Pretoria: Van Schaik Publishers.
- DVV International (Institut für internationale Zusammenarbeit des Deutschen Volkshochschul-Verbandes). (2011). *Non-formal skills training. Adult education for decent jobs and better lives. Adult education and development supplement*. Bonn: DVV International.

- Dunkley, G. (2008). *Technology-based vocational skills training for marginalized girls and young women*. Bangkok: UNESCO Bangkok.
- Erasmus, B.J. (2010). *Managing training and development in South Africa* (5th ed.). Cape Town: Oxford University Press Southern Africa.
- Fields, G. (2013). Self-employment in the developing world: A Report to the high-level panel of eminent persons. Available at [http://www.post2015hlp.org/wp-content/uploads/2013/05/Fields\\_Self-Employment-in-the-Developing-World.pdf](http://www.post2015hlp.org/wp-content/uploads/2013/05/Fields_Self-Employment-in-the-Developing-World.pdf).
- Fouché, C.B. & Bartley, B. (2011). Quantitative data analysis and interpretation. In A.S. De Vos, H. Strydom, C.B. Fouché & C.S.L. Delpont (Eds), *Research at grass roots: For the social sciences and human service professions*. (4<sup>th</sup> ed.). Pretoria: Van Schaik Publishers.
- Freedman, D. 2008. *Improving skills and productivity of disadvantaged youth*. Employment Working Paper No. 7, ILO. Available at <http://www.ilo.org/public/english/employment/download/wpaper/wp7.pdf>.
- Georgiadou, G., Kekkeris, D., & Kalantzis, M. (2009). A discussion of non-formal education training programs for Roma women in Greek Thrace: Proposals for a better planning. *The International Journal of Humanities* 6(9), 79–86.
- Hasanov, R., Biybosunova, S., & Hasanova, S. (2009). *Assessing the business environment for women's entrepreneurship development in the Kyrgyz Republic. Working paper no.3*. Moscow: ILO. Available: [http://www.ilo.org/public/english/region/eurpro/moscow/info/publ/wed\\_en.pdf](http://www.ilo.org/public/english/region/eurpro/moscow/info/publ/wed_en.pdf). Accessed: 10 March 2016.
- International Labour Organisation (ILO). (2009). *Rural skills training: A Generic Manual on Training for Rural Economic Empowerment*. Geneva: ILO.
- Islam, M., Mia, A., & Sorcar, N.R. (2012). Income-generation perspective in non-formal education NGO initiatives in Bangladesh. *Asia-Pacific Journal of Social Work and Development*, 15(1), 17–29.

- Kamil, M. (2007). *Looking again at non-formal and informal education towards a new paradigm*. Centre for Research in International Cooperation in Educational Development, University of Tsukuba. Available at <http://file.upi.edu/direktori/fip/jur.pend.luarsekolah/mustofa-kamil/nonformaleducationalanrogers2.pdf>.
- Kaufmann, K. (2015). Non-formal education in international comparison: Patterns of participation and investment in selected European countries. *International Journal for Research in Vocational Education and Training (IJRVET)*, 2(4), 239–267. Available: <http://www.ijrvet.net/index.php/IJRVET/article/view/115>.
- Kedrayate, A. (2012). Non-formal education: Is it relevant or obsolete? *International Journal of Business, Humanities and Technology*, 2(4), 1–5.
- King, K. & Palmer, R. (2006). *Skills, capacities and knowledge in the least developed countries: New challenges for development cooperation*. Background paper for the 2006 UNCTAD Least Developed Countries Report. Edinburgh: Centre of African Studies.
- King, K. & Palmer, R. (2007). *Skills development and poverty reduction: A state of the art review*. European Training Foundation. Available at [http://www.etf.europa.eu/pubmgmt.nsf/\(getAttachment\)/B055AACF8E9CC19DC12573AF00520109/\\$File/NOTE79TKHJ.pdf](http://www.etf.europa.eu/pubmgmt.nsf/(getAttachment)/B055AACF8E9CC19DC12573AF00520109/$File/NOTE79TKHJ.pdf). Accessed 28 Mai 2015.
- King, K. (2012). *Eight proposals for a strengthened focus on Technical and Vocational Education and Training (TVET) in the Education for All (EFA) agenda*. Background paper prepared for the Education for All Global Monitoring Report 2012. Paris: UNESCO. Available at [http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/gmr\\_2012-ED-EFA-MRT-PI-06.pdf](http://www.unesco.org/new/fileadmin/MULTIMEDIA/HQ/ED/pdf/gmr_2012-ED-EFA-MRT-PI-06.pdf). Accessed: 22 September 2015.
- Kyndt, E., Dochy, P., & Nijs, H. (2009). Learning conditions for non-formal and informal workplace learning. *Journal of Workplace Learning*, 21(5), 369–383. Available: <http://dx.doi.org/10.1108/13665620910966785>. Accessed: 10 March 2016.

- KwaZulu-Natal Provincial Government (KZN). (2013). *Provincial growth and development plan 2011–2030*. Pietermaritzburg. Available at <http://www.kznppc.gov.za/Portals/0/Documents/13-09-11 PGDPVersion203.pdf>. Accessed: 22 October 2015.
- KwaZulu-Natal Department of Education (KZN-DoE). (2011). *Adult education and training report – 2011*. Pietermaritzburg.
- KwaZulu-Natal Department of Education (KZN-DoE). (2012). *Adult education and training and FET college report – 2012*. Pietermaritzburg: KwaZulu-Natal Department of Education.
- Jjuuk, R. & Kwiri, T. (2010). Report of needs assessment study for skills training and non-formal education for poverty reduction in Karamoja. Available at [http://ugaaden.ac.ug/documents/Needs Assessment Study Report for Karamoja Project2010final draft \[1\].pdf](http://ugaaden.ac.ug/documents/Needs%20Assessment%20Study%20Report%20for%20Karamoja%20Project2010final%20draft%20[1].pdf).
- Langer, K. (2013). Technical and Vocational Skills Development in the Informal Sector: Contributions to the 4<sup>th</sup> Bonn Conference on Adult Education and Development (BoCAED), October 2013 (Ed.). DVV International. Available: [https://www.dvv-international.de/fileadmin/files/ipe\\_68\\_gb\\_web.pdf](https://www.dvv-international.de/fileadmin/files/ipe_68_gb_web.pdf). Accessed: 10 March 2016.
- Maree, K. & Pietersen, J. (2012). Standardisation of a questionnaire. In K. Maree, *First steps in research* (215–223). Pretoria: Van Schaik Publishers.
- Mahembe, E. (2011). *Literature Review on SME access to credit in South Africa*. Pretoria: National Credit Regulation.
- Mckay, V. (2007). *Adult Basic Education and Training in South Africa*. Available at <http://www.ncsall.net/fileadmin/resources/annrev/rallv7.pdf>. Accessed: 14 September 2016.
- Meager, N., Martin, R., & Carta, E. (2011). *Skills for self-employment: Evidence report 31 August 2011*. London: The UK Commission for Employment and Skills.

- Morton, M.H. & Montgomery, P. (2011). Empowerment-based non-formal education for Arab youth: A pilot randomized trial. *Children and Youth Services Review*, 34, 417–425.
- Nieuwenhuis, J. (2012). Qualitative research designs and data gathering techniques. In Maree, K. *First steps in research* (69–97). Pretoria: Van Schaik Publishers.
- Ololube, N.P. & Egbzor, D.E. (2012). A critical assessment of the role/importance of non-formal education to human and national development in Nigeria: Future. *International Journal of Scientific Research in Education*, 5(2), 71–93. Available at [http://www.ij sre.com/Vol.,5\\_2\\_-Ololube&Egbezor.pdf](http://www.ij sre.com/Vol.,5_2_-Ololube&Egbezor.pdf).
- Palmer, R. (2008). *Skills and productivity in the informal economy*. ILO Employment Working Paper No. 5. Geneva: International Labour Office. Available at <http://www.ilo.org/public/english/employment/download/wpaper/wp5.pdf>. Accessed: 22 February 2016.
- Palmer, R. 2007. Skills for work? From skills development to decent livelihoods in Ghana's rural informal economy. *International Journal of Educational Development*, 27(4), 397–420.
- Palmer, R., Wedgwood, R., & Hayman, R. 2007. *Educating out of poverty? A synthesis report on Ghana, India, Kenya, Rwanda, Tanzania and South Africa*. Edinburgh: Centre for African Studies, University of Edinburgh.
- Pantea, M. (2016). On entrepreneurial education: dilemmas and tensions in non-formal learning. *Studies in Continuing Education*, 38(1), 86–100. Available: <http://www.tandfonline.com/doi/full/10.1080/0158037X.2015.1032920>. Accessed: 10 March 2016.
- Preece, J. (2010). Response to learning through life: Thematic area of poverty reduction. *International Journal of Lifelong Education*, 29(4), 475–485.

- Republic of South Africa (RSA). (2015). *National Policy on Community Colleges*. Government Gazette, No. 38924 3 of July 2015. Available at <http://www.dhet.gov.za/Community/nationalpolicyoncommunitycolleges.pdf>.
- Rogers, A. (2004). *Non-formal education: Flexible schooling or participatory education?* Hong Kong: Comparative Education Centre.
- Stevenson, L. & St-Onge. (2011). *Assessment of the environment for the development of women's entrepreneurship in Cameroon, Mali, Nigeria, Rwanda and Senegal*. Geneva: ILO Publication.
- Vally, S. & Motala, E. (2014). *Education, economy and society*. Pretoria: UNISA Press.
- Weyer, F. (2009). Non-formal education, out-of-school learning needs and employment opportunities: Evidence from Mali. *Compare: A Journal of Comparative and International Education*, 39(2), 249–262. Available at <http://www.tandfonline.com/doi/pdf>.
- White, S. & Kenyon, P. (2005). *InFocus programme on skills, knowledge and employability*. Skills Working Paper No. 1. Geneva: ILO.
- World Bank. (2004). *Skills development in sub-Saharan Africa*. Washington, DC: The World Bank.
- World Bank. (2005). *Education sector strategy: Achieving education for all, broadening our perspective, maximizing our effectiveness*. Available: <http://siteresources.worldbank.org/Education/Resources/ESSU/EducationSector>. Accessed 10 November 2015.

---

Celestin Mayombe  
School of Built Environment and Development Studies  
College of Humanities  
University of KwaZulu-Natal

[mayombec@ukzn.ac.za](mailto:mayombec@ukzn.ac.za)