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Finding a space between poverty alleviation and high growth – a model for youth enterprise development in South Africa

Jocelyn Renee Smith
Student number 8459538

A dissertation submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand, in fulfilment of the requirements for the degree of Master of Management by Research and Dissertation

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Abstract

Interventions promoting youth entrepreneurship in South Africa assume there is a central role for entrepreneurship in confronting a range of development challenges. This research interrogates such assumptions and offers an alternate approach towards systemic interventions. A theoretical framework of transformative learning to negotiate challenges of liquid modernity underpins the study. A qualitative case study design, comprising 24 interviews conducted in 2014, explored two enterprise support programmes in Mpumalanga and Gauteng, each comprising a majority of youth under 35.

Findings show how assumptions embedded in policies promoting youth entrepreneurship are paradoxical, contributing to their failure. Youth entrepreneurship can contribute strategies to help navigate effects of liquid modernity and develop know-how if perceived as niche activities, achieved with appropriate support. It is not for everybody. Possible niched approaches include structured ones for levels above subsistence, and effectuation for potential high-growth technology start-ups. Recognition that entrepreneurship development must help transform individuals underlies both.

Declaration

I declare that this dissertation is my own, unaided work. It is submitted in fulfilment of the requirements of the degree of degree of Master of Management by Research and Dissertation at the Wits School of Governance, at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

_____

Jocelyn Renee Smith

7 September 2018.

Dedication

To my children Daniel, Hannah and Talya with love

Who must understand the past, live in the present and create the future.

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Chapter 1 Background

1.1 Introduction

Promotion of entrepreneurship and self-employment through micro and small enterprises is a prominent theme of government and multinational organisations' policies and strategies worldwide (Chigunta, 2017; Herrington, Kew & Mwanga, 2017; International Labour Organization, 2015). Policy-makers assume entrepreneurship and self-employment to be mechanisms that contribute to economic growth, facilitate greater participation in the economy, reduce growing levels of unemployment and alleviate poverty (Chigunta, 2017; Herrington, Kew & Mwanga, 2017; ILO, 2015).

South African government policies such as the *National Development Plan 2030* (National Planning Commission, 2011) and the *New Growth Path* (Economic Development Department, 2011) position small and medium firms as the main drivers of future employment, and thus the inclusion of greater numbers of people into the economy.

With 37% of the population between the ages of 15 and 34 (Reddy, Bhorat, Powell, Visser & Arends, 2016), South Africa faces the dual challenge of harnessing the potential of a youthful population to drive growth on the one hand, and on the other, addressing the destructive effects of the inability of a large proportion of this segment of society to enter into the formal economy. Entrepreneurship and self-employment appear to offer attractive solutions.

Policies on entrepreneurship promotion in both the formal school sector (Department of Basic Education, 2016) and for post-school youth (Department of Trade and Industry, 2013a; National Youth Development Agency, 2015) reflect the seriousness with which government in South Africa views youth entrepreneurship as a component of its strategies to include young people in the formal economy.

1.2 Rising unemployment in South Africa

Despite the emphasis on growth and job creation in government policy (NPC, 2011; EDD, 2011), and on measures for youth, including entrepreneurship development (dti, 2013a; NYDA, 2015), unemployment in South Africa continues to rise.

According to official figures from the fourth quarter of 2017, 26,7% of economically active people between 15 and 64 years old are unemployed (Statistics South Africa, 2018), an increase of 2,6% from 24,1% in the fourth quarter of 2013 (Statistics South Africa, 2014). Statistics South Africa's expanded definition of unemployment, which includes discouraged work-seekers who have not looked for a job for four weeks, saw unemployment rise from 34% in the fourth quarter of 2013 (StatsSA, 2014) to 36,5% in the third quarter of 2017 (StatsSA, 2018).

Official definitions of discouraged work-seekers may mask much higher unemployment figures. Contesting StatsSA's definition, Posel, Casale and Vermaak (2014) argue that a definition of discouraged work-seekers broader than four weeks offers a more realistic picture. They maintain that the probability of finding employment for those who actively search, and for those who do not, is the same. Their figures suggest that including non-searching unemployed people to StatsSA's definition of discouraged work seekers would have raised the expanded unemployment rate at the end of 2012 a further 10% to 44% (Posel, Casale & Vermaak, 2014).

1.2.1 Youth unemployment

Approaching two-thirds of South African youth aged 15–24 years, or 63,9% if applying StatsSA's expanded definition, were unemployed in the fourth quarter of 2017, and 42,8% between 25–34 years (StatsSA, 2018).

Numbers of youth not in employment, education or training (NEET) remain high (Graham & De Lannoy, 2016), especially in the 24-35 age group. In the final quarter of 2017, 3,06 million youth aged 15-24 were not in employment, education or training (StatsSA, 2018). In the last quarter of 2013, this figure was 3,08 million (StatsSA,

2014). For those aged 25-35, numbers grew from 4,03 million at the end of 2013 (StatsSA, 2014) to 4,67million at the end of 2017 (StatsSA, 2018).

Youth unemployment is not unique to South Africa, but is higher than in most other countries (Graham, Patel, Chowa, Masa de Vera, Khan, Williams & Mthembu, 2016). The International Labour Organization estimates that global youth unemployment rates rose from 12.9% in 2012 to 13.1% in 2016 (ILO, 2016), and are unlikely to decline in the immediate future. In South Africa and elsewhere, young people tend to be the first affected when jobs are shed, and there are simply not enough jobs to absorb growing numbers of entrants into the job market.

Commentators point to structural elements of the labour market and the education system as significant factors in growing youth unemployment in South Africa. Key labour market constraints are poor employment growth resulting from weak economic growth, and the mismatch between labour supply and demand, which favours highly skilled workers (Graham & De Lannoy, 2016; Graham et al., 2016; Reddy et al., 2016).

Systemic government initiatives in higher education have included improvements to offerings and levels of technical training at public institutions (Department of Higher Education and Training, 2014; McGrath, 2005), and the restructuring of the higher education sector, as outlined in the *National Plan for Higher Education* (Republic of South Africa, 2001; Hall & Symes, 2006). Benefits of post-school education in South Africa have been shown to be greater employability and higher earnings than those without. This helps to break cycles of weak education and poverty for children of graduates (Van der Berg, 2013).

Increased enrolments in both the TVET (Technical and Vocational Education and Training) and university sectors have not, however, yielded increased completion rates, especially in courses requiring competence in mathematics, sciences and technological subjects, which are increasingly necessary for greater workplace skills requirements (Reddy et al., 2016). Funding for students plays a role in poor completion rates. Van der Berg's study on progression of students supported by the

National Students Financial Aid Scheme (NSFAS) shows that financial assistance to students in the higher education sector from 2000-2009 improved the through put of beneficiaries when compared to students who did not receive it (Van der Berg, 2013).

Data on poor progress in building the skills profile of black South Africans in the 20 years from 1994 to 2014 points to the ineffectiveness of efforts in the higher education sector (StatsSA, 2016). Despite a general increase in the proportion of people in skilled employment during these years, the percentage increase for black South Africans (2,8%) was the lowest of all the population groups: from 15,1% to 17,9%. In comparison, Indian/Asian and white skilled employment rose by 25,5% and 19,3% respectively over the same time (StatsSA, 2016). In the 24 to 35 age group of black South Africans, skilled employment levels actually fell (StatsSA, 2016).

The South African government's response to youth unemployment, presented in its *Youth Enterprise Development Strategy* 2013–2023 (dti, 2013a), offers three policy interventions designed to bring youth into the economy. These are a wage subsidy to firms employing young people (National Treasury, 2011), improving employability and employment prospects of young people through community-based employment programmes, and promotion of self-employment through mechanisms such as the National Youth Development Agency (NYDA, 2015).

Evidence of the wage subsidy's effectiveness is inconclusive. Some researchers estimate that the effects have been insignificant (Ranchhod & Finn, 2016), while others (Levinsohn, Rankin, Roberts & Schöer, 2014) note a greater propensity of those receiving such a subsidy to get employment afterwards. Given the scale of the youth unemployment problem, both may be true.

While the magnitude of youth unemployment necessitates a large-scale response (Centre for Development and Enterprise, 2017b), this dissertation argues that entry points into the economy, such as entrepreneurship and self-employment, if conceived differently, should not be discounted because they are not large-scale.

Not all young people can be accommodated by improved quality and throughput from technical and vocational institutions, or by greater ease of hiring. Focusing only on scalable solutions may inhibit more immediate short-term opportunities (Graham & De Lannoy, 2016).

1.3 The purpose and contribution of youth entrepreneurial activity

There is a fairly general consensus among writers that youth entrepreneurship contributes more to a country's development than the simple survival of enterprises. Youth enterprise development can also offer a pathway to greater employability in the formal sector (Cleveland & Cleveland, 2006; Llisteri, Kantis, Angelelli and Tejerina, 2006, Schoof; 2006; Schlemmer, 2005). When youth-run businesses fail, it does not mean that there are no enduring benefits to the entrepreneur. The experiences of starting and running them may open up other employment opportunities for their owners (Llisteri et al., 2006; Schoof, 2006; Schlemmer, 2005).

Writing for the Kellogg Foundation, Cleveland and Cleveland (2006) summarise the three major contributions of youth entrepreneurship. Firstly, for young people at school, it can improve levels of engagement and academic performance, as well as promote awareness of entrepreneurship as a career option. Secondly, it can improve the life and work skills of young people who are entering a workforce that requires greater interpersonal skills, teamwork, cognitive complexity, innovation and creativity. Thirdly, it can result in income-generating enterprises (Cleveland & Cleveland, 2006). These contributions are applicable to South Africa as well, where youth also need to overcome developmental and skills challenges brought about by disadvantage, and a skills base that has not been improved by interventions in the formal education and training sector (StatsSA, 2016).

Leading entrepreneur Richard Branson underlines the importance of youth enterprise development in Africa:

> The important thing about entrepreneurship is that is provides young people with skills that may or may not make them entrepreneurs, but will help them to be more innovative and opportunistic in their future working lives, be it in the public sector, industry, or running their own businesses (Branson, excerpt

from acceptance speech, doctoral award ceremony, Glasgow Caledonian University, November 1995, quoted in Manu, 1999, p.120).

1.4 Constraints on young South African entrepreneurs

Self-employment and entrepreneurship are not easy options, especially for young people who generally lack the education, skills, work experience, networks and access to finance required for successful self-employment (Chigunta, 2017; Schoof, 2006; Swiss South African Co-operative Initiative, 2005). A study on youth entrepreneurship initiatives commissioned by youth development agency SSACI (Schlemmer, 2005; SSACI, 2005) found that these difficulties are not unique to South Africa, but have been exacerbated by its colonial and apartheid history, spatial location of people, poor education, and racial barriers for black people entering into the business environment. The lack of an entrepreneurial culture and of appropriate role models can be added to this list (Herrington & Kew, 2016). Other constraints on South Africa entrepreneurs of all ages are corruption and crime, inefficient government bureaucracy and onerous labour laws (Herrington, Kew & Kew, 2014).

Successive reports from the South African Global Entrepreneurship Monitor (GEM) confirm that few government initiatives aimed at supporting entrepreneurship have been successful (Herrington, Kew & Kew, 2014; Herrington & Kew, 2016; Herrington, Kew & Mwanga, 2017). Contributing to this is the failure of South African programmes to take into consideration the particular challenges facing young entrepreneurs from disadvantaged backgrounds (Schlemmer, 2005). Similarly, research into youth entrepreneurship programmes in Kenya, Tanzania and Uganda found that the interplay between the assistance programmes and their broader contexts limited their potential outcomes (Baxter, Chapman, DeJaeghere, Peko & Weiss, 2014).

Despite policies and programmes promoting the development of small, medium and micro-enterprises in South Africa from 1994 (dti, 1995; dti, 2005) and its continuing prominence in policy documents at least fifteen years later (dti, 2013a, NPC, 2011; National Treasury, 2013, SEDA, 2012), the numbers of people in self-employment in South Africa remain low (Herrington, Kew & Mwanga, 2017).

International benchmark studies of entrepreneurship, such as the Global Entrepreneurial Monitor (Xavier, Kelley, Kew, Herrington & Vorderwulbecke, 2012; Herrington et al., 2017) suggest that South Africans' orientation towards self-employment for people of all ages compares unfavourably with other countries at similar levels of development. The 2016 GEM Report (Herrington et al., 2017) notes that South Africa's established business rate of 2,5% of the adult population is almost five times as low as the average for the African region, and has declined by 26% since 2015. South Africa's business rate was ranked 61 out of the 65 economies that participated in the GEM 2016 study (Herrington et al*.,* 2017). While there has been some variation annually, entrepreneurship is not growing sufficiently to have the desired impact on growth and employment (Herrington et al*.,* 2017).

South Africa's large private sector creates much higher expectations of wage labour than is the case elsewhere in Africa (Ligthelm, 2008; McGrath, 2005). Entrants into the job market thus remain disproportionately dependent on the formal economy, rather than on being self-employed.

1.5 Assumptions about entrepreneurship development

Assumptions embedded in policy and practice, in South Africa and internationally, about the potential of entrepreneurship development to solve social and economic challenges, are that:

- Entrepreneurship can be a solution for those not in employment, education or training (NEET)
- The small business sector and entrepreneurship creates significant employment
- Enterprises grow on a continuum, from informal micro enterprises to growth oriented small, or larger businesses
- The diverse goals of entrepreneurship are compatible
- All that is required are certain limited inputs such as finance and training.

I will argue in this dissertation that these assumptions and misconceptions contribute materially to the failure of many youth entrepreneurship initiatives. In attempting to

understand why these assumptions are paradoxical, this dissertation examines features of youth employment and entrepreneurship policy, the development goals of entrepreneurial activity, types of entrepreneurship and how these assumptions are articulated in the enterprise development landscape South Africa.

1.6 Solutions for the otherwise unemployable

Policies on youth employment and entrepreneurship correctly emphasise what young people not in employment, education or training lack, such as technical, managerial, and entrepreneurial skills, access to micro-finance, assets and information on business opportunities (dti, 2013a). At the same time, these policies assume that entrepreneurship will develop as an outcome of their interventions with the addition of certain inputs.

Policies that commit resources, such as loan financing, training, mentoring or other forms of business support to young people assume that such “missing ingredients” will allow the target enterprises to move onto a higher level (Berner et al., 2012, p.392). Supporting unsustainable and uncompetitive businesses can have adverse effects and may perpetuate legacies of dependence if the young owners are left in debt, or are afraid to take part in future entrepreneurial ventures (Blackburn & Ram, 2006). Effective strategies need to consider how limited resources can be more effectively utilised to help young people.

1.7 The development goals of entrepreneurship

The literature describes a range of development goals for entrepreneurial activity (Alvarez & Barney, 2014; Blackburn & Ram, 2006; Liedholm & Mead, 1999; Rogerson 2001; White & Kenyon, 2001). Goals include economic growth; industry competitiveness; poverty alleviation through self-employment and job creation; social inclusion; redistribution; improving the self-confidence and empowerment of individuals; and improving the employability of young people. Understanding the wealth creation potential of different types of entrepreneurial activity is key to maximising their impact (Alvarez & Barney, 2014).

Traditionally, the focus of entrepreneurship and entrepreneurial activities differs in developed and developing countries. In a developed country such as the United States, Yusuf attributes almost 70% of economic growth to entrepreneurial activity (Yusuf, 2010). In the developing world, in contrast, entrepreneurship is largely seen as self-employment, providing an important buffer against poverty for reluctant entrepreneurs (Banerjee & Duflo, 2011; Beeka & Rimmington, 2011; Berner et al., 2012; ILO, 2015; Liedholm & Mead, 1999; Rogerson, 2001; Rogerson, 2004; Stern, Dethier & Halsey Rogers, 2005; Vandenberg, 2006).

South Africa's dual economy includes both types of entrepreneurship. A vibrant, formal, small and medium sector at the top end of the economic spectrum is comparable to that of other developed countries (Bureau for Economic Research, 2016). However, there is also an over-concentration of subsistence-type micro and survivalist enterprises at the bottom end, with low entry barriers (Bureau for Economic Research, 2016; Fourie 2013; Ligthelm, 2010; Rogerson, 2004).

Entrepreneurship policy needs to respond to a dual challenge. It must promote participation in a globally competitive, knowledge-based economy requiring a high skills base to embrace a fourth industrial revolution (Bloem, Van Doorn, Duivestien, Excoffier, Maas & Omeren, 2014; Naudé, 2017; Schwab, 2016). At the same time, in a local context, it needs to find realistic ways to facilitate entry for those who have been excluded by creating low-wage jobs (Reddy et al., 2016). The question is how coherent entrepreneurship policies can support both types when the goals of improving global competitiveness, promoting employment and redistribution are different challenges, and may be in conflict (Rogerson, 2004).

1.7.1 Entrepreneurial activity for economic growth

Advocates of entrepreneurship as a key pillar for economic growth and job creation, such as Schumpeter (1934), Kirzner (1973), and Shane and Venkataraman (2000), locate their arguments in the context of developed countries. Applicability of entrepreneurship for growth in developing countries, however, is an increasingly important question (Isenberg, 2010).

Entrepreneurship, especially the high growth type, is consistently linked to growth in countries' gross domestic product (Isenberg, 2010), which, in turn, has been shown to reduce poverty. Pinkovskiy and Sala-i-Martin's analysis of survey data from 1990 to 2011 relating to sub-Saharan African countries' income distributions and national accounts found that when GDP per capita increased, poverty decreased, and vice versa (Pinkovskiy & Sala-i-Martin, 2014). A study from the Philippines on the impact of entrepreneurship and economic growth on poverty, income inequality and economic development in the Philippines (Bonito, Daantos, Mateo and Rosete, 2017) reveals a similar pattern. From their analysis of regional data from government offices, Bonito et al. found that while economic growth has a positive impact on poverty, income inequality and economic development, entrepreneurship affects economic development, but has little effect on poverty and income inequality (Bonito et al., 2017).

Their findings are consistent with Isenberg's argument in favour of entrepreneurial resources being directed at high growth enterprises (Isenberg, 2010; 2016). In his view, one high-potential enterprise employing 500 people has a greater impact than 500 sole proprietorships, even though they both create the same number of jobs. Spillover effects from high growth businesses include the emergence of small suppliers, professional service providers such as lawyers and accountants, and resource providers such as banks and investors (Isenberg 2010; 2011; Brown and Mason, 2017). Allocating resources to subsistence or to what Prahalad calls 'bottom of the pyramid' enterprises (Prahalad, 2006) can increase their incomes but should not be pursued to the exclusion of high-potential ventures because of the broader impact the latter can have, argues Isenberg (2010; 2016).

Isenberg (2010) names Rwanda and Chile as examples of how local conditions can be optimised for entrepreneurial success. A strongly interventionist approach by government in Rwanda, after the 1994 genocide, to train coffee farmers to grow and supply coffee to an international standard, with links to an overseas supply chain, led to about 72 000 new two- or three-person operations, tripling exports and reducing poverty by 25% in 10 years. Rwanda made use of its existing conditions, style and culture, but was able to develop it to integrate into a developed economy, while

market reforms in Chile allowed new fishing ventures to become the second-biggest supplier of salmon to American markets (Isenberg, 2010).

Not all entrepreneurship interventions to promote growth are helpful. They can sometimes have the opposite effect. Mkandawire (1999) notes how market liberalisation in Africa in the 1990s actually worsened conditions for local growth-oriented micro and small enterprises that did not have access to capital and technology to exploit new opportunities. They found it impossible to compete with foreign companies and fell further and further behind (Jeans, 1999).

1.7.2 Entrepreneurial activity for job creation or self-employment

Entrepreneurial activity affects employment in two ways: the first is job creation by growth-oriented businesses, and the second is self-employment by the owners of the enterprises.

While entrepreneurship is widely recognised as a growth strategy, its effects on job creation are not automatic (Isenberg, 2010; 2016, Brown and Mason, 2017). The jobless growth experienced in South Africa (Ligthelm, 2008; Rogerson, 2004) is echoed globally. While growth can benefit some groups, it can harm others (Piketty, 2014).

A common assumption about entrepreneurship is the job creation potential of growth-oriented small enterprises. Kerr, Wittenberg and Arrow's analysis of data on creation and destruction of jobs in South Africa between 2005 and 2011 shows that larger companies are actually better net creators of jobs than small ones (Kerr, Wittenberg & Arrow, 2014). Similar studies in the United States (Haltiwanger, Jarmin & Miranda, 2013) support these findings. As in the United States, high rates of job creation from start-up businesses in South Africa are balanced by even higher rates of job losses from this sector.

Job creation from entrepreneurial activity in developing countries is primarily through self-employment. 69% of enterprises in sub-Saharan Africa in 2010 were survivalist, informal micro-enterprises that did not employ others, with few growth-oriented small

businesses (ILO, 2015). Although an emphasis on small enterprise development in Africa in the 1990s attempted to help such businesses to grow and employ others (Mead & Liedholm, 1998; Leidholm & Mead, 1999; Vandenberg, 2006), research shows that this did not happen to any significant extent (ILO, 2015). South Africa, too, has a predominance of enterprises at low levels of development (Bureau for Economic Research, 2016; StatsSA, 2014), and a missing middle of enterprises between poverty alleviation and large business.

The assumption that enterprises can grow from subsistence-type micro-enterprises to become formal, growth oriented ones is therefore not borne out by evidence. Survivalist and micro-enterprises, whether in South Africa (Rogerson, 2004) or elsewhere, provide incomes for many rural, female-headed households and other economically marginalised people, but generally do not grow beyond a certain point (Banerjee & Duflo, 2011; Blackburn & Ram, 2006; Isenberg, 2011; Liedholm & Mead, 1999). The majority of such enterprises are not integrated into existing production and value chains (Ligthelm, 2010, Masutha & Rogerson, 2014; Rogerson, 2013), and have thus not been able to move onto a higher growth trajectory (Rogerson 2001; Rogerson 2004; Masutha and Rogerson, 2014).

To do so, they would require significant capital, which they may not be able, or want to borrow, additional skills they may not possess and markets they may not have access to (Banerjee & Duflo, 2011; Blackburn & Ram, 2006). Limited human capital, property rights and access to finance often prevent poor people from benefiting from the kinds of opportunities that could make a material difference to their lives (Alvarez & Barney, 2014).

While assistance such as micro-finance plays an important role in helping poor people subsist, it also creates debt. Self-employment opportunities for poor people in developing countries are thus rarely scalable, or offer employment to others (Alvarez & Barney, 2014).

1.7.3 Entrepreneurial activity for poverty alleviation

The International Labour Organization sees enterprise development as a pillar of its poverty alleviation strategies (Vandenberg, 2006), with the potential to enhance labour absorption in economies that have been shedding jobs as a result of global economic changes. This, too, was the emphasis the South African government placed on enterprise development after 1994 (Rogerson, 1999), and it remains a mainstay of its *Youth Enterprise Development Strategy 2013-2023* (dti, 2013a).

Both the ILO's goal of entrepreneurship for poverty alleviation (Vandenberg, 2006) and South Africa's *Youth Enterprise Development Strategy* (dti, 2013a) seek to promote youth entrepreneurship in the context of other strategies such as "decent, permanent jobs and employment growth" (dti, 2013a, p.5). For the ILO, decent work includes the right to productive, remunerative employment, social dialogue and social security (Vandenberg, 2006).

A tension, however, often exists between these goals and the other elements of their strategies. The majority of young entrepreneurs, especially in Africa, are involved in marginal types of entrepreneurial activity that earn subsistence incomes, and certainly do not provide social security or what could be considered decent work (Chigunta, Schnurr, James-Wilson & Torres, 2005). Where the primary concern of enterprise development is with elements like decent work, protection of employment rights and social security, the growth and efficiency of small and micro-businesses become secondary considerations (Mkandawire, 1999). Bonito et al's., (2017) research in the Philippines supports this finding, where entrepreneurship was found to have no direct impact on poverty alleviation and income inequality per se, but contributed to overall economic growth

1.7.4 Entrepreneurial activity for inclusion

Greater inclusion into the economy enhances people's capacity to make choices that improve their lives (Beeka and Rimmington, 2011; Blackburn & Ram, 2006; Gstraunthaler & Cramer, 2012; Ligthelm, 2008; Stern et al., 2005; Vandenberg, 2006).

Blackburn & Ram (2006) describe exclusion as occurring when people and areas suffer from a combination of linked problems, like unemployment, a lack of skills, low incomes, inadequate housing, high crime rates, poor health and family breakdown (Blackburn & Ram, 2006). Although they were writing about England, conditions of exclusion are similar in developing countries. Patterns of racial exclusion and poor education are additional causes of exclusion in South Africa.

Enterprise development is one way in which the South African government envisages bringing more black people (dti, 1995; 2005; Rogerson, 2013; Masutha & Rogerson, 2014; The Presidency, 2003; RSA, 2013a) and young people (dti, 2013a; NYDA, 2015) into the formal economy.

While acknowledging the success of entrepreneurship success in encouraging participation in some contexts, Blackburn & Ram (2006) warn of policies that push especially young people into self-employment. The enterprises created are often informal, risky and poorly paid, with low entry barriers (Blackburn & Ram, 2006). As is the case in many parts of the developing world, including South Africa (Rogerson, 1999; Rogerson, 1994), local economies cannot support the duplication of these types of enterprise (Blackburn & Ram, 2006; Liedholm & Mead, 1999; Rogerson, 2013).

Policies on youth entrepreneurship that seek to foster social inclusion and job creation may be valuable, but they cannot replace policies addressing the structural problems in the economy that affect young people (Blackburn & Ram, 2006; Banerjee & Duflo, 2011).

Growth in self-confidence and empowerment of individuals, introduced by Liedholm & Mead (1999) as a goal of enterprise development, resonates with goals of inclusion and enabling people to make informed choices. For youth, this may be a particularly important component of enterprise development, as it could encourage young people to find new solutions and different ways of doing things (White & Kenyon, 2001). In order to achieve this kind of personal empowerment, Blackburn & Ram (2006) suggest changes to how enterprise development is evaluated: it should

include assessment of how initiatives change individuals and their aspirations, rather than simply looking at the survival of an enterprise. Such changes would support the notion of the three types of contribution made by youth entrepreneurship (Cleveland & Cleveland, 2006) rather than simply seeing it as a solution to youth unemployment (White & Kenyon, 2001).

While Blackburn and Ram (2006) focus on the particular challenges presented by viewing of entrepreneurship as a means of including young people into the economy, Stern et al*.,* (2005) and Hausmann (2014) focus on its value for promoting social and economic inclusion in a broader sense, for inclusive growth.

1.7.5 Entrepreneurial activity for inclusive growth

Entrepreneurial activity for economic growth does not necessarily facilitate inclusion of poor people into the economy. In *Capital in the Twenty-First Century,* Piketty (2014) highlights how, when growth is weak and return on capital high, inequality increases, with an economy's top earners separating from the rest. This process is aggravated by insufficient diffusion of knowledge or investment in skills, or what Hausmann calls a country's stock of know-how. Know-how is described as increasing specialisation in a country (Hausmann, 2016), as well as human capital (Alvarez & Barney, 2014) or diffusion of knowledge (Piketty, 2014).

Like Nicholas Stern (Stern et al., 2005), Hausmann (2014) argues that both inequality and slow growth often result from a form of exclusion. Exclusion is both the cause and the result of unemployment. Poor people are excluded from the facets of the modern economy that enable those with access to succeed. These facets include infrastructure such as roads, electricity, water, affordable transportation, and increasingly, information and communication technology and social necessities such as education, health, security and finance. The cost of such networks and infrastructure is high and usually fixed, so those unable to afford them cannot participate fully in their countries' economies (Hausmann, 2014).

Stern's overall strategy for developing countries is based on two pillars. The first is creating a good investment climate that will encourage large and small businesses to invest, create jobs and increase productivity. The second is including poor people in a country's growth (Stern et al., 2005). Entrepreneurial successes in developing countries which have resulted in significant reductions in poverty, argues Stern, have been the result of high growth, and large scale public investment in infrastructure, for example in Kenya, China, India, Uganda and Vietnam (Stern et al*.,* 2005). Such investment has reduced the costs of poor people's participation in networks that make them productive (Hausmann, 2014; 2016)

This study addresses the question of how entrepreneurship can contribute to more inclusive growth. In Stern's view, entrepreneurship can act as a bridge between the two pillars, innovation and inclusion. It provides a way out of poverty for many poor households and is often a dynamic source of learning and ideas for developing countries, as well as accounting for a significant share of employment (Stern et al., 2005). Addressing the institutional, behavioural and policy barriers to participation may be key to achieving this. Entrepreneurship for inclusive growth should therefore contribute to the stock of a country's know-how (Hausmann, 2016).

1.8 Types of entrepreneurship in South Africa

Baumol identifies three types of entrepreneurship that he believes exist in all economies, namely productive, unproductive and destructive entrepreneurship (Baumol, 1990). Productive entrepreneurship involves exploiting a business opportunity for growth and contributes to the overall growth of a country. Unproductive entrepreneurship, largely aimed at survival, protection of particular groups or redistribution, does not. Destructive types of entrepreneurship relate to criminal activities (Baumol, 1990). Societies that are able to channel most entrepreneurial activity to productive growth are likely to develop faster than those that do not (Baumol, 1990).

All three types are found in South Africa. Apart from large-scale entrepreneurial businesses such as MTN, Outsurance and Discovery, a business that creates a range of hair salon products and distributes them to a number of shops is an

example of productive entrepreneurship, while a single, survivalist-level hairdresser is unproductive (Maxum General Manager, Skills and Enterprise Development, Interview, 17 September 2014).

In contrast to this type of high growth entrepreneurship, enterprise models based on legislation that redistributes factors in the value chain without necessarily adding value (Maxum General Manager, Skills and Enterprise Development, Interview, 17 September 2014) are examples of unproductive entrepreneurship.

Policy-makers in South Africa appear reluctant to make a choice about the types of entrepreneurs they want to support. Political pressure and the realities of South Africa's unemployment situation lend themselves to a focus on poverty alleviation and equity, but these policies may not produce the types of entrepreneurship needed to grow an economy (Isenberg, 2011). Isenberg argues that such pressures placed on governments worldwide often make them do exactly the opposite of what is required to support entrepreneurship for economic growth (Isenberg, 2011).

1.9 The South African enterprise development landscape

South Africa's colonial and apartheid history and its resulting racially segmented economy have necessitated a post-apartheid entrepreneurial focus on redistribution and redress. Rogerson's analyses (Rogerson, 1999; 2004; 2013; Masutha & Rogerson 2014), complemented by Mathibe and Van Zyl (2011) and McGrath (2005), offer a historical overview of the key features of government policy and institutions aimed at supporting small, medium and micro businesses (SMMEs) in South Africa. Addressing weak market access has been a consistent theme of all of these policy measures (Rogerson, 2013).

Post-1994 enterprise development policies and strategies are characterised by changing directions towards SMMEs. They were articulated first in the *White Paper on National Strategy for the Development and Promotion of Small Business in South Africa* (dti, 1994), then revised as the *Integrated Strategy On The Promotion Of Entrepreneurship And Small Enterprises* (dti, 2005) which incorporated international shifts towards a more market-led approach.

The first strategy contained a range of policy objectives deriving from perceptions of the key roles of SMMEs, such as employment creation, redistribution and improvement in global competitiveness (Rogerson, 1999). The major achievement during those years was the creation of an institutional architecture for a sector that had been largely neglected before 1994 (Rogerson, 2004). Primary problems with the strategy were that objectives were often conflicting, with an over-emphasis on survival type enterprises. Too few of the emerging growth oriented businesses were owned by black South Africans (Rogerson, 2004).

The new strategy aimed at promoting entrepreneurship, creating enabling environments and enhancing the competitiveness of existing entrepreneurs (dti, 2005). Its three pillars were the expansion of access to credit and finance, extending access to market opportunities and engaging government on regulatory reform. This framework was more proactive in targeting emerging black-owned enterprises (Rogerson, 2013). SEDA (Small Enterprise Development Agency) was the agency tasked with delivering support to small enterprise. SEDA was an amalgamation of two institutions established by the 1994 strategy, Ntsika Enterprise Promotion Agency and NAMAC (National Manufacturing Advisory Centre). Khula Enterprise Finance remained tasked with assisting enterprises with access to finance.

In general, commentators are critical of the achievements of the incorporation of market development and market-driven policies and programmes in South Africa (Gstraunthaler & Cramer, 2012; Rogerson, 2006; Ligthelm, 2008; Mathibe & Van Zyl, 2011). Business support programmes remain supply-driven, with little focus on markets and little government understanding of markets and market needs (Gstraunthaler & Cramer, 2012). Programmes have tended to be aimed more at high growth types of businesses, which can pay for services. Those at the lower end tend to be bypassed (Rogerson, 2006) or are still seen as being in need of sustained government support (Ligthelm, 2008; Mathibe & Van Zyl, 2011; Rogerson, 2006).

Since 2005, government has focused on three main aspects of business support, aside from financial support. These are business incubation (dti, 2005; SEDA, 2012), facilitating linkages between large and small enterprises, (dti, 2005) and facilitating

access to government procurement through Broad-based Black Economic Empowerment (B-BBEE) (dti, 2005).

The redistributive emphasis has resulted in Broad-based Black Economic Empowerment (B-BBEE) legislation becoming one of the drivers of enterprise development, either through ownership, sub-contracting or supplier development (Republic of South Africa, 2004; 2013a). This has resulted in enterprise models based primarily on preferential public sector procurement, and private-sector supplier development and sub-contracting arrangements (Rogerson, 2013).

1.9.1 Broad-Based Black Economic Empowerment

More aggressive approaches to leveraging opportunities for black South Africans, through the passage of the B-BBEE legislation (RSA, 2004; 2013a) and the adoption of B-BBEE Codes of Good Practice (RSA, 2007; 2013b) giving points to businesses for different indicators of support for black ownership, skills development, inclusion into supply chains and support for enterprise development, are evidence of a policy shift from supporting SMMES towards B-BBEE (Rogerson, 2013). The higher an organisation's B-BEEE scorecard, the greater its ability to transact with local, provincial and national government (Rogerson, 2013).

Assessments of the success of B-BEEE initiatives to integrate black businesses into formal supply chains and government procurement have been mixed. Some studies suggest that B-BEEE has had an effect on increasing the numbers of black- owned high growth firms (Mthimkhulu & Aziakpono, 2016), and that established businesses do alter their behaviour to comply with B-BEEE regulations (Hiam, Eshgi & Eshgi, 2017).

Mthimkulu and Aziakpono's (2016) analysis of a sample of 479 firms from the World Bank Enterprises survey database also found that many of these firms are in the services sector, which generally under-performs, and that too few were involved in exporting. Their research supports Rogerson's assertion that these models have created some entrepreneurial activity, but largely of a transactional rather than a value-adding nature (Rogerson 2013).

Ryan (2012) provides insights into how innovative partnerships between the government and the private sector can be effective (Ryan 2012). Her study shows how B-BBEE policies can be used to leverage funding and participation from the private sector, and thus create a mechanism for small enterprise support (Ryan 2012). However, private sector involvement emanating from government policies has been limited mainly to the development of an enterprise support system for SMMEs (Rogerson, 2013).

1.9.2 Incubation

Alongside B-BBEE, incubation has been a cornerstone of government policy towards small enterprises since 2005. Masutha & Rogerson (2014; 2015) broadened the limited academic literature on business incubation in South Africa by describing the evolution of incubation as a strategy, highlighting the proliferation of incubators, geographical placement and focus, and pointing out differences between public and private sector incubators.

Summarising various and sometimes disputed definitions of a small business incubator, Masutha and Rogerson (2014) suggest a consensus view, of an incubator offering a range of targeted business and technical support services aimed at assisting emerging and small start-up businesses to grow into operationally independent entities (Masutha and Rogerson, 2014).

Global failure rates of new small busineses are high in both developed and developing countries (Infodev, 2010a). Incubators are assumed to be able to address mortality rates of early stage businesses by targeting support, such as networking relationships with potential customers or suppliers, access to financial support programmes, training business assistance, shared space and subsidised services (InfoDev, 2010a). Incubation was the strategy designed to address the high failure rate of South African SMMEs in their first year, estimated at 80% (Masutha and Rogerson, 2015).

The Godisa Trust, created in 2000 to support competitive SMMEs with a technology focus (Masutha & Rogerson, 2014), recorded the survival of over 80% of the

businesses it assisted (Buys & Mbewana, 2007). It laid the foundation for significant expansion of business incubation (Masutha & Rogerson, 2014). Timbali Technology Incubator, one of the cases studied in this research, was one of the programmes set up by the Godisa Trust in 2003.

In the consolidation of entrepreneurial initiatives following the dti's revised strategy in 2005, Godisa merged with other government programmes to form the SEDA Technology Programme (STP). The dti's Incubation Support Programme (ISP) (dti, 2013b) confirms government's long-term commitment to incubation as a vehicle for creating and supporting sustainable enterprises through the promotion of partnerships between government and the private sector (Masutha & Rogerson 2014; 2015).

In 2013, of the 51 incubators in South Africa, 82% were publically owned and 80% were situated in large cities and small towns. The rest were in rural areas and townships (Masutha & Rogerson, 2015). Since then, private sector incubation programmes have mushroomed, as well as programmes designed to accelerate the growth of start-up businesses, driven largely by the unblocking of corporate funding resulting from B-BBEE legislation (Levin, 2017).

Masutha & Rogerson's (2015) analysis of two public-sector and two private-sector incubation programmes reveals similarities in terms of methods of recruitment, incubation processes, services offered, challenges faced by the entrepreneurs involved and the benefits they derived. The latter includes better financial and legal compliance, entrepreneurial spirit, commitment, work ethic and networking skills.

Common challenges include high dropout rates, entrepreneurs who were really job seekers, lack of procurement opportunities, financial mismanagement and lack of effort or discipline on the part of entrepreneurs (Masutha & Rogerson, 2015). The study also found evidence of better performance of private incubators in creating jobs and graduating businesses out of the incubators (Masutha & Rogerson, 2015).

Assessments of the effectiveness of incubation strategies point to their being a helpful rather than an essential component of entrepreneurial development (Dubihlela & Van Schalkwyk 2014; Isenberg, 2010). Isenberg (2014), in particular, sees little evidence of their commensurate contribution to entrepreneurship.

Outside of Buys and Mbewana's assessment of the success of the Godisa Trust (Buys & Mbewana, 2007), and of Masutha and Rogersons's contributions (Masutha & Rogerson 2014; 2015), comprehensive academic analyses of the ability of business incubators in South Africa to support competitive SMMES and reduce failure rates among start-up businesses have been in short supply.

1.10 The problem statement

Increasingly, from 1995 onwards, the South African government has developed interventions and channelled resources into youth entrepreneurship on the assumption that this would achieve economic growth, more equitable distribution of wealth, greater inclusion of marginalised young people into the economy, and job creation (NPC, 2011; EDD, 2011; dti, 2005; 2013a).

The huge resources and inputs required to support government policies to promote small business have borne little discernible result (Herrington & Kew, 2014). Simply providing content, or adding missing elements such as credit or business development services has not proved effective for youth entrepreneurs in South Africa (Mathibe & Van Zyl, 2011) or elsewhere (Berner et al., 2012). There have been few studies on the effectiveness of these interventions, and even less attention has been paid to how they would work. The assumptions underlying these interventions have not been interrogated.

1.11 The purpose statement

The purpose of the research is to understand what models of entrepreneurship intervention are appropriate for certain types of young South Africans, with a view to identifying what can be learned and replicated from their experiences.

The research is exploratory, seeking a better understanding of how young people succeed and learn in their enterprises, although it has a descriptive component. Yin asserts that a study is usually exploratory when the questions that are asked are generally about 'what', and where there is no single, clear set of outcomes (Yin 2014).

Assuming that entrepreneurship can be learned (Cope, 2005a), this research applies an adult learning theory, transformative learning, as a framework for understanding how enterprise development support can assist young people to grow or sustain their business activities by developing the type of mindset or identity needed to respond to a context of rapid change, or liquid modernity (Bauman, 2000).

This study seeks to contribute to the debate where there are gaps in current knowledge. It explores how young entrepreneurs learn in dedicated entrepreneurship development programmes outside secondary and higher education settings, and specifically, how entrepreneurial learning in the context of a developing country like South Africa can be transformative. Through this study, the researcher hopes to contribute to a greater understanding of how to facilitate the inclusion of youth in the space described in the title of King and McGrath's book, *Enterprise in Africa: Between Poverty and Growth* (King & McGrath, 1999).

1.12 Research questions

The study was intended to answer one overarching question, and three sub-questions about youth enterprise development:

1. What is an appropriate model for youth enterprise development in South Africa?
    a. What lessons can be learned from a comparison between the approaches, practices and results of two selected market-oriented programmes in South Africa?
    b. What innovative components and methods of these two programmes could lead to more sustainable youth businesses?
    c. How do young people learn on these programmes?

To answer these questions, this research examined both local and international entrepreneurship theory, as well as programmes operating in South Africa in 2014 that have tried to adopt particular theoretical approaches. The study is positioned in the context of theories of entrepreneurship and theories of learning, rather than in theories of youth development and youth unemployment. It also surveys adult education theories that may currently be left out of formal academic discourse on youth entrepreneurship. In selecting the models, lessons and components, programmes were investigated that utilise the business support resources available in South Africa and are aimed at sustainable, growth-oriented self-employment.

1.13 Definitions

1.13.1 Definitions of enterprise development and entrepreneurship

Definitions of entrepreneurship are not one-dimensional, and differ according to the theories they are derived from. Dominant economic views on entrepreneurship in developed countries focus either on what Schumpeter calls creative destruction, which is disruptive and discontinuous and leads to the destruction or obsolescence of what preceded it (Schumpeter, 1934), or on the uncovering and exploiting of opportunities (Kirzner, 1973), which may be small-scale, gradual and cumulative. Later research associating entrepreneurship theory with business strategy either links entrepreneurship with existing businesses that show growth and development (Ligthelm, 2008; Shane, 2003) or with the creation of new businesses (Storey, 2006).

Shane and Venkataraman define entrepreneurship as “the process by which opportunities to create future goods and services are discovered, evaluated and exploited” (Shane & Venkataraman, 2000, p.218). This definition which emphasises a process rather than individual characteristics or specific opportunities, comes closer to describing entrepreneurship in the context of this study.

Isenberg states that terminology should differentiate entrepreneurship from self-employment and enterprise development in order not to dilute the importance of entrepreneurship (Isenberg, 2011). However, the researcher has selected the Global Entrepreneurship Monitor’s definition of entrepreneurial activity, which was first

adopted in 1999, as ‘any attempt at self-employment, new venture creation, or the expansion of an existing business by an individual on their own, in conjunction with others, or by an already established business’ (Reynolds, Hay & Camp, 1999, p.3).

The study adopts the GEM definition for two reasons. The first is that it describes a process of either starting or expanding a business. The second is that it does not distinguish between a new or an existing enterprise, between innovative, disruptive enterprises and those exploiting existing opportunities, or between enterprises in the developed and developing world. Adopting this definition allows the terms entrepreneurship development, enterprise development and promotion of self-employment to be used interchangeably

1.13.2 Youth and youth entrepreneurs

There is no universally accepted definition of youth. The ILO refers to youth as being between ages 18 and 24 (Schoof, 2006), while the South African government identifies youth as being between 14 and 35 (The Presidency, 2009). Although this study applies the South African definition, the focus on youth enterprise development is not on young people still in secondary school, but on young people between 18 and 35 in post-school entrepreneurship programmes.

1.13.3 Types of enterprise and entrepreneur

Youth entrepreneurs are found in growth-oriented and survivalist businesses, and at all levels of sophistication. Often driven by necessity, they also take advantage of opportunities (Beeka & Rimmington, 2011). Even South Africa, with its low levels of entrepreneurial activity, has a high proportion of entrepreneurs who go into business to take advantage of perceived opportunities (Herrington, Kew & Mwanga, 2017).

The study initially intended to target growth-oriented, very small and micro-enterprises (VSMEs) that could be either formal or informal in terms of their legal registration, but were not potential high growth start-up enterprises in the high-tech sector. The assumption was that they did not need assistance. However, upon consideration of the potential impact of high-growth, innovative businesses,

especially those with a technological focus on the economy and on other young entrepreneurs (Isenberg, 2010), the parameters were revised to include them.

1.14 Organisation of the study

This study is divided into in seven chapters. Chapter 1 introduces and states the case for youth entrepreneurship. It describes the policy context in South Africa. The problem statement, purpose of the study, and research questions are presented.
Chapter 2 reviews the literature relating to entrepreneurship theories and learning theories, and different approaches to enterprise development. The theoretical framework used in the study, of transformative learning as a response to liquid modernity, is explained. Chapter 3 describes the philosophical premise, research paradigm and research design that was adopted. Findings from the two cases studied, Timbali Technology Incubator and Maxum Incubator, are presented separately in Chapters 4 and 5 in order to give the reader a sense of the discrete nature of each one. Chapter 6 presents a cross-case analysis of the results, including the theoretical and practical implications of the research. Conclusions derived from the discussion are outlined in Chapter 7.

Chapter 2 Literature Review

2.1 Introduction

In this chapter, the literature on approaches, models and theories related to how young entrepreneurs learn is presented and discussed. This review provides an appraisal of approaches to youth entrepreneurship, and of general local and international approaches to entrepreneurship development, and examines entrepreneurship theories and learning theories for entrepreneurship. The theoretical framework outlines how youth enterprise development is framed within a theory of transformative learning, which is seen as a response to a rapidly changing world, described as liquid modernity (Bauman, 2000).

2.2 Approaches to youth entrepreneurship

There is little literature that answers questions around the need for specialised youth entrepreneurship development programmes (Baxter et al., 2014). Outside of educational settings, studies either generalise the business issues of youth to the general population or they focus on the social, psychological and community aspects of youth and ignore business issues (Schoof, 2006).

The interaction between personal relationships and contextual factors outside of the control of young entrepreneurs, which have potential to limit outcomes, is investigated in programmes in developed (Geldhof, Porter, Weiner, Malin, Bronk, Agans, Mueller, Damon and Lerner, 2013) and developing countries (Baxter et al., 2014).

Baxter et al., (2014), Schlemmer (2005) and White & Kenyon (2001) try to address gaps in understanding what the content of youth entrepreneurship development programmes should be. They all stress the need to combine areas of need in the enterprise with maximising the personal skills and potential particular to young people (Baxter et al., 2014; White & Kenyon, 2001; Schlemmer, 2005).

White and Kenyon present different views on whether youth need specialised support programmes or whether they should be incorporated into programmes aimed at the general population. Incorporating them into general programmes allows them to learn from others and prepares them for the real world. Having their own programmes, however, may allow additional time and attention to focus on issues specific to youth (White & Kenyon, 2001).

2.2.1 Entrepreneurship education

The most thorough evaluations of youth enterprise programmes have been of entrepreneurship education (Hamilton & Hamilton, 2012). Entrepreneurship education involves the use of a structured learning environment to help individuals develop entrepreneurial skills and become entrepreneurs (Cleveland & Cleveland, 2006). It is guided by the failure of traditional education to connect youth to real-life experiences, the changing nature of work and the potential of classroom and experiential learning to enhance entrepreneurial skills (Cheung, 2008; Cleveland & Cleveland, 2006).

In South Africa, as is the case elsewhere in the world, gaps between the world of school and the world of work are large and increasing as a result of technical innovation and changes to the economy. These gaps are the reason why many countries started introducing entrepreneurial education into schools (Cheung, 2008).

Research indicates a positive relationship between entrepreneurship education interventions at secondary school and increased aspirations by participants to consider entrepreneurship or self-employment as possible career options. This is found in studies from Hong Kong (Cheung, 2008), and the United States (Network for Teaching Entrepreneurship, 2013). South African studies on a short-term entrepreneurship education intervention (Myres and Venter, 2003) and on the short-term impact of the startUp&go programme in the Free State (Bohne, Christensen, Frölich & Wiesenfarth, 2014) show similar results.

Entrepreneurship education is often seen as a good route to long-term promotion of a greater entrepreneurial culture (Cheung, 2008; Chigunta, 2017; Cleveland &

Cleveland, 2006; UNCTAD, 2010), despite some reservations about its necessity (Isenberg, 2014). While acknowledging that it may be helpful, Isenberg notes significant entrepreneurship, arising organically, in developed countries such as the United States, Israel and Iceland, before any introduction of entrepreneurship education (Isenberg, 2014). The entrepreneurship culture in those countries is attributed primarily to the presence of human capital, access to customers and to capital (Isenberg, 2014). However, potential entrepreneurs in both developing and developed countries are often excluded from those factors (Hausmann, 2014), making entrepreneurship education more relevant.

South Africa has seen a growing emphasis on entrepreneurship education, both in schools (North, 2002; Steenekamp, Van der Merwe and Athayde 2011) and in higher education institutions (Jesselyn & Mitchell, 2006). Although there are some good examples of secondary school programmes, such as Junior Achievement and EWET[1] (Education with Enterprises Trust), the general criticism of these types of programmes is that they are too classroom-based and not sufficiently experiential (North, 2002).

The development of an entrepreneurial mindset in the transition of young people to adulthood is the goal of more recent entrepreneurship education programmes, both in secondary school and in higher education institutions. Such an emphasis comes in response to the recognition that a changing work landscape requires news sets of abilities and skills in order to meet the challenges of future careers (Obschonka, Hakkarainan, Lonka & Salmela-Aro, 2017). The assumption is that students with a greater entrepreneurial orintentation are more likely to develop entrepreneurial intentions (Rana, Jain, Singh & Som, 2017). Programmes focusing on developing entrepreneurial mindsets tend to stress personality characteristics and age-approriate entrepreneurial competencies such as leadership, self-esteem, creativity and proactivity motivation (Turner & Gianiodis, 2018).

[1] Junior Achievement South Africa and EWET (Education with Enterprises Trust) are non-governmental organisations that offer business and entrepreneurial skills to schoolchildren.

Obschonka et al. (2017) demonstrate similar findings about individual attributes in their study among high school students. Entrepreneurship alertness and career intention among high school students tend to be independent of career development, are an expression of an entrepreneurial mindset, and are predicted by different underlying competencies of creativity and proactivity motivation, which are mediated by leadership and self-esteem (Obschonka et al., 2017).

In higher education institutions worldwide, attempts to teach greater entrepreneurial orientation take place either through through traditional business school degree programmes and short courses (Rana et al., 2017), and by attempting to embed greater entrepreneurial orientation into curricula of other disciplines outside of business shools (Turner and Gianiodis, 2018).

Turner and Gianiodis's study casts doubts on the effectiveness of integrating entrepreneurship into the curricula of other disciplines such as science, engineering and the humanities. They argue that in blended entrepreneurial programmes, it is the student-led attributes, such as entrepreneurial passion and alertness that lead to greater entrepreneurial intention and recognition of entrepreneurial opportunity in their fields, rather than the content of the blended curricula themselves (Turner & Gianiodis, 2018). Implications for such embedded entrepreneurship programmes to succeed are that admission criteria will need to take account of individual entrepreneurial attributes, as well as the more traditional criteria concerning whether candidates will succeed in the profession (Turner & Gianiodis, 2018).

Further research on the emotional impact of entrepreneurship in class-based entrepreneurship education programmes (Jones & Underwood, 2017) provides greater inghts into the personal demands entrepreneurship makes on individuals, and how programmes can better prepare students for more real life sitautions. Jones and Underwood's research hints at a greater role for educators in mediating emotional responses from students to simulated entrepreneurial situations that may case them stress (Jones & Underwood, 2017).

Formal entrepreneurship education is not the primary concern in this research, which focuses on out-of-school youth. Nevertheless, insights from the entrepreneurship education literature from higher education, particularly in relation to individual attributes and entrepreneurial orientation, contribute to the theoretical argument made in this research. This is particularly pertinent on the need for some form of transformative learning among individuals, and how it takes place. The emotional component introduced by Jones and Underwood (2017) resonates with a later iteration of Mezirow's theories of of transformative learning, which responds to criticisms that they are overly rational (Dirkx, 1997), and incorporates a more emotional component (Mezirow, 2009; Illeris, 2014). These are discussed later in this literature review.

2.3 Approaches to enterprise development

Policy and practice in enterprise development reflect a continued search for the right balance between market liberalisation and commercially driven policies on the one hand, and interventions by government, donor organisations and the private sector on the other (Vandenberg, 2006). Changes in approach on the part of large donors and governments are indicative of this search.

Two broad approaches to small enterprise and entrepreneurship development emerge from the literature. The first, suggested by Berner et al. (2012), sorts policies targeted at both survival and growth-oriented enterprises into macro, meso and micro levels (Berner et al., 2012).

The second, the entrepreneurship ecosystem approach, describes a holistic application of the key elements of entrepreneurship that come together to facilitate innovation and growth. These elements add more value collectively than they would alone**.**

2.3.1 Macro, meso and micro-level approaches

Macro-level policies aim at promoting an enabling environment and reducing institutional hurdles faced by small entrepreneurs. Examples are measures to

improve the investment climate, macroeconomic and trade policies and infrastructure development. The private sector can then take advantage of a more conducive business environment (Stern et al., 2005).

Meso-level policies include value chains and clustered economic activities, which see large firms or clusters generate economic benefits for smaller firms (Berner et al., 2012). Other examples include local economic development, support for formal networks and associations and a market development approach to small business which encourages the involvement of the private sector in creating a market for the provision of services on a competitive basis.

King & McGrath's collection of research in Africa in the 1990s (King & McGrath, 1999) on these types of activities presents chapters showing some success for small businesses in economic clusters (McCormick, 1999; Rogerson, 1999), but little with micro-enterprise associations (Haan, 1999). Similar findings with respect to youth on the limited role of formal networks and business associations in England (Blackburn & Ram, 2006) and in South Africa (CDE, 2007) suggest that young people tend to gravitate to more informal networks for their economic and social capital.

Micro-level interventions aim to support individual entrepreneurs and businesses, and include financial services, micro-credit, and some form of business assistance, the missing ingredients that Berner et al. describe as "assumed to allow the entrepreneur or enterprise to move onto a higher level of development" (Berner et al., 2012, p.392).

The early to mid-1990s saw a major shift in international approaches to enterprise development, away from direct government support for enterprises at micro-level, towards a more market development approach at meso-level, with a greater private sector role in providing support (Mathibe & Van Zyl, 2011; Rogerson, 2006). Rogerson (2006) and Mathibe and Van Zyl (2011) outline how these changes emerged in South Africa as a result of business development services being highly subsidised by government, but insufficient in their outreach, of poor quality and poorly run.

In this new approach, emphasis was on developing more effective market environments which could lead to a growing demand for business development services. Enterprise owners were seen as consumers of services rather than programme beneficiaries (Rogerson, 2006). Essential features of the approach were to make services, previously largely subsidised by government, more sustainable and responsive to the actual needs of the enterprises through their delivery by private-sector providers on a cost-recovery basis (M4P network, 2008; Rogerson, 2006).

For Berner et al. (2012), the types of support offered to survivalist enterprises within the framework of these three levels do not succeed because they try to move them into a growth-orientation. Berner et al. (2012) base their argument on international evidence that survivalist enterprises will not and largely do not want to grow. When they have extra revenue, they tend to replicate themselves somewhere else rather than enlarge their existing enterprises. Berner et al. (2012) challenge the assumptions of Yunus (2003) and Prahalad (2006), for example, that the latent entrepreneurial potential of small entrepreneurs can be unleashed, with some assistance such as micro-credit.

The possible exception comes from local economic development initiatives, which bring together players from local government, the private sector and the local community, to address specific issues within communities. Berner et al. (2012) concur with Rogerson's view that these can have a profound effect for survival-level enterprises through formal markets, land-use policies and the development of infrastructure (Berner et al., 2012; Rogerson, 2004; Rogerson 2006a; Rogerson, 2006b.) If assistance is conceived differently, and offered in parallel to that for growth-oriented businesses, poor people in survivalist enterprises can be helped to become a little less poor (Liedholm & Mead, 1999, Berner et al., 2012; Clemensson & Christensen, 2010; Fourie, 2013; Rogerson, 2001; Schoof, 2006, Vandenberg, 2006).

King & McGrath (1999) frame the debate about intended beneficiaries of intervention differently, questioning whether small, medium and micro-enterprises in Africa form a continuum with enterprises growing from micro-level to more viable growth-oriented businesses (Vandenberg, 2006), or are actually a series of different segments, with different policy implications for each.

A contrasting approach which does not segment enterprises at all, but sees them all as part of a wider whole, is the entrepreneurial ecosystem approach.

2.3.2 The entrepreneurship ecosystem approach

The entrepreneurial ecosystem seeks to replicate a biological ecosystem that involves key elements interacting and reinforcing one another. The metaphor of a biological ecosystem to describe entrepreneurship was first used by James Moore in 1993 (Moore, 1993). The entrepreneurial ecosystem approach has the potential to correct shortcomings in how the role of entrepreneurship has been overlooked in traditional economic systems one the one hand, and on how entrepreneurship studies have generally overlooked the role of systems in explaining the prevalence and performance of entrepreneurship on the other hand (Acs, Stam & Audretsch, 2017).

Daniel Isenberg adopted and popularised the concept (Isenberg, 2010; 2011). It is now one of the most commonly referred to approaches in entrepreneurship development because, on the surface, it offers a new approach to addressing and fostering growth-oriented entrepreneurship (Brown & Mason, 2017; Isenberg, 2016).

Isenberg's approach to understanding the entrepreneurship ecosystem (Isenberg, 2010; 2011; 2014; 2016) has been extensively incorporated into policy and practice all over the world (Brown and Mason, 2017), including at entrepreneurship foundations such as the Ewing Marion Kaufmann Foundation (Auerswald, 2015), and in benchmark studies such as *Global Entrepreneurship Monitor* (Global Entrepreneurship Monitor, 2017; Herrington, Kew & Mwanga, 2017) and *The Global Startup Ecosystem Report* (StartUp Genome, 2017).

The main principle of the entrepreneurship ecosystem approach is the interaction between six interdependent elements, each essential for entrepreneurship but insufficient to sustain it on its own (Isenberg, 2011). The elements are:

- enabling policies and leadership
- finance
- an encouraging culture
- institutional and infrastructural support
- human capital
- markets (Isenberg, 2011).

The rapid adoption of the entrepreneurial ecosystem approach has led to its meaning drifting in its application, so that it has come to imply formal, intentional mechanisms, such as co-working spaces and business incubators (Isenberg, 2014; 2016; Brown & Mason, 2017). Isenberg himself notes that these types of structures may be helpful, but that there is little empirical evidence internationally supporting the necessity of incubation as part of an entrepreneurial ecosystem (Isenberg, 2014). He does, however, stress the importance of geographic clustering of high growth and high potential ventures with universities and support institutions for entrepreneurship such as vocational training, suppliers, consulting firms and professional associations (Isenberg, 2010).

Myths that grew as the concept was adopted suggested that the ecosystem is necessarily about start-ups, that large companies stultify entrepreneurship and that the views of entrepreneurs themselves are paramount (Isenberg, 2014; 2016). Isenberg counters that none of this is true. Large companies provide markets and flows of talented people. Entrepreneurs almost always perceive their own challenges to be around access to talent, finance and excessive bureaucracy, whereas markets or financiers may view their challenges very differently (Brown & Mason, 2017; Isenberg 2014; 2016).

In the absence of an exact formula, Isenberg offers key principles that he believes leaders should follow for creating an entrepreneurial ecosystem (Isenberg, 2010).

First, countries need to shape their ecosystems around their own conditions rather than seek to emulate Silicon Valley. Isenberg's examples of Chile and Rwanda illustrate this (Isenberg, 2010). Both countries developed ecosystems around key industries, coffee, tea and tourism in Rwanda, and fishing in Chile. Thailand, Iceland, New Zealand and Israel developed their ecosystems around human capital (Isenberg, 2010).

Second, Isenberg (2010) advocates ongoing engagement with the private sector. Governments cannot build ecosystems by themselves and require the motivation of the private sector to develop self-sustaining markets. Third, governments should favour high-potential entrepreneurs rather than spreading resources too thinly, and should expose them to the rigours of the market by not flooding them with easy money (Isenberg, 2010). Fourth, with an encouraging culture as a key component of an entrepreneurial ecosystem, governments should address cultural change with regards to attitudes towards entrepreneurs by celebrating success and tolerating failure. Finally, Isenberg believes that governments should support clusters that grow organically rather than over-engineer them (Isenberg, 2010).

Four factors drive divergent views on the ecosystem approach's effectiveness. These are its exclusion of the informal sector, overlooking the different types of entrepreneurs existing in an economy, the difficulties associated with creating an ecosystem, and measuring the number of interacting dimensions which, together, are greater than the sum of its parts. The heterogeneity of actors, scale and focus of those making up the ecosystem make it difficult to determine which approach to policy making may be most useful in improving entrepreneurial ecosystem performance (Acs, Stam & Audretsch, 2017; Brown & Mason, 2017). Exclusion of the informal sector in a developing country like South Africa is significant. Assumed spillover from high growth enterprises is unlikely to be sufficient on its own to include marginalised entrepreneurs. Isenberg himself acknowledges that where there is a large informal economy, the notion of large-scale entrepreneurial activity of the high growth type is misconceived (Isenberg, 2011).

Brown and Mason's suggestion that each segment has its own ecosystem appears more appropriate (Brown & Mason, 2017), especially in the light of how how performance of ecosystems is measured. For Acs, Stam and Audretsch (2017), the most identifiable measure of an entrepreneurship ecosystem's success is in the number of high impact "unicorn" ventures, those valued at over $1b, emerge from them. While so few actually do this, it does not mean that they have unhealthy ecosystems. They offer an alternate view, that suggests that performance may be better measured in how well the ecosystem enables broader exploration of knowledge frontiers (Acs, Stam & Audretsch, 2017). Brown & Mason's critical analysis of the entrepreneurial ecosystem approach supports many of Isenberg's ideas but adds a new typology that differentiates between embryonic and scale-up ecosystems that may shed light on possible applications of the metaphor in South Africa. Embryonic ecosystems are typically characterised by modest levels of growth-oriented entrepreneurship, limited numbers of start-ups and weak integration with other actors in the system (Brown & Mason, 2017).

A paucity of academic literature on a South African entrepreneurial ecosystem suggests that the approach has not been wholly embraced, although pockets of entrepreneurship development have tried to set ecosystems of their own, as this research will show. This review does not assess whether or not Isenberg's entrepreneurial ecosystem is applicable to the South African situation, but notes a gap in the academic literature of studies that do this.

2.4 The multi-disciplinary nature of entrepreneurship

Entrepreneurship affects most aspects of economic and social behaviour (Casson, Yeung, Basu & Wadeson, 2006), with no single theory or discipline fully explaining it (Casson et al., 2006; King & McGrath, 1999; Ricketts, 2006). In 1971, Kilby compared explanations for the source of entrepreneurial performance in developing countries to hunting the Heffalump in *Winnie-the-Pooh*[2] (Kilby,1971; 2003). Nobody

[2]A series of fictional children's stories about Winnie-the-Pooh by A.A. Milne

quite knows what a Heffalump is, so the hunters draw from their own disciplines and claim to have captured its major determinants (Kilby, 2003).

In constructing a theoretical framework for this study, this section focuses on the main theories that cut across disciplines and are described in the literature; and it evaluates their contribution to the argument that is advanced in this research.

2.4.1 Economic theories

Mainstream economic theories seek to explain entrepreneurship in relation to either creating opportunities and innovation (Schumpeter, 1934) or exploiting them (Drucker, 1985; Kirzner; 1973, Shane, 2003). In his theories on entrepreneurship and economic growth in advanced societies, Schumpeter focused on new products, new technologies and creative destruction. For Schumpeter, creative destruction meant that innovations render moribund what precedes them (Schumpeter, 1934).

Foss and Klein (2017) offer a middle ground on the debates in the management literature between the individual/opportunity nexus, as espoused by Shane and Venkataraman (2000) and Shane (2003) on the one hand, and the view of entrepreneurship as creation, as advocated by Alvarez and Barney (2007), on the other hand (Foss & Klein, 2017). Foss and Klein believe that opportunities for entrepreneurial profit do not exist objectively waiting to be discovered, but neither are they created at will. They see opportunity more as a metaphor for an entrepreneur's beliefs and judgements about an uncertain future. There may be objective indications of opportunities that require interpretation, such as market research, but these also require resource commitments in order to achieve them, which can then only be measured after the fact. At the same time, they argue that entrepreneurship is a creative process, but entrepreneurs try to create new firms, products or markets, not opportunities (Foss & Klein, 2017).

Although these theories were formulated for developed countries, changes in the world are making the boundaries between the developed and developing world more permeable in terms of their application. Emerging modernising economies compete globally, while at the same time contend with large levels of informal sector activity.

South Africa is a striking example and is clearly not immune to the massive changes unfolding in every aspect of society, in particular in the organisation of work, as new technological-based businesses replace labour-absorbing ones.

In the context of the technological revolutions driving change in contemporary society, Schumpeterian entrepreneurship, which stresses creativity and reinvention (Schumpeter, 1934) requires increasing levels of specialisation (Piketty, 2014) and know-how (Hausmann, 2014). The Schumpeterian paradigm stresses that long-term growth is primarily generated by innovations, which result from entrepreneurial investments responding to economic incentives, and replace old technologies (Aghion, 2017). In offering a modern iteration of this paradigm, Aghion addresses Piketty's (2014) concerns with inequality and social mobility (Aghion, 2017). For Aghion, the causal link between innovation and extreme inequality is temporary, and can generate social mobility. The challenge, however, is to understand and address the extent to which society provides equal opportunities to participate. If innovation-led growth is inclusive, and does not exclude individuals based on social origin, it can promote social mobility (Aghion, 2017).

The types of businesses supported at the Maxum Incubator, one of the cases studied in this research, could be considered Schumpeterian, in that they are innovative in their development of new ideas and products.

2.4.2 Non-economic theories

Diverging from traditional economic theories are psychological, historical, anthropological and sociological theories of entrepreneurship. They emphasise the influence of non-economic factors such as social norms and beliefs and psychological motivation (Berger, 1991). The complex, intimate relationship between entrepreneurs and their businesses, through significant investment of personal, emotional and financial exposure, especially at the early stages, makes psychological theories of entrepreneurship compelling (Cope, 2003). Such theories focus on either the personal attributes of an entrepreneur (traits theory) or on how they think and make decisions (cognitive aspects) (Wadeson, 2006).

Challenges to the personality traits approach stem from the assumption that individuals have inherent, enduring personality characteristics that predispose them to entrepreneurial activity (Cope, 2005a). Cope argues that acceptance of inherent entrepreneurial traits precludes the possibilities of learning, developing and changing (Cope, 2005a). His analysis contributes to the framework for interpreting the results used in this research, which assumes that enterprise development support programmes can assist entrepreneurs in learning, developing and changing (Cope, 2005a).

Perceived self-efficacy, a cognitive theory, has been found to affect business strategies and performance positively (Wadeson, 2006; Urban, 2006) and has been used as a theoretical framework in some studies on entrepreneurship in South Africa (Cline, 2012; Mureithi, 2010; Stevens, 2013). Critics of this theory maintain that the correlation between self-efficacy and competence is imperfect and often overstated, and may lead to over-optimism and escalating commitment to a failing course of action, such as starting or continuing with a business based on incorrect assumptions (Wadeson, 2006). Capable people can perceive themselves as having poor self-efficacy, and vice versa (Wadeson, 2006).

Although this study does not use self-efficacy as a theory to describe how youth entrepreneurship programmes help young people with their businesses, it does accept the cognitive dimension of change that needs to happen, applying it instead to it an adult learning theory, transformative learning.

2.4.3 A cultural theory

Entrepreneurial culture, in the sense of how society views and supports entrepreneurs and tolerates failure, is a key element of Isenberg's entrepreneurial ecosystem (Isenberg, 2011). Mazonde and Carmichael's study on the effects of culture on female entrepreneurs in Zimbabwe (Mazonde & Carmichael, 2016), affirms the importance of traditions and social relationships in supporting or hindering entrepreneurial success.

Arguing for a cultural dimension in the analysis of entrepreneurship, Berger (1991) maintains that such an approach can both accommodate a variety of other approaches and explore the relationship between culture and entrepreneurship theory in developing countries that have not yet developed an entrepreneurial tradition. Godsell's assessment of the interplay between cultural traditions supportive of entrepreneurship and external political realities among Indian, black and Afrikaans entrepreneurs in South Africa under apartheid (Godsell, 1991) can illuminate current developments in entrepreneurship and how entrepreneurship is viewed.

For this reason, Godsell's (1991) exposition of different types of ethnic and cultural networks bears examination. The ethnic, religious and family traditions of the Indian community under apartheid resulted in positive perceptions of entrepreneurs and of the community assistance given to them. The community offered help and individuals were expected to use this to get a head start and, in turn, give back to others. This internal cohesion allowed Indian entrepreneurs to succeed despite an environment hostile to them. Networks used by Indian entrepreneurs were organic, supportive and usually unconscious (Godsell, 1991).

Neither black nor Afrikaans entrepreneurs under apartheid were able to draw on such organic networks in support of their businesses (Godsell, 1991). Although substantial networks for welfare and social help existed in black communities, they did not translate into business assistance at that time (Godsell, 1991). Both black and Afrikaans communities harboured negative views of entrepreneurs, usually as exploitative or corrupt in some way. Business did not enjoy a high status and there was no religious justification for supporting them, as was the case with Muslim Indian businesses (Godsell, 1991).

Black entrepreneurs who succeeded did so despite a hostile environment and a lack of community assistance, while Afrikaans entrepreneurs lacked community assistance but were favoured by the environment (Godsell, 1991). In contrast to Indian businesses, the involvement of family and community in black entrepreneurs' businesses was largely driven by their needs for employment or for donations to political activity, rather than by the resources they offered. In the absence of

supportive organic networks, the networks created were strategic, consciously developed for a single purpose, and usually operated at a high level rather than at the level of typical township businesses (Godsell, 1991).

In the 1930s, the lack of a broad cultural acceptance of entrepreneurship meant that when the government of that time introduced efforts to empower Afrikaners, entrepreneurship was steered by leaders who were strong role-models in large organisations, rather than in widespread small businesses (Godsell, 1991). Certain criticisms of B-BBEE policies echo these arguments: that beneficiaries are mainly elites, not small businesses on a broader scale (Hiam, Eshgi & Eshgi, 2017).

While cultural dimensions of entrepreneurship are important for this research, they are not the main lens through which entrepreneurship development is viewed. Godsell's final question, however, is a key one that has not yet been answered in the literature. The question is whether the growing numbers of successful black entrepreneurs will contribute to a heightened respect for the role and resources of individuals in their communities, or whether the pressures towards group conformity will narrow an individual's space and limit their growth and influences (Godsell, 1991). This study attempts to answer a related question, which is whether entrepreneurship development programmes for young people can help entrepreneurs to recognise and overcome aspects of their culture that push them towards conformity.

2.4.4 A learning theory

In introducing a learning perspective to entrepreneurship, Cope and Watts (2000) and Cope (2003; 2005a) build on the dominant economic and psychological theories described above. While there is little evidence that entrepreneurial abilities are inherited (Casson et al., 2006), it is clear that some learning must take place for successful business owners who often lack a full complement of knowledge and skills when they begin (Cope, 2005a).

Cope emphasises change and learning in start-up and business activity; understanding how entrepreneurs learn becomes as important as what they learn

(Cope, 2005a). Cope (2003, 2005a) draws on adult learning, individual learning and management theories to address what he sees as key features of entrepreneurial learning. Entrepreneurs learn from habitual, routinised activities, from specific learning events, and from the interaction between reflection, learning and action. They happen throughout the life-cycle of a business, not only at the start-up phase (Cope, 2003; 2005a).

Figure 1 below outlines Cope's conceptual framework for entrepreneurial learning (Pittaway & Thorpe, 2012), which distinguishes higher from lower levels of learning. The framework shows how lower forms of learning combine with critical reflection to achieve higher forms (Cope, 2003; 2005a; Pittaway & Thorpe, 2012).

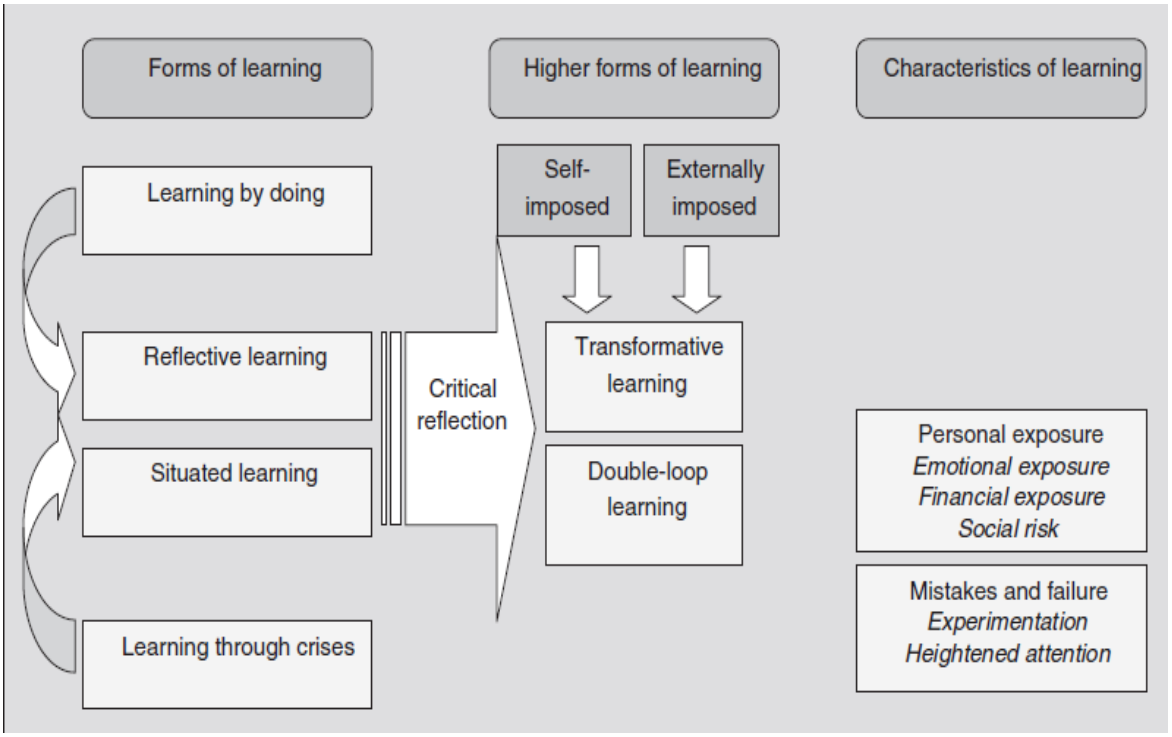


Figure 1: Cope's conceptual framework for entrepreneurial learning
Source: Pittaway & Thorpe, 2012.

Blocks on the left-hand side of the diagram indicate the forms of learning and refer to lower levels of learning that allow entrepreneurs to address practical and concrete challenges in their business (Cope & Watts, 2000; Cope, 2005a; Pittaway & Thorpe, 2012). These are learning by doing, situated learning, reflective learning and learning as a result of crises.

Learning by doing is also called adaptive or experiential learning (Cope & Watts, 2000; Cope, 2005a; Pittaway & Thorpe, 2012). Situated learning, which is Cope's application of learning by doing to a social context (Cope; 2005a) is reminiscent of adult education theories of situated cognition (Hansman, 2001) and contextualised meaning making, which involve constructing knowledge in distinctive settings (Zepke & Leach, 2002). These theories imply that learning in context is dependent on the interaction and intersection of people, tools and context within a learning situation (Hansman, 2001; Merriam & Caffarella, 1999; Zepke & Leach, 2002).

More holistic challenges require higher forms of learning, which are double-loop learning and transformative learning (Cope & Watts, 2000). Cope differentiates double-loop learning from transformative learning by the dimensions in which they take place. Double-loop learning happens in the organisational dimension, leading to a renewed understanding of organisational processes. Transformative learning takes place in the personal dimension and has the capacity to trigger changes in an entrepreneur's self-understanding (Cope, 2003).

Higher levels of learning involve an alteration of the beliefs, viewpoints and perspectives that shape an individual's view of the world and impact on the effectiveness of what they do. This kind of learning occurs when entrepreneurs face non-routine situations or crises, and their learned responses and habitual ways of behaving seem ineffectual (Cope & Watts, 2000, p.106). This, in turn, triggers a higher level of learning (Marsick & Watkins, 1990).

Changes in perspective, found prominently in Mezirow's theories of transformative learning (Mezirow, 1983, 1991, 1997) form the basis for learning from critical incidents, which act as important triggers for entrepreneurial learning (Cope, 2005a). These higher levels take place in the personal dimension and are therefore transformative. In including characteristics of learning on the right-hand side of the diagram, Cope recognises the intricate relationship between personal exposure and business performance (Cope, 2003).

Although Cope expanded on and developed this framework in his later research (Cope, 2005a) to include notions of generative learning and entrepreneurial preparedness, illuminated by Pittaway & Thorpe in their tribute to Cope's work on entrepreneurial learning (Pittaway & Thorpe, 2012), those later additions are not applicable to this particular framework.

In selecting transformative learning as the predominant learning theory with which to examine entrepreneurship development for young people, this study acknowledges the combined role that experiential learning, incidental learning and situated cognition play (Pittaway & Thorpe, 2012). The main reference point for analytical purposes will, however, be transformative learning. On the basis of my research findings I will argue that entrepreneurship is essentially a personal journey, and adapting to the demands and conditions of entrepreneurship requires a deep personal transition or shift in mindset.

2.5 Transformative learning

2.5.1 Introduction

Transformative learning, used interchangeably in the literature with transformational learning, has become the dominant theory of adult education, since it was first articulated by Mezirow as perspective transformation in 1981 (Taylor, 2017; Merriam & Bierema, 2014; Hoggan, 2016). In its simplest terms, "transformational learning shapes people; they are different afterwards, in ways both they and others can recognise" (Clark, 1993, p.47).

Widespread adoption of transformative learning has had positive and negative consequences. On the positive side, it offers a detailed theoretical foundation for adult learning (Hoggan, 2016), which traditionally borrows theories from other disciplines such as psychology and sociology. In this respect, it is not unlike entrepreneurship. On the negative side, perhaps because of its popularity, it has strayed from its theoretical foundations and been used to refer to almost any kind of learning (Newman, 2012).

Overviews on transformative learning theory (Cranton, 2002; Hoggan, 2016; Merriam & Bierema, 2014; Taylor, 2017) offer different organising systems for understanding it. This review first considers Mezirow's original conception of the theory, and then challenges to his approach and to the theory as a whole. Following Gunnlaugson's (2008) suggestion of two different waves of transformative learning approaches, the review then examines how Illeris (2014) incorporates some of the criticisms in order to extend the theory and relate transformative learning to identity. Finally, assessments are drawn from the literature on how to identify its markers and evaluate transformative learning.

2.5.2 Mezirow's theory of transformative learning

Theories in the adult education canon based on changes in consciousness look beyond the perspectives of adult characteristics, social roles, responsibilities and experiences, and provide the opportunity to reflect on the content of one's environment and experiences in it (Merriam & Cafarella, 1999). Mezirow's notion of transformative learning is one of them (Mezirow, 1983; 1991; 1997; 2006). Another is Paulo Freire's problem-posing education (Freire, 1970), which sees radical social change as a necessary corollary to critical reflection (Freire, 1970; Merriam & Cafarella, 1999).

Mezirow draws from a variety of sources, including Freire and the German philosopher Jurgen Habermas (Cranton, 2002; Mezirow, 2009). Mezirow applied Habermas' theory of knowledge to adult education (Mezirow 1981; 1991; 1997; 2006). Habermas divided knowledge into three domains: the instrumental, the communicative and the emancipatory (Mezirow 1981; 1991). The instrumental domain involves action to control or manipulate the environment, such as the analytical sciences and workplace learning. The communicative domain necessitates social interaction, as in the social sciences. The emancipatory domain involves interest in self-reflection and self-knowledge and is the most distinctive domain in adult learning (Mezirow, 1983).

For Mezirow, the concept of emancipatory action is synonymous with transformative learning, the learning process through which adults come to recognise their culturally

induced dependency roles and relationships and the reasons for them, and take action to overcome them (Mezirow, 1983; 2006).

Emancipatory learning is also essential in the instrumental domain, particularly in the light of economic changes and new ways of working, in which traditional techniques used to acquire technical competence do not necessarily generate the skills and competencies required for autonomous learning (Mezirow, 1997; 2006). Mezirow maintains that work in the more technologically sophisticated twenty-first century is increasingly abstract and depends on understanding and manipulating information rather than simply on acquiring it. New forms of skills and knowledge are required, which can only occur through transformative learning (Mezirow, 1997; 2006).

In Mezirow's theory, transformative learning is defined as "the process by which we transform problematic frames of reference (mindsets, habits of mind, meaning perspectives) – sets of assumptions and expectations – to make them more inclusive, discriminating, open, reflective and emotionally able to change" (Mezirow, 2009, p.92). Frames of reference are acquired structures of culture and meaning, or assumptions, which shape and delimit our perceptions, cognition and feelings. Once set, people have a strong tendency to reject ideas that do not fit in with these preconceptions (Mezirow, 2009). Transformative learning involves a paradigm shift, and entails the revision of a frame of reference in concert with reflection on experience (Taylor, 2017).

Mezirow offers two possible paths to transformative learning (Mezirow, 1983). The first is through sudden insights into the assumptions that have limited or distorted understanding of the self and one's relationships. Cope's emphasis on critical incidents, or crises, and the relationship between reflection, learning and action as a basis of entrepreneurial learning, draws on this path (Cope, 2005a). The second path is a more gradual movement towards revising specific assumptions. Cope and Watts (2000) argue that more learning happens from critical incidents than from the second path.

2.5.3 Challenges to Mezirow and transformative learning

Major early criticisms levelled at Mezirow's approach are that there is an over-emphasis on the rational nature of his theory (Dirkx, 1997) and that his theories do not advocate social change, despite drawing on theorists like Freire and Habermas, who operate within a critical theory tradition (Brookfield, 1991; 2012). Mezirow addressed these in later writings (Mezirow, 2009). He acknowledged the first criticism, recognising that emotions, intuition, context and relationships play a part in transformative learning and that greater insight into the role of the imagination is required (Mezirow, 2009). Although maintaining the primacy of the rational, cognitive dimension (Mezirow, 2009), he refined his approach to distinguish between learning that takes place outside of awareness, or incidentally, and within awareness (Dirkx and Mezirow, 2009).

In response to criticism that transformative learning does not lead to social change, Mezirow maintains that change takes different forms, it can be knowledge-related, or psychological, but it is ultimately the learner's responsibility to effect it, not the educator's (Mezirow, 2009). If the primary responsibility of educators is to think politically, the lines between transformative learning and indoctrination become blurred. Mezirow is wary of locating transformative learning solely in the critical theory tradition, which he believes does not invite any critical assessment of its own assumptions (Mezirow, 2009). For Mezirow (2006), transformative learning is essentially a meta-cognitive process of reassessing reasons for supporting problematic meaning perspectives. Limiting its application exclusively to social change and contextual issues "is ultimately self-defeating" (Mezirow, 2009, p.104).

Broader, later, criticisms of transformative learning as a theory are primarily concerned with conceptual uncertainty about what it is and is not, and what gets transformed through the process (Illeris, 2014; Merriam & Bierema, 2014). This conceptual uncertainty, if unresolved, decreases the value and usefulness of the theory (Hoggan, 2016).

Newman (2012) offers the most serious challenge to the theory, questioning whether it really is a different kind of learning, or just good learning. Flaws include the lack of clear boundaries for transformative learning (Newman, 2012). Newman also points out that changed behaviour is not necessarily the result of transformative learning (Newman, 2012; Cranton & Kasl, 2012). Kegan (2009) questions what, exactly, was being transformed by transformative learning.

The criticism of Newman and others has contributed to greater clarification of aspects of the theory (Merriam & Bierema, 2014). In support of transformative learning as a theory, Cranton & Kasl (2012) maintain that Newman's views are primarily a response to Mezirow's theories, which he revised, and do not take other theories, subsequent to Mezirow's, into account.

Despite Newman's challenges, transformative learning remains an attractive theory to educators and researchers, and has applications to this research, since it explains how changes take place in the way people see the world (Merriam & Bierema, 2014).

2.5.4 Transformative learning as identity

Illeris (2014) broadens the definition of transformative learning to relate to identity in a time of liquid modernity (Bauman, 2000). He draws on Mezirow's theories and the challenges to them, which offer alternative conceptions of transformative learning. He combines these with Erikson's psychological theories of identity (Erikson, 1968) and Bauman's sociological theory of liquid modernity (Illeris, 2014). Illeris was influenced by the psycho-analytic approach to transformative learning (Cranton, 2002; Dirkx, 1997) derived from Jung's theories of analytical psychology, which include understandings of the process of individuation, and involve arriving at an understanding of the self by reflecting on the psychic structures that make up an individual (Taylor, 2017). This leads him to include the more emotional and contextual aspects of transformative learning to his definition, in addition to Mezirow's meaning perspectives, frames of references and habits of mind (Illeris, 2014).

Illeris outlines the structure of an individual's identity as concentric layers situated around a core (Illeris, 2014). Figure 2, below, illustrates Illeris's three levels of identity (Illeris, 2014), and their relation to Mezirow's meaning schemes and meaning perspectives (Mezirow, 2009).

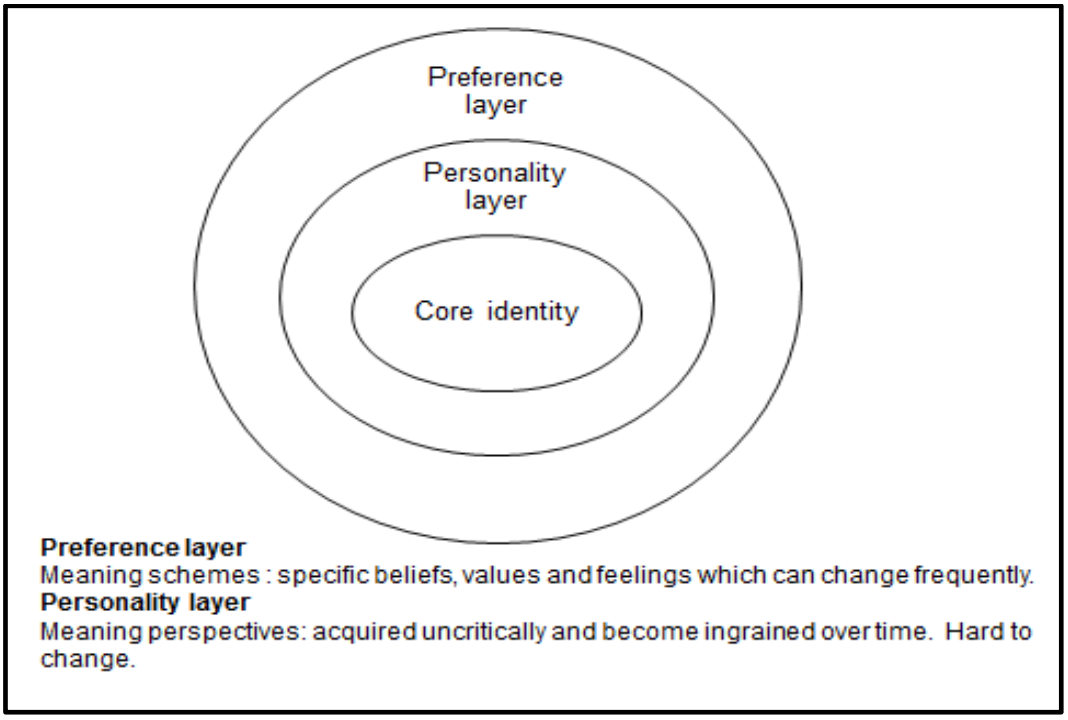


Figure 2: The structure of identity in relation to transformative learning

Source: Adapted from Illeris, 2014, p.156.

The core identity is what people develop and try to maintain in spite of tendencies towards instability and fragmentation. This core is usually fully developed around the age of fifteen (Illeris, 2014).

Personality and preference, respectively, are the two layers situated outside of the core identity. The personality layer is how an individual relates to the outside world, to society and the environment, rather than to the self of the core identity. Illeris differentiates between Mezirow's meaning perspectives and frames of reference, which are usually found in the layer of personality, with meaning schemes found in the layer of preference (Illeris, 2014).

The proximity of the change to the core identity influences the inclination to make changes. The outer layer, or preference layer, is the most peripheral. An individual is usually willing to make changes in the layer of personality if there are good reasons to do so (Illeris, 2014). The closer to the core, the greater the transformation required. Changes are not only dependent on what individuals feel and think, but on whether the energy and commitment to change can be mobilised (Illeris, 2014). In the context of liquid modernity in the world with its rapid and constant changes, (Bauman, 2000), Illeris argues that individuals need to make choices about behaviour, lifestyle and identity with increasing frequency (Illeris, 2014).

By relating transformative learning to changes in identity, Illeris (2014) enriches the understanding of transformative learning and enables a better understanding of what is transformed (Kegan, 2009), thereby addressing questions on its boundaries and targets (Illeris, 2014; Merriam & Bierema, 2014). It also provides a framework for understanding the changes entrepreneurs experience as a result of what they learn from the programmes studied.

2.5.5 Evaluating transformative learning

By its nature, transformative learning is difficult to capture, plan for, or evaluate (Merriam & Bierema, 2014). Knowledge gained from instrumental and communicative learning is measurable, while knowledge gained from transformative learning is emancipatory and empowering, since it is gained from critical reflection and challenges to the status quo (Merriam & Bierema, 2014). Measurement is more difficult. The most common method used is the in-depth interview, in which learners are asked to tell their stories of change (Merriam & Bierema, 2014).

Typical markers of transformative learning are critical reflection and dialogue, discourse or social interaction (Merriam & Bierema, 2014). For students, educators model for and enable students to examine and critically assess their assumptions about themselves, the world and their place in it (Merriam & Bierema, 2014). Conformity with Mezirow's steps for the transformative learning process (Mezirow, 2009; Merriam and Bierema, 2014) also indicates transformative learning.

Although most adult educators value transformative learning, it is not usually their primary goal, but the outcome of something else learned (Merriam & Bierema, 2014). All educators can do is to create the space and conditions for transformative learning to take place. This is certainly the case in entrepreneurial learning.

Most studies on transformative learning are conducted in institutions of higher education (Taylor, 2017; Merriam and Bierema, 2014). Studies linking transformative learning and entrepreneurship look primarily at entrepreneurship programmes at universities (Cope, 2003; Pittaway & Cope, 2007; Pittaway & Thorpe, 2012) in developed countries. This research attempts to fill the gap in understanding transformative learning in entrepreneurship development outside of those contexts.

2.5.6 Transformative learning and youth

Although theories of transformative learning are prominent in the adult education discipline, they are also applicable to youth entrepreneurs who are undertaking adult responsibilities in running businesses. Transformative learning cannot happen in childhood, when an individual's core identity is being established (Illeris, 2014). Identity development in youth, however, from around the age of thirteen, is of considerable relevance to the individual possibilities of transformative learning, leading to more consistent and thinking behaviour (Illeris, 2014). Illeris notes that in developmental terms, the psychological age of youth is terminated in the early twenties (Illeris, 2014). Extended definitions of youth, as applied in South Africa to the age of 35, make transformative learning even more pertinent, as the habits people acquire through their upbringing and culture can be even more difficult to change than they would be in their early twenties.

2.6 Liquid modernity

The concept of liquid modernity (Bauman, 2000) provides a context for entrepreneurship and transformative learning in this study. Liquid modernity is a metaphor for a contemporary society that has no fixed form or shape, and that undergoes continuous, rapidly increasing changes, embracing impermanence and changing personal relationships (Bauman, 2000).

Liquid modernity emerged from what Bauman perceived as a symbiotic relationship between modernism and postmodernism (Elliot, 2007a). Just as postmodernism critiqued the dominant power relations of modernism, Bauman felt that it was unable to do the same self-critique and question the shifting sands of its own foundations, especially in relation to moral relativism (Bauman, 2007b).

Bauman argued that as much modernity exists in the twenty-first century as in the twentieth, but that trends of deregulation and privatisation of modern tasks and values place a much greater burden on individuals, with little responsibility for public space. He uses a campsite as an analogy, open to anyone with a caravan who can pay the rent, but who may have no interest in how the public space of the campsite is run (Bauman, 2007b). Society follows the campsite model, rooted in "a profound transformation of the public space and, more generally, in the fashion in which modern society works and self-perpetuates" (Bauman, 2007b, p. 20).

In using the metaphor of solids and liquids to describe modernity, Bauman differentiates between heavy and light modernity (Bauman, 2007a). Heavy modernity is solid, and is revealed in large factories like Ford and General Motors, which occupy enormous space and have some social compact with employees, almost like a marriage. They represent the era of hardware, with capital and labour locked together, resulting in much conflict, but also in mutual accommodation. Revolutions and the welfare state were both unavoidable outcomes of their inability to disengage (Bauman, 2007a). Because hard modernity occupied space, time was irrelevant.

Software capitalism, the third industrial revolution, ushered in the era of light modernity. Capital is no longer locked together with labour, and is free to move and find new partners elsewhere, unilaterally breaking its dependence on labour. Labour's bulkiness and size, assets in heavy modernity's hardware, become liabilities, so that it cannot move quickly. Light modernity is liquid, and time matters far more than space or shape (Bauman, 2007a).

The result for labour has been a disembodiment and growing casualisation, as capital prizes buoyancy above all, throwing overboard all the non-vital elements. This

downsizing has affected workers and management alike (Bauman, 2007a). The impact of liquid modernity has been felt in business cycles, employment patterns, political horizons, family relations and communal life (Elliot, 2007b).

Bauman compares Rockefeller, the oil entrepreneur, with Bill Gates, founder of Microsoft, to illustrate the transition from heavy to light modernity (Bauman, 2007a). Rockefeller wanted to own things such as oil rigs, railroads and machinery. Bill Gates is willing to destroy what he has made, given the demands of the situation.

In liquid modernity, the most elusive and free to move are the most powerful, often supplanting the authority of the nation state. Those who cannot move from their place at all are ruled (Bauman, 2007a). Bauman sums up the challenge presented by liquid modernity:

> The advent of instantaneity ushers human culture and ethics into an unmapped and unexplored territory where most of the learned habits of coping with life have lost their utility and sense (Bauman, 2007a, p.44).

Societies respond to liquid modernity in different ways. One is through the increasing primacy of the individual and growing liquefaction, while another is through a return to cultural identity and values (Elliot, 2007a). In an extreme form, religious fundamentalism is another response. New ways of learning, which recognise what has been acquired uncritically, are a key to navigating liquid modernity. Transformative learning is one of these ways.

Critics of liquid modernity point to its exaggerated influence (Elliot, 2007b; Ray, 2007). The world, where geographical distance is eradicated by globalisation and telecommunication, is not only flat (Brown & Mason, 2017). Many people, especially in developing countries, are locked out of the new political economy of liquid modernity (Elliot, 2007b). Elliot argues that liquid modernity does not account for how people form certain social bonds that may transcend changing conditions and that it takes surface experiences of contemporary society at face value (Elliot, 2007b).

Despite such criticism, the notion of liquid modernity is apposite in a time of great changes in societies because of the interconnectedness of the world resulting from technology and its impact on economic life (Bloem et al., 2014; Schwab, 2016). The growing casualisation of labour, a characteristic of liquid modernity (Bauman, 2007a), is one of the causes of widespread youth unemployment. Growing gaps between those with access to technology and know-how (Hausmann, 2016), in both developed and developing countries, and between different types of entrepreneur in developing countries (Hausmann, 2016), support the relevance of the concept of liquid modernity for contemporary entrepreneurship, globally and in South Africa. Entrepreneurship development in this context needs to be seen as a way of helping young people engage in this world, rather than preparing them for an economy that no longer exists (Naudé, 2017).

For Illeris (2014), transformative learning in relation to identity is not about being able to shift all the time, but to engender a better understanding of an individual's identity in terms of their assumptions and values in order to adapt. A renewed identity emerging from transformative learning can also be a defence against being overwhelmed by constant change (Illeris, 2014).

2.7 The theoretical framework

The evolution of transformative learning as the main theoretical framework for understanding youth entrepreneurship in this study, and the contributions of other theories towards this evolution, are shown in Figure 3 below.

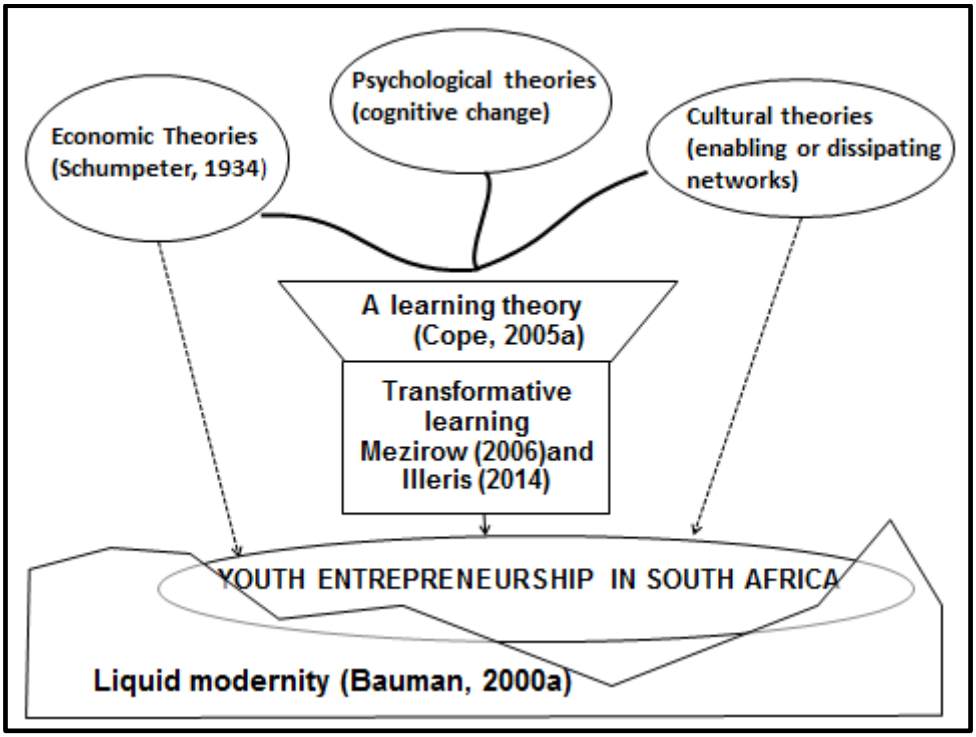


Figure 3: Theoretical framework

Rapid technological changes, with the growing dominance of hi-tech and knowledge-based economies, appear to reflect Schumpeter's views (Schumpeter, 1934) that businesses ultimately fail as new products and technologies replace them (Bloem et al., 2014; Schwab, 2016). These changes create opportunities for people with know-how (Hausmann, 2016), especially young people with the right combination of energy, education, technological skills, human and social capital and appropriate attitudes to enter into that world. Risk-taking, innovation and flexibility characterise small enterprises that succeed in this environment (Naudé, 2017).The economic theories put forward have some relevance for them.

A cultural perspective on entrepreneurship adds to an understanding of the kinds of changes young entrepreneurs in South Africa need to undergo. Successful entrepreneurs need to find ways to negotiate and manage the pressures to conform with prevailing cultural norms which may not be supportive of an entrepreneur's individual journey (Godsell, 1991). Transformative learning can play a role in the journey young entrepreneurs make in understanding how they acquire certain cultural norms and practices, in order to break away from them.

Transformative learning is an appropriate learning approach for youth entrepreneurs, but involves more than simply training on particular issues. Young adulthood is a critical developmental phase during which change can take place. In late adolescence and early adulthood, a person can start to recognise cultural structures that influence thoughts and actions and begin theorising about alternatives (Mezirow, 2009).

In this research, the application of a theory of transformative learning (Mezirow, 2009) in relation to identity at a time of liquid modernity (Illeris 2014) is a means to understand the elements of one's identity which may have their roots in the way people are brought up or in their cultural practices, which hinder them from adapting to changes and moving forward (Mezirow, 2009; Illeris, 2014). All entrepreneurs, and especially young ones, are learning and running their businesses in a rapidly changing environment (Bauman, 2000, Cope, 2005a), and need to be able to adapt their practices and be flexible, as well as understand what holds them back, and integrate this understanding into new ways of doing things (Illeris, 2014). Transformative learning for entrepreneurs is ultimately about their being able to learn and think and do things differently (Cope, 2005a).

Based on these ideas, the most valuable learning processes for young entrepreneurs are those that encourage autonomous learning or help to change the way young people think or perceive of the world. This research uses transformative learning as a framework for understanding how enterprise development support can assist young people to develop a mindset that helps them grow and sustain their business activities, or develop skills that will help them to find a job.

If Stern's vision of a development strategy for growth is to enable the inclusion and participation of poor people so that they can make choices (Stern et al., 2005), a transformative learning perspective on entrepreneurship can play a role helping them to do so.

Chapter 3 Methodology

3.1 Introduction

Having addressed the epistemic dimension of the research through the literature review and theoretical framework (Merriam & Tisdell, 2016) the study now turns to the methodological dimension, which describes how the research goals were reached (Mouton, 1996).

In relation to this research, Mouton's three levels of the methodological dimension, the research paradigm, research methods and research techniques (Mouton, 1996) are addressed in turn.

3.2 Philosophical premise and research paradigm

This research follows a constructivist approach located within an interpretive social science (ISS) tradition (Merriam & Tisdell, 2016; Denzin & Lincoln, 2011). The basic premise of this approach is that reality is socially constructed (Merriam & Tisdell, 2016; Neuman, 2011). Multiple interpretations of reality need to be described, understood and interpreted in their particular context (Merriam & Tisdell, 2016; Mouton, 1996; Neuman, 2011).

A qualitative research paradigm derived from that approach was used to gain a deeper understanding, and build a theory of how young people, and the programmes that support them, can learn to overcome difficulties and optimise opportunities to create sustainable businesses. It relates in-depth descriptions of personal experiences and factors affecting youth enterprise development in the overall context of their lived environment.

This research does not seek to simply explain why youth enterprises are not generally successful, or test a particular hypothesis about what makes a youth enterprise successful. Those questions can be answered with a quantitative approach derived from a positivist view of the world. Neither does it adopt a critical social science approach, which goes beyond uncovering of people's interpretations

of their world and looks at the prevailing social structure so that it can change, emancipate or empower (Merriam & Tisdell, 2016). A critical social science approach might, for example, have followed Freire's theory of social action (Freire, 1970) and questioned whether enterprise development for young people seeks to replicate prevailing structures in the economy which may cause poverty and inequality.

Because the research questions of this exploratory study are of the 'what' and 'how' variety, and have had no single, clear set of outcomes (Baxter & Jack, 2008; Yin 2014), a qualitative constructivist approach was most applicable to it.

Cope's defence of a qualitative, constructivist approach in his research on how entrepreneurs learn (Cope 2005b) supports the growing emergence of an interpretive social science approach within the broader context of entrepreneurship research, which usually follows a positivist tradition (Pittaway & Thorpe, 2012). Packard (2017) underscores the appropriateness of interpretivism as a meta-narrative for entrepreneurship because of the essentially individualistic and personal nature of entrepreneurship. In Packard's view, entrepreneurship is a continuously unfolding process, dependent on the intentions and expectations of the entrepreneurs and not tied to any specific outcome (Packard, 2017). This view is congruent with interpretivism, which sees the social world as becoming rather than being (Packard, 2017). The interpretive paradigm therefore offers a robust foundation upon which to build a holistic theory of entrepreneurship (Packard, 2017).

This study builds explanations and observations from data obtained in response to the research questions. Using an inductive process, it "begins with concrete empirical evidence and works towards more abstract concepts and theoretical relationships" (Neuman, 2011, p.70). Theory building from inductive reasoning is evolutionary and iterative, with room for continuous improvements through application in new contexts (Lincoln & Guba, 1985). This research follows the approach Cope used to develop his theory of entrepreneurial learning (Cope, 2005a) with theoretical positions emerging from rich descriptions of experience.

A study on transformative learning requires people to reflect on their experiences and on how they have been changed by them (Mezirow, 1991; 2006; Merriam & Bierema, 2014). Such a requirement lends itself to characteristics of qualitative research, namely a focus on meaning and understanding of how people make sense of their experience, on the researcher as the primary agent of data collection, and on rich description as the product of qualitative enquiry (Merriam & Tisdell, 2016).

Following an open-ended, qualitative paradigm, certain attributes, identified in the literature, are explored in relation to each research question, listed in table 1 below.

Table 1

Research questions and attributes

Research Question	**Attributes**
1. What is an appropriate model for youth enterprise development in South Africa?	• Development goals • Success measures • Purpose and motivation • Type and nature of enterprise
a. What lessons can we learn from a comparison of the approach, practices and results of selected market-oriented programmes in South Africa?	• Broad approaches • Target of intervention • Providers of intervention • Effectiveness
b. What innovative components, and methods, of these two programmes could lead to more sustainable youth businesses?	• Factors affecting youth enterprise • Components of successful interventions
c. How do young people on these programmes learn?	• Types of learning • How learning is effected • Theoretical position – the ability to challenge assumptions and take action

3.3 The research design

This study used a multi-site qualitative case study design. Individual case studies on two enterprise development programmes were first developed. These programmes are Timbali Technology Incubator in Mpumalanga, and the Maxum Incubator at the Innovation Hub in Gauteng. A cross-case analysis then selected features across the

cases (Yin, 2014) and, together with a theoretical underpinning from the literature, forms the basis of the study, from which a model of youth enterprise development support emerges.

3.3.1 Why a case study?

A case study is a research strategy focusing on understanding dynamics present within single settings (Eisenhardt, 1989), or bounded units (Merriam & Tisdell, 2016). It facilitates investigation of a phenomenon using a variety of data sources (Baxter & Jack, 2008; Yin, 2014). Grounded in context, case studies enable links to be made from issues at micro-levels to macro or larger-scale interventions or processes.

For Merriam and Tisdell (2016), use of a case study is determined by what the researcher wants to know. Yin extends this and applies a case study to combine what the researcher wants to know with events that cannot be controlled, and to contemporary events (Yin, 2014). A case study is unlike an experiment; there is no control over what might happen, or a historical study where basic facts cannot be changed (Yin, 2014).

The research adopts Merriam and Tisdell's description of a qualitative case study as an "in-depth description and analysis of a bounded system" (Merriam & Tisdell, 2016, p.37), as its major defining feature, although Yin's descriptions are also applicable. The bounded systems in this research are the enterprise development programmes themselves. Analysis of these systems, individually and comparatively, answers the research questions. This bounded system, as well as the particularistic, descriptive and heuristic characteristics of a case study (Merriam & Tisdell, 2016) allow a detailed focus to tell a larger story (Neuman, 2011).

Different uses of case studies are to provide description, to test theories or to generate theory (Eisenhardt, 1989). This study adopts the latter use, building inductively from the data towards a model for youth enterprise development.

3.3.2 A multi-site case study

Yin refers to case studies as exploratory, explanatory or descriptive, and as single or multi-site studies (Yin, 2014). A multi-case, cross case or multi-site approach involves data collection and analysis from several cases (Eisenhardt, 1989; Merriam & Tisdell, 2016; Neuman, 2011; Yin, 2014). In this instance, the research questions point to the use of a multi-site case study, allowing the researcher to analyse data within and across settings (Baxter & Jack, 2008; Tellis, 1997).

Substantial analytic advantages result from using more than one case (Yin, 2014). Evidence may be more compelling, even if only two cases are considered (Baxter & Jack, 2008; Merriam & Tisdell, 2016; Yin, 2014). The advantages outweigh the disadvantages, which are that such research is time-consuming, often expensive, and potentially challenging to manage as it can generate a great deal of data (Merriam & Tisdell, 2016; Baxter & Jack, 2008; Yin, 2014).

To manage potential disadvantages of a multi-site case study, this research reduced the number of cases from three, as was originally intended, to two. This decision was made initially on the basis of one of the envisaged cases not meeting the selection criteria. The decision was subsequently confirmed by an initial assessment of the quality and quantity of data collected from the other two cases. This preliminary assessment, following Merriam's suggestion of simultaneous collection and analysis of data (Merriam, 2009), indicated that the data was sufficiently extensive and rich in description to answer the research questions. Time and cost constraints also played a role.

3.3.3 Strengths and limitations of a case study

Merriam and Tisdell view the main strength of a case study as the process it provides for capturing the complexity of a situation comprising multiple variables (Merriam & Tisdell, 2016). Anchored in real-life situations, case studies can offer rich and holistic accounts of a phenomenon (Merriam & Tisdell, 2016). They also allow for close collaboration and rapport between the researcher and participants in the study (Baxter & Jack, 2008; Mouton, 2001).

A case study can help to construct new themes and explore boundaries among related concepts (Neuman, 2011), and to identify concepts and move towards their essential meaning in abstract theory (Mouton, 2001; Neuman, 2011; Yin, 2014). It has high construct validity through the use of multiple data sources (Yin, 2014).

Major challenges to the case study approach emanate from researchers operating within a positivist paradigm who seek to test theories deductively, rather than build them inductively. Concerns with a qualitative case study relate to validity, reliability, and the dependence on the integrity and ethics of the researcher (Merriam & Tisdell, 2016). Of these, the greatest concern is often with external validity, or the ability to generalise results (Flyvbjerg, 2011; Merriam & Tisdell, 2016; Yin, 2014).

In response, Flyvbjerg (2011), Merriam and Tisdell (2016), and Yin (2014) maintain that it is not the purpose of a case study to generalise findings statistically to an entire population. Case study findings can be generalisable in other ways, including analytically to theoretical positions if cases are chosen strategically (Flyvbjerg, 2011; Yin, 2014), or naturalistically (Stake, 1995). Stake's naturalistic generalisation refers to data generated from case studies which resonate experientially with a broad section of readers, thus facilitating greater understanding of a phenomenon (Stake, 1995).

The study adopts Merriam and Tisdell's view that much can be learned from case studies even if the results are not statistically generalisable (Merriam & Tisdell, 2016). Following Stake (1995), it assumes that thick description derived from content-rich cases can produce naturalistic generalisability.

3.4 Research techniques and procedures

This section addresses the different stages in the research process, namely the sampling strategy, sources and collection of data, and strategies for data processing and analysis. It outlines how each of these was addressed in the research, and the rationale behind those decisions.

A two-phase sampling strategy was adopted, as suggested by Merriam (2009). The first phase involved the selection of cases, and the second phase the selection of respondents and other data sources within cases.

3.4.1 Selection of cases

Since the goal of this research was to achieve an in-depth understanding of conditions and approaches that can assist young entrepreneurs, a purposive sampling method was chosen (Merriam, 2009). Purposive sampling can also be called criterion-based selection, with criteria and attributes used as a guide to identifying information-rich cases (Merriam, 2009). A probability sample, allowing the researcher to generalise results, is not desirable or justifiable in qualitative case study research (Merriam, 2009).

The cases studied, Timbali Technology Incubator and Maxum Incubator, were selected on the basis of their being theoretically useful (Eisenhardt, 1989), and to maximise what could be learned in the time available (Tellis, 1997). Replication logic (Yin, 2014) was adopted: this refers to cases chosen because they may yield similar or, conversely, contrasting results. In this instance, the two cases were chosen for their contrasting approaches and target beneficiaries.

The selection process followed Yin (2014) in first establishing access, then choosing cases which best illuminated the research questions. Sites were selected on the basis of their accessibility to the researcher, their credibility in the field, and their approaches to enterprise development. Access entails the researcher being able to identify and contact people associated with the programme, schedule interviews, observe events associated with the programme, and have access to relevant documentation. It also includes a programme's allocation of a key person to act as a liaison with the researcher. Neuman calls these people "gatekeepers", who have formal or informal authority to control access (Neuman, 2011, p.429).

Once access was established, criterion-based selection was used to guide the selection (Merriam, 2009). The criteria for selection of cases, derived from the literature review, combined practical considerations with the appropriate target

population and the types of businesses supported. These criteria and the reasons for their inclusion are offered in table 2. A guide that was used to assist in selecting cases is attached to this dissertation as Appendix A.

Table 2:

Criteria for selection of cases

Criterion	Reasons for inclusion
Practical considerations	
Single site or embedded units.	Programme may run projects in different locations. Choosing sites with embedded units may affect the number of cases selected for practical reasons relating to time and cost (Merriam, 2009; Yin, 2014).
Location	To establish geographical accessibility to the researcher.
Target population	
Proportion of youth under 35	To establish whether a programme targets young entrepreneurs specifically, or if there is a substantial proportion (50%) under 35.
Start-up or existing enterprises (the majority operating for at least a year)	Existing businesses are more likely to be more sustainable than start-ups, with the owner having overcome obstacles associated with running an enterprise in its first year. Very new enterprises may not have had sufficient time to experience many critical learning incidents (Cope, 2005a). It was important to consider some participants in early phases as well given that certain incubation programmes adopt a phased approach (Masutha & Rogerson, 2014).
Types of business supported	To ascertain whether participants' businesses fall into the space between poverty alleviation and high growth, and whether they have manged to break into established supply chains (Rogerson, 2013).
Recruitment of participants	To ascertain how participants are selected for the programme. Self-selection or actively recruited. This may be an indicator of motivation and ongoing commitment.
Language used when providing assistance	To ascertain whether translation will be needed for the interviews once cases have been selected.
The programme	
Approach to assistance	To ascertain what assistance a programme offers. Is the approach targeted at individuals, or to markets? Does it provide, or facilitate access to, a range of services?
Structure/Source of funding	To ascertain whether the organisation is a private company, an NGO, or a public entity.

Different aspects of purposive sampling were considered. In the first case, Timbali Technology Incubator, theoretical sampling was involved; the case is chosen for its obvious relevance to the research problem (Merriam, 2009). Timbali was known to the researcher through her professional relationship with one of its funders, and it conformed to the selection criteria. The funder provided an introduction to the Chief Executive Officer, who agreed to participate.

The second case was more difficult to find. Internet-based searches and personal referrals proved unsuccessful; two programmes were approached but did not respond to repeated telephone and email requests. A snowball or network sampling strategy followed, which involved locating key participants and requesting referrals from them (Merriam, 2009; Neuman, 2011). Personal contacts once again led to three other potential case study sites.

The selected cases, Timbali Technology Incubator and the Maxum Incubator, were chosen for specific reasons. Entrepreneurs from both are able to integrate into a formal supply chain servicing a mainstream or high-end market. This was ascertained from initial contacts with the programme managers or CEOs. As noted in the introduction, a deficiency of many business support programmes in South Africa over the years has been their tendency to be supply driven and not geared towards addressing market needs (Rogerson, 2013), thus not enabling beneficiaries to enter into established supply chains (Gstraunthaler & Cramer, 2012).

In Timbali's case, market access is through supplying baby vegetables and herbs for export and to high-end retailers like Woolworths, and flowers to the Multiflora market in Johannesburg. Other agricultural enterprise development programmes that provide assistance for farmers to produce for local and subsistence markets were not chosen. Having a customer or contract is a condition for Maxum entrepreneurs to enter into its main incubation programme.

Two other potential sites were considered. One was the Johannesburg branch of Furntech, a national incubation programme funded by the SEDA Technology Programme, and the other, SEED Academy, a private sector school for

entrepreneurship. Furntech, an incubator for emerging furniture manufacturers, was considered and investigated, but ultimately not selected. The sample of cases already included two business incubation programmes, and more importantly, none of Furntech's beneficiaries have been able to break into the mainstream retail supply chains, which tend to see them as competition (Furntech Manager, Interview, 22 September 2014).

SEED Academy, based in Johannesburg, offers a ten-week training course for entrepreneurs to work on a business idea. SEED's entrepreneurs are not involved in their businesses on a full-time basis, so they have not yet had the opportunity to experience the day-to-day challenges of running a business (SEED Academy CEO, Interview, 15 September 2014), so it was not selected.

Interviews with the centre manager of Furntech in Johannesburg and the CEO of SEED Academy, however, yielded valuable insights which are included in the analysis.

3.4.2 Description of selected cases

Timbali Technology Incubator and the Maxum Incubator present contrasting models of enterprise development and operate in different niches. Timbali Technology Incubator is an agricultural assistance programme in Mpumalanga that seeks to assist rural people to become commercial farmers. Its beneficiaries are primarily rural, unemployed women with little formal education. Without Timbali, they would probably be part of the large group of people described in policy documents as not in employment, education or training (dti, 2013a). The Maxum Incubator targets potential high growth entrepreneurs (General Manager, Enterprise & Skills Development, Interview, 17 September, 2014). It is designed to accelerate the growth of technology start-up companies by providing business development, mentorship and other necessary support.

Both are public sector supported programmes. Maxum is wholly owned by the Gauteng provincial government through the Gauteng Enterprise Development

Department, and Timbali is a non-government organisation, part of the SEDA Technology Programme (Rogerson, 2013), its main funder.

Yin (2014) and Merriam (2009) differentiate between single-site cases and sites with embedded units, or sub-programmes. Timbali runs two sub-programmes, amaBlom and amaVeg. The amaBlom flower farmers are a mix of ages, although most are under 35. The amaVeg vegetable farming sub-programme specifically targets people under 35. These two sub-programmes offer the opportunity to compare programmes targeting only youth under 35 with those with a mix of ages. Like the amaBlom farmers, Maxum entrepreneurs' ages are mixed, but the majority of entrepreneurs are under 35. Age is not a criterion for selection at Maxum.

The Timbali and Maxum programmes allow for the examination of the main assumptions made in the theoretical framework of this research, which are that entrepreneurship is a personal journey and that entrepreneurship can be learned. Analysis of these two programmes, with their different approaches and target beneficiaries, sheds light on how, with the right kind of support, entrepreneurship can enable the successful participation of young people in the economy.

3.4.3 Within-case selection

Once the cases were selected, a second set of criteria was developed to decide on how to select interview respondents from each site (Merriam, 2009). The within-case sampling strategy at both sites was also purposive (Merriam, 2009) with some structured and some snowballing selection. At both sites, most potential interview respondents were based at a central venue, so the interviews took place there.

The research was designed to capture the lived experience of entrepreneurs as well as of programme managers, staff members and consultants who support them. For ease of reference, staff members and consultants are referred to as interveners in this dissertation. Programme managers offer a perspective on the overall picture, and the aims and approaches the programme takes. They are able to assess its strengths, weaknesses and gaps. Staff members involved in the actual implementation offer a different perception. The bulk of interviews were with

participating entrepreneurs. Isenberg's assertion that the views of entrepreneurs on their own challenges and experiences may not always be shared by those who support them (Isenberg, 2014) underscores the value of these different perspectives. Different interview schedules were used for each type of respondent.

Each site allocated a liaison person, the gatekeeper (Neuman, 2011) to assist with identifying respondents and scheduling interviews. Managers and staff also helped identify respondents, using snowball sampling (Yin, 2014). Although ten interviews were planned at each site, this was adapted to include respondents whose views were considered theoretically useful to the study (Eisenhardt, 1989). Ultimately, thirteen interviews were conducted at Timbali and nine at Maxum. Actual numbers of interview respondents, with their designations and responsibilities are presented with the sources of the data used.

Purposive selection of Timbali farmers tried to obtain a blend between flower and vegetable farmers from the two sub-programmes. Sampling also aimed at a mix of farmers at different stages, namely trainees, tenants and graduates, and the most successful farmers, suggested by management. Most respondents were under 35, with contrasting views solicited from two older farmers. An element of convenience sampling was present (Merriam, 2009), as interviews depended on who was available when the field visit took place, on 3-4 September 2014.

Written consent was obtained from the Innovation Hub's General Manager for Enterprise and Skills Development. Then the Maxum Hub Business Relations Manager, acting as gatekeeper (Neuman, 2011), sent out emails to nine entrepreneurs who she felt fitted the profile of potential respondents. These emails included information on the research and requested their voluntary participation. Three entrepreneurs responded initially and were interviewed on 20 October 2014. Others did not reply or were not available when the fieldwork was scheduled to take place. Not wanting to burden staff, the researcher contacted others directly to arrange suitable times. Business consultants interviewed were also contacted directly by the researcher.

In response to patterns emerging from the interviews, two interviews planned with entrepreneurs were shifted to consultants in order to explore those patterns in more detail, as the consultants were theoretically useful to the study (Eisenhardt, 1989). Interviews at both sites continued until saturation was reached and no new information was forthcoming (Lincoln & Guba, 1985).

3.5 Data collection

3.5.1 Sources of evidence

Use of multiple sources of evidence is a feature of case study research (Merriam & Tisdell, 2016; Yin, 2014), especially when the intention is to build theory (Eisenhardt, 1989). It allows for development of converging lines of enquiry and can be used to establish the validity of a study, using data triangulation (Tellis, 1997; Yin 2014).

Eisenhardt (1989), Tellis (1997), Merriam and Tisdell (2016) and Yin (2014) identify archives, interviews, questionnaires, observations, documents and physical artefacts as the main sources of data used for case studies. For qualitative case studies, Merriam and Tisdell (2016) narrow this list to interviews, observations and documents. Two questions guide their assessment of the value of data sources, whether they contain information relevant to the research questions, and whether they can be acquired in a reasonably practical and systematic manner (Merriam & Tisdell, 2016). This study used interviews and documents, with interviews as the primary source.

3.5.2 Interviews

Interview structures can range on a continuum from highly structured to unstructured or informal (Merriam, 2009; Mouton, 2001). This study used semi-structured interviews, which fall between the two extremes (Merriam, 2009).

In semi-structured interviews, specific data is required from all respondents, but following Merriam, questions were used flexibly and were not dependent on a particular order, allowing exploration of issues (Merriam, 2009). As case study interviews are “guided conversations rather than structured queries” (Yin, 2014,

p.110), questions were largely open-ended. Some structured questions were included to provide demographic data.

The types of interview questions used fall broadly into categories, as suggested by Patton (2015). Experience and behaviour questions elicit entrepreneurs' experiences in running their businesses, and their opinions of the support programme. Demographic and background questions elicit age, education level, experience and other relevant factors, including background to the programme. Knowledge questions elicit participants' actual factual knowledge relating to a situation (Patton, 2015). In this research, knowledge questions were more relevant to staff and management, and relate to an assessment of entrepreneurs' operating environment and challenges. Opinion and values questions ask about perceptions of the programme. Sensory questions, similar to experience and behaviour questions (Patton, 2015), attempt to capture some of the changes entrepreneurs experience as a result of being on the programmes. Patton's other category, feeling questions (Patton, 2015), were not applicable to this research because respondents were not required to share their feelings. Changes experienced of a personal nature were captured using sensory questions. Ideal position questions, suggested by Merriam (2009), asked interveners to consider ideal programme conditions, and entrepreneurs to consider what they would do with the resources they need. Ideal position questions elicit information and opinion, and reveal positive and negative aspects of a programme (Merriam, 2009). The interview guides used for managers, staff and entrepreneurs, are shown in Appendix B.

The effectiveness of interviews can be limited by poorly articulated questions, response bias, respondents offering what they think the interviewer wants to hear, and inaccuracies due to poor recall (Tellis, 1997; Yin, 2014). A skilled interviewer can mitigate such limitations by picking up cues, probing, establishing rapport and putting the respondent at ease. With 20 years' experience as an interviewer, the researcher was able to use these techniques, as well as assuring anonymity if required, to address limitations. A possible response bias, manifested as reluctance to say negative things about Timbali, especially by the younger farmers interviewed, could have limited the effectiveness of some of the interviews.

Language barriers may have been a limitation with some Timbali interviews, despite Timbali's indication that an interpreter would not be necessary as the farmers, whose home language is mainly siSwati, all spoke English. With Maxum entrepreneurs and interveners, there was no evidence of a language barrier.

The formal database for the case study comprised 24 interviews. Table 3 presents the total number of interviews conducted, including four in the preliminary case selection phase.

Table 3
Interviews conducted

Source	**Selection of cases**	**Timbali Technology Incubator**	**Maxum Incubator**
Interviews			
Funder – CSI division of large corporate	1		
Funder - CEO, Youth development agency	1		
CEO	1	1	
Managers	1	2	3
Business consultants			2
Entrepreneurs		8	4
	4	11	9
Total interviews	24		

Thirteen interviews were conducted at Timbali during a site visit on 3 - 4 September 2014, three with staff members and ten with farmers. Two farmers felt uncomfortable being recorded, so these interviews have not been included formally. They were, nevertheless, willing to share insights which have been incorporated into the findings. Thus transcripts from eleven interviews have been used, each an average of 35 minutes long.

At Maxum, nine interviews were conducted, three with full-time staff members, two with business consultants working with entrepreneurs, and four with entrepreneurs. Both business consultants are entrepreneurs in their own right, are under 35, and mentor one of the other entrepreneurs interviewed. Interviews took place over a

series of five site visits between 17 September and 27 November 2014. Respondents were generous with their time, with an average of 55 minutes taken for each interview.

A follow-up telephonic interview was held with Timbali's CEO on 31 August 2017 to obtain clarity on developments subsequent to the initial interview. This has not been included in the table, although content of the discussion has been incorporated into the case study. Follow-up emails were sent on 13 June 2017 to the four Maxum entrepreneurs interviewed, to ascertain whether they were still at the Maxum incubator but there was no response.

Malfunctioning equipment and respondents' unease with technology are limitations to be aware of, although respondents usually forget about the device as the interview progresses (Merriam, 2009). This unease was the case with the two interviews that have not been formally included. The researcher had a back-up recording device in the event of malfunction.

After receiving written permission from respondents, interviews were recorded electronically and transcribed. Verbatim transcriptions of recorded interviews provide the best database for analysis (Merriam, 2009). Transcripts were generated from a total of 18 hours and 55 minutes of interviews. The researcher transcribed all the recording herself which, although time-consuming, resulted in detailed familiarity with the content (Merriam & Tisdell, 2016). An online transcription and dictation software programme, Transcribe, was useful in expediting the transcription process, although it still required manual typing.

Table 4 presents the Timbali and Maxum interview respondents, with details of their designation, race, the date of interview and the codes used to refer to them in the research findings.

Table 4

Timbali and Maxum interview respondents

Interview Code Number	Designation	Race	Date of interview
Timbali Technology Incubator			
TCEO	Chief Executive Officer	white	4 September 2014
TM1	Centre Manager. Responsible for finance, reporting to funders, training farmers, including life-skills training and staff development.	black	4 September 2014
TM2 and TM3	Development managers on technical and marketing side respectively	white	3 September 2014
TE1	Gerbera farmer (amaBlom)	black	3 September 2014
TE2	Lisianthus farmer (amaBlom)	black	3 September 2014
TE3	Baby vegetable farmer (amaVeg)	black	3 September 2014
TE4	Baby vegetable farmer (amaVeg). Packhouse supervisor	black	3 September 2014
TE5	Trainee baby vegetable farmer (amaVeg)	black	4 September 2014
TE6	Baby vegetable farmer (amaVeg). Becoming an out-grower	black	4 September 2014
TE7	Trainee baby vegetable farmer (amaVeg)	black	4 September 2014
TE8	Gerbera farmer (amaBlom)	black	4 September 2014
Maxum Incubator			
MM1	General Manager, Enterprise and Skills Development	coloured	17 September 2014
MM2	Business Development and Incubation Manager, Maxum programme	white	28 October 2014
MM3	Business Relationships Manager	black	28 October 2014
MBC1	Business consultant 1	white	30 October 2014
MBC2	Business consultant 2	black	27 November 2014
ME1	Entrepreneur	black	20 October 2014
ME2	Entrepreneur	black	20 October 2014
ME3	Entrepreneur	black	20 October 2014
ME4	Entrepreneur	black	20 November 2014

Race has been included for two reasons. The first is that entrepreneurship policies in South Africa seek primarily to facilitate inclusion of black people into the economic mainstream (Rogerson, 2013), and secondly, because of sensitivities that might

arise in comments on transformations that have taken place in relation to cultural backgrounds of respondents.

Although respondents have been identified by their position up to this point, in the interests of uniformity, all respondents from the two cases are now referred to by a code, T or M, for Maxum or Timbali, and another code indicating their designation, whether entrepreneur, CEO, manager or business consultant, followed by a number if there was more than one respondent of that type.

3.5.3 Documentation

Advantages of documentary evidence are that they do not change, they already exist, they help to verify correct spelling and titles, and provide broad coverage (Tellis, 1997; Yin, 2014). They are products of the context in which they were generated (Merriam, 2009). They may also reflect the bias of an author (Tellis, 1997; Yin, 2014). For example, a progress report for the purposes of accessing funding may leave out certain information that could prejudice its case.

Although Merriam (2009) identifies different types of documents useful in qualitative research, her list, which includes public records, personal documents, physical artefacts, and researcher-generated documents, is not applicable to this type of study.

Accessing documentation from both cases was uneven. The relationship between the researcher and one of Timbali's funders assisted in making the CEO feel sufficiently comfortable to share documentation that was not available in the public domain, such as reports to funders. The documents used to construct the Timbali case study, and the codes assigned to them are:

- Timbali Technology Incubator Annual Report 2012-2013 (TD1)
- Timbali Corporate Profile (TD2)
- Growth Conversation – News from Timbali Technology Incubator, July/August 2015 (TD3)

- Report to Funder: Key Lessons Learnt from SSACI/Timbali amaVeg Cluster, 26 July 2013 (TD4)
- Timbali Model and Expansion Strategy, 2014 (TD5)
- CEO Presentation Slides (TD6).

Staff at the Maxum Incubator did not provide documentation, and this source was confined to what was available in the public domain. Documentary evidence from the Maxum Incubator was obtained from Internet searches of the Maxum Incubator, the Innovation Hub, the Gauteng Growth and Development Agency (GGDA), the shareholder, and of the individual entrepreneurs, mainly to corroborate information obtained in the interviews. The documents are:

- Gauteng Growth and Development Agency Annual Performance Plan 2015/2016 (MD1)
- Gauteng Growth and Development Agency Annual Report 2015/16 (MD2).

These documents have been included in the main reference list.

3.6 Data analysis

Data analysis refers to how the data is broken up into manageable themes, patterns, trends and relationships (Mouton, 2001), or of “examining, categorizing, tabulating, or otherwise recombining the evidence to address the initial propositions of a study” (Yin, 2014, p.126). Once a pattern is identified, it needs to be interpreted in terms of a social theory, or the setting in which it occurred. This allows the researcher to “move from the particular description of a historical event or social setting to a more general interpretation” (Neuman, 2011, p.517).

3.6.1 Broad principles

Broad principles for processing and analysing data in this study follow the principles that data collection and analysis should be simultaneous (Merriam & Tisdell, 2016), and that it should converge data from multiple sources (Baxter & Jack, 2008; Yin, 2014). Analysis in a multi-case study should follow the same process as in a single-

case study, with individual cases analysed in their own right first, followed by cross-case analysis (Merriam & Tisdell, 2016; Yin, 2014).

Simultaneous processing and collection of data allowed the researcher to make adjustments to collection procedures in response to emerging findings, as happened during within-case sampling at Maxum. Although analysis began while in the field, the process became more intensive once all the data had been collected (Merriam, 2009).

Convergence of data from multiple sources maximises the benefit of a case study research design. Convergence, which was used in this study, "adds strength to the findings as various strands of data are braided together to promote a greater understanding of the case" (Baxter & Jack, 2008, p.554). This is illustrated in figure 4 below, adapted from Yin (2014, p.121), to incorporate only data sources selected for this study. It shows the difference between convergence and non-convergence of multiple sources of evidence. Non-convergence entails separate sub-studies for each source.

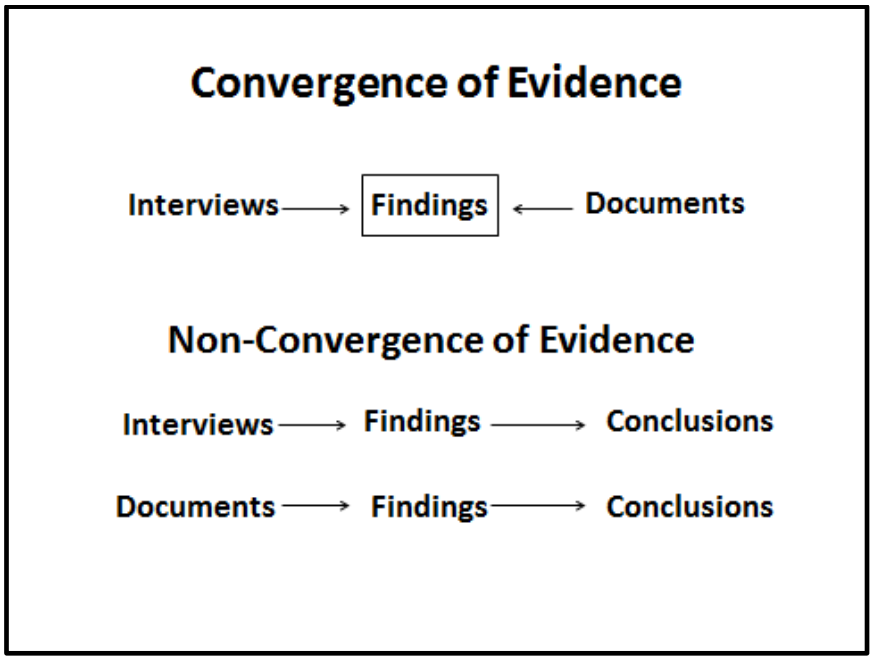


Figure 4: Convergence and non-convergence of evidence.
Source: Adapted from Yin (2014, p.121)

This research adopts Cresswell's conceptualisation of two levels of qualitative data analysis (Cresswell, 2014). The first, data reduction, indicates the general procedures, where data is organised, summarised and presented. The second level outlines analytical steps chosen (Cresswell, 2014).

3.6.2 Data reduction

The range of data generated by qualitative case studies necessitates careful attention to management and organisation. The research addressed this with a case study database (Merriam, 2009) which was stored on a computer hard-drive, with back-ups, in the researcher's office, and on a password protected cloud storage site. The database includes the interview voice files, the transcripts, the researcher's notes, and documents. This was to ensure that data would not be lost, and would be easily accessible (Merriam, 2009). A case study database help to both manage the data and to establish the validity and reliability of a study by creating an audit trail (Yin, 2014).

Data processing proceeded according to steps outlined by Merriam (2009). The first step was category construction, by assigning codes to items of data, starting with the first transcript and comparing that with subsequent transcripts. Units of data were then sorted into categories, which were then given names generated by the researcher, sometimes based on responses received (Merriam, 2009; Cresswell, 2014). Coding was both descriptive, and thematic, as reasoned by Cresswell (2014).

After this analysis began, building the evidence that had been broken down into a coherent whole, but also using an iterative process of returning to the data when new insights were discovered. Miles and Huberman's suggestions of matrices of categories, tabulating categories and examining their complexity and relationships with others were incorporated (Miles & Huberman, 1994).

Consideration was given to whether computer software should be used to assist with data reduction, but the researcher ultimately decided against it. Software packages for qualitative analysis can be helpful and offer organised filing systems for data analysis (Merriam, 2009; Yin, 2009). They can locate textual data relating to codes,

and search incidences of occurrence, even where multiple combinations are found together (Yin, 2009). The researcher found, however, that a word processing package, Microsoft Word, in conjunction with an organised case study database, was sufficient. Furthermore, the output of qualitative data analysis software cannot be used as an end-point, as in statistical analysis. The researcher still needs to determine whether meaningful patterns emerge, and define the initial codes (Yin, 2009). It was also felt that a qualitative data software package would distance the researcher from the data, a potential problem with qualitative software packages noted by Creswell (2014).

3.6.3 Data analysis

There are few fixed formulas and strategies for how to carry out qualitative analysis, as there are in quantitative analysis (Merriam & Tisdell, 2016; Neuman, 2011; Yin, 2014). For this reason, Yin (2014) advocates that every case study adopt an overall analytical strategy that defines priorities of what should be analysed and why.

This research adopted Merriam's approach, which draws strongly on a constant comparative method (Merriam, 2009). Although usually associated with grounded theory, Merriam maintains that since qualitative analysis is primarily inductive and comparative, the constant comparative method is appropriate even if grounded theory is not the purpose of the study (Merriam, 2009). Merriam sees constant comparison as a complex process involving "moving back and forth between concrete bits of data and abstract concepts, between inductive and deductive reasoning, between description and interpretation" (Merriam, 2009, p.176).

In practice, Roller and Lavrakis's description of how qualitative content analysis takes place accurately reflected how data coding actually happened in the research:

> Qualitative researchers methodically and frequently revisit the content they are studying to better understand each relevant piece as well as its relationship to the entire context from which it was chosen, thereby modifying how and what they are coding throughout the data collection period …. Interpretations are reformulated based on new insights. (Roller & Lavrakis, 2015, p.233)

To capture the complexity of the cases, data was coded at three levels, according to this approach (Merriam, 2009). The first was open coding, the second axial coding, where categories and properties are related to each other, and the third was selective coding, where core categories and propositions were developed.

Once the data was organised, analysis became more theoretical, making inferences and generating theory (Merriam, 2009). Information was analysed and integrated into first individual case studies, and then a comparison across the two cases. The cases are presented as separate chapters in order to appreciate the discrete nature of each. The discussion was written up as a cross-cases analysis, with insights obtained from the literature. The cross-case analysis attempts to build a general explanation applicable to both (Yin, 2014).

3.7 Validity and reliability

Definitions of validity in qualitative research - whether as “the best approximation of truth” (Mouton, 1996, p.109), establishing the “truthfulness, credibility, or believability of findings” (Neuman, 2011, p.208) or of presenting insights and conclusions that ring true to readers, practitioners and other researchers (Merriam, 2009) - are about achieving authenticity in the research. They entail giving an account of the steps taken to check the accuracy and credibility of the findings (Cresswell, 2014).

Features of a qualitative study derived from an interpretive social science approach influence the validity and reliability strategies adopted. These features are the focus on meaning and understanding, positioning the researcher as the primary instrument of data collection, inductive reasoning, and a richly descriptive product (Merriam, 2009).

Lincoln and Guba (1985) argue that terms such as construct validity or internal validity, reliability, and external validity, are, in fact, inappropriate for a naturalist or qualitative paradigm. They prefer to use alternative criteria, namely credibility, transferability, dependability and confirmability, which are designed to develop a trustworthy account of the phenomenon in question (Lincoln & Guba, 1985). Although Merriam and Tisdell (2016) and Yin (2014) use the terms validity and

reliability, their application to qualitative inquiry match the methods advocated by Lincoln and Guba (Merriam & Tisdell, 2016; Yin, 2014). The research therefore applies Merriam and Tisdell's (2016) and Yin's (2014) conventions.

Since it is exploratory in nature, the research uses Merriam and Tisdell's application of internal validity, which indicates how the research findings match reality. Their application is consistent with Neuman's concern about whether errors have been made in the design process that might produce false conclusions (Merriam & Tisdell, 2016; Neuman, 2011), and Lincoln and Guba's concerns with credibility (Lincoln & Guba, 1985). Implicit in the case study design was the use of multiple sources of evidence. The research triangulated data from interviews and documents in order to establish credibility (Merriam, 2009; Yin 2014). While Timbali provided documentation, internet searches of the Maxum entrepreneurs were used to confirm findings about their businesses and corroborate claims made in interviews.

Reliability in a qualitative study, according to Merriam, refers to an assessment of whether results are consistent with data collected rather than the extent to which similar results will be yielded if a study is repeated, as may be the case in quantitative research (Merriam, 2009). The use of a case study protocol and a case study database, advocated by Yin (2014), was applied to this study to contribute to its reliability.

Techniques used in the selection of cases and data analysis support the study's external validity. This multi-site, qualitative case study used replication logic in selecting cases at the design stage to contribute to the study's analytical generalisability (external validity), as advocated by Flyvbjerg (2011), Merriam and Tisdell (2016), and Yin (2014).

Measures at the data collection phase include using multiple sources of data, the use of a case study protocol, the development of a case study database and an audit trail, which provides a detailed account of methods, analytical procedures and decisions (Merriam, 2009). Finally, a rich, thick description allows readers to

determine the extent to which their situation matches the research context, and therefore indicate whether findings can be transferred (Merriam, 2009).

To a large extent, the validity and reliability of a qualitative study depend on the skills and ethics of the researcher (Merriam, 2009). Some of the skills Merriam pinpoints include an ability to ask good questions and interpret answers, to be a good listener and not be trapped by pre-conceptions, be adaptive and flexible, have a good grasp of issues and to be sensitive and responsive to contradictory evidence (Merriam, 2009).

3.8 Ethical considerations

The research was guided by the university's code of ethics for research on human subjects (University of the Witwatersrand, n.d.). Yin (2014) and Merriam and Tisdell (2016) state that protecting human participants in a study usually involves gaining informed consent from participants, protecting those who participate from harm, protecting privacy and confidentiality so that they are not, even unwittingly, put in an undesirable position, and taking precautions to protect vulnerable groups (Merriam & Tisdell, 2016; Yin, 2014). The university code adds that the aims of the investigation should be communicated as well as possible to participants, who may decline to participate, and who are also free to reject the use of recording devices (University of the Witwatersrand, n.d.).

A letter from the University introducing the research and the researcher was sent to prospective cases. Written permission to conduct the research was obtained from the manager of each programme and from each interview respondent. Written consent to use a recording device was obtained. Although most respondents were willing to have their names used, this was not done, in order to respect the wishes of those who did not.

3.9 The researcher

Over the past 20 years I have had a strong professional interest in small enterprise in general, and youth enterprise in particular. This interest has included assisting in

the setting up and management of a business assistance centre, conducting desktop and practical research projects into small businesses and especially micro-enterprises, and evaluating the effectiveness of projects designed to assist them. I have researched and developed a curriculum model and developed materials for an entrepreneurship education programme to be piloted for use in public secondary schools in Gauteng (Smith& Chetty, 2016). This programme seeks to develop a more entrepreneurial mindset among learners at school. An entrepreneurial mindset is a creative one that is able to recognise opportunities, solve challenges, design solutions, innovate and think outside of its usual frame of reference (Smith & Chetty, 2016). I have also evaluated other youth development projects which have had far more successful outcomes than those that specifically target self-employment by young people.

Through previous research, I have seen that many, but not all programmes designed to help young entrepreneurs, do not achieve what they set out to. However, even where enterprises are not as successful as they could be and project results have not met their stated goals, there are many positive spin-offs, and some of the young entrepreneurs, with the right kind of approach, attitude and assistance, could succeed.

For this reason, I wished to explore further how these positive spin-offs could be incorporated into the primary objectives of youth entrepreneurship development programmes if they were framed differently.

This study has taken me on a journey from a predominantly empirical approach towards youth entrepreneurship towards a greater epistemological appreciation of the need for more realistic thinking and design of interventions for youth entrepreneurs. This journey has led to a study of niches for young entrepreneurs that have not been considered previously, and to assess these, using the theoretical lens of transformative learning.

Chapter 4 Timbali Technology Incubator: The Yellow Brick Road[3]

4.1 Introduction

Timbali Technology Incubator describes its vision as becoming a "leader in creating sustainable wealth for small-scale farmers in agricultural and related enterprises" (Timbali Technology Incubator, n.d., p.3).

Registered as a non-government organisation in 2003, Timbali was started by the municipality of what was then Nelspruit (now Mbombela), and the Agricultural Research Council (ARC). The first farmers started in 2004, at Friedenheim farms, farming gerbera flowers under the amaBlom brand. In 2012 Timbali expanded the product range to include herbs and baby vegetables, under the AmaVeg brand, actively targeting youth under 35 to train as farmers.

Government funding was initially received through the Godisa Trust, which became the SEDA Technology Programme in 2005. Timbali has since attracted other government, private sector and development agency funders. These include the national Department of Agriculture, Forestry and Fisheries, the Limpopo Department of Agriculture (LDA), the Industrial Development Corporation (IDC), Syngenta (a Swiss-based global agribusiness company), the Anglo American Chairman's Fund, and the Swiss South Africa Co-operative Initiative (SSACI). SSACI's funding encouraged Timbali to target young people under 35 for the amaVeg programme in 2012.

In 2014 Timbali obtained funding from the Jobs Fund to build an additional four agri-parks[4]. The Jobs Fund project has resulted in significant expansion, which began after this research was conducted, which was in September 2014.

[3] The yellow brick road is a fictional device used in Frank Baum's novel *The Wonderful Wizard of Oz*, It functions as a guide that leads all who follow it, to the road's ultimate destination (Baum, 1900).

4.2 A response to contextual challenges

Timbali's activities are a response to the challenges facing commercial farming in South Africa, and to large-scale unemployment in rural communities. A decline in the numbers of commercial farmers in South Africa, from 79 000 in 1994 to 33 000 in 2014, has resulted in huge job losses in the agricultural sector. The average age of South African commercial farmers is 62 years (De Klerk, 2014b). Staff members concur:

> We want to teach the youth to farm, and at the same time, create jobs. (TM2, Interview, 3 September 2014)

Global agricultural trends find smaller farmers unable to compete with large commercial operations due to the latter's economies of scale, high-tech inputs, costs and access to credit (De Klerk, 2014b). Large-scale farmers in South Africa, with a critical mass from their own growing programmes, are able to supply large retailers, which small-scale farmers are not.

Increasingly competitive, farming requires sophisticated management skills and a product support chain. A product support or supply chain is a series of activities that help producers deliver a product or service to a customer. In this context, it involves quality assurance, packaging, logistics, branding, marketing and sales to wholesalers who either export or supply retail outlets (Timbali, n.d.). The CEO nominates the lack of a product support chain as the single greatest constraint to growth for small-scale farmers:

> The Bill & Melinda Gates Foundation says the lack of a supply chain keeps farmers in that subsistence inertia of poverty. (TCEO, Interview, 4 September 2014)

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[4] The Jobs Fund was launched in 2011 by the Minister of Finance to co-finance projects by public, private and non-governmental organisations that will significantly contribute to job creation. Retrieved from http://www.jobsfund.org.za/about.aspx

Chile, with one of the largest tomato processing plants in world, illustrates successful use of a supply chain by peasant farmers. 80% of input into this plant is grown by peasant farmers, and over 70% of its production is exported (De Klerk, 2014a).

Timbali has found a way to connect inexperienced, low-skilled young, unemployed rural people, mostly women, to sophisticated markets by means of incubation, a product supply chain and an enabling environment (De Klerk, 2014a).

4.3 Structure of the case study

Case study findings are presented in sections according to the themes emerging from analysis. The first section describes the Timbali model, the next profiles the programme beneficiaries. Farmers' pathways to entrepreneurship are explored after that, followed by an examination of the challenges farmers face, and the measures of success employed. After that, the chapter describes how farmers learn, the necessary changes or transformations they make, and how they are made. Additional programme considerations for youth entrepreneurship, not incorporated elsewhere, are presented in the last section.

4.4 The Timbali Model

4.4.1 Approach to enterprise development

Timbali offers a highly structured approach to enterprise development that "tries to simplify things that are very complicated", especially for unskilled people (TM1, Interview, 3 September 2014). Farmers work through systems which enable challenges to be identified and addressed. The CEO explains:

> I looked for a yellow brick road, a business development process, a paint-by-numbers system. I found the solution in what I call McDonalds (a franchise type model). We say you find McDonalds in any country, in any culture all over the world, and they offer a predictable quality product. In America today, McDonalds is an entry-level job creator. Young, unskilled people run the system, but the system gives a predictable quality. Their system is very rigid, but that is the basic idea. (TCEO, Interview, 4 September 2104)

Simultaneously, the project has adapted an approach, first outlined by author Michael Gerber (Gerber, 1995) that recognises separate characteristics existing within each entrepreneur. These characteristics are the entrepreneur, the technician and the manager, and are often in conflict with one another. This approach encourages technicians and managers to develop the other aspects of their entrepreneurial character. For Timbali, whose farmers are described as technicians, it encourages long term vision, and the ability to plan towards it:

> They don't want interruption from outside and don't want to be forced to think where I'm going to be in ten years' time. They all come in here and want to own a Pajero. So we say, ok, for you to own a Pajero, you need to have a business worth this amount. (TCEO, Interview, 4 September 2014)

4.4.2 Key elements of the model

Timbali's model is based on a cluster development principle, and a holistic environment and infrastructure, which includes a Global G.A.P.[5] accredited packhouse, and where technical farming, business and life-skills training, and mentoring of farmers, takes place. Profitable opportunities for locally-grown vegetables in South Africa require Global G.A.P. quality accreditation, which few new entrants to the market are able to obtain, even if they are commercial farmers (TCEO, Interview, 4 September 2014). Through the packhouse, Timbali offers access to the Multiflora flower market for the amaBlom farmers, and to Fresh to Go for the amaVeg farmers. Fresh to Go is a produce marketing company which supplies Woolworths and export markets, and the Jozi Fresh Produce Market.

4.4.3 The cluster

Timbali's prototype model is the cluster development, which enables it to address economies of scale and financial and infrastructural challenges. Through the cluster,

[5] Global G.A.P. is a worldwide organisation that sets standards for the certification of agricultural products around the world. Retrieved from http://www.globalgap.org/uk

the amaBlom farmers are able to compete successfully with other growers at the flower market. The CEO explains:

> It provides the enabling environment where fledgling apprentice farmers have the opportunity to grow into independent competitive agri-franchise enterprises .... The cluster tips the balance in favour of the smallholders. In 2004, 1 million gerbera stems were sold at Multiflora[6]. At the end of 2005, when our first flower farmers got into production, 2 million stems were sold. Today, one out of every four gerberas that you buy in South Africa is produced by amaBlom. (TCEO, Interview, 4 September 2104)

Farmers pool resources, share costs of inputs like fertilisers, and help each other ensure a consistent supply of produce to fulfil market requirements. Farmers elaborate on the value they perceive from the cluster:

> Everything I share, fertiliser, chemicals, packhouse, greenhouses and water and electricity. It's easy for me. On my own I would not afford it. (TE1, Interview, 3 September 2014)

> On my own I'd have to buy myself a truck, I'd have to buy the chemicals, the fertiliser. Even the assistant, I'd have to pay him alone. (TE8, Interview, 4 September 2014)

Collective branding offers assurance to clients of predictable supply and quality:

> They [*the farmers*] know their reputation is at stake, and what affects one person affects them all. I've seen them giving each other produce, saying ok, this is your order, but you won't be able to achieve it, so let me give you my flowers. (TM1, Interview, 4 September 2014)

Timbali follows a phased approach. Farmers enter the system as trainees, called projects. If they perform well, they become independent operators, called SMMEs,

[6] The Multiflora market is the primary market for Timbali's gerbera growers. It is the largest flower auction house in Africa. Retrieved from http://www.multiflora.co.za/history.php

who rent greenhouse space and participate in the cluster. Their rate of progress varies, ranging from two months to a year, depending on their performance.

4.4.4 Environment and infrastructure

Substantial investment in an environment and infrastructure enables small-scale farmers to access formal markets through branding, technical and financial expertise, decision-making around growing programmes, market feedback and feedback around financial and technical performance at cluster business meetings. Other kinds of support offered are introductions to suppliers, markets and industry specialists and peers.

Although Timbali provides co-ordinated marketing and branding, farmers work for their own account. Timbali encourages farmers, especially more established flower-growers, to develop their own customer bases:

> Timbali helps us market, but I also have individual customers. When I send flowers to the market, I put my business card in the box. (TE1, Interview, 3 September 2013)

> I have my own customers as well. When they come to buy flowers I give them my business cards, then sometimes when they want something they call me. Timbali encourages us to get customers, it's about half-half. (TE2, Interview, 3 September 2014)

Within the cluster framework, Timbali offers training in the technical aspects of farming, as well as on all other elements of the supply chain. Training takes place in the field, with each farmer given daily key performance indicators that they need to meet. Performance of farmers, and of the cluster lies in meeting these key performance indicators consistently:

> The difference doesn't exist in any one, individual behaviour, intervention, service or skill or person but rather in Timbali's belief that there is a critical set of best practices, identified and recorded as farmer key performance indicators (KPIs) that must be aligned to maximise agribusiness chances for

> success and long-term competitiveness. (TCEO, Interview, 4 September 2014)

Weekly quality management meetings and monthly cluster meetings help farmers to make decisions, solve problems and review performance. Farmers TE8 and TE2 explain what happens at these meetings:

> We decide, we manage our pests, we manage our business as a team. (TE8, Interview, 4 September 2014)

> We sit down and review how we did this month. Did we make a loss or a profit? I don't show my statements. We discuss altogether what our expenses are, but we don't discuss what the profits are. (TE2, Interview, 3 September 2014)

As farmers grow their businesses, other types of training are introduced.

> We also train farmers in human resource processes. Some, like TE1 and TE2, have their own employees and need to understand recruiting and appointing, and dealing with grievances. (TM2, Interview, 3 September 2014)

Staff emphasise the importance of life-skills training. Components of the training include valuing the self, building relationships, facing choices and forming friendships. It was introduced especially for younger farmers recruited for the amaVeg programme. It helps farmers to:

> understand the bigger picture, something they probably never understood. You'll see the tech differences here and there, but not major. But we hope that this is what is making the difference. (TM2, Interview, 3 September 2014)

4.4.5 Variations on the model

Timbali offers three variations on its model: the agri-park, the satellite agri-park and the out-grower, each entailing a different level of involvement from Timbali. In the agri-park model, participants rent greenhouse space at Timbali and participate in the cluster as independent operators. Timbali "prescribes the quality chain, procedures, and enforces peer review adherence" (TCEO, Interview, 4 September 2014).

The amaBlom cut-flower farmers are anchor tenants at the Friedenheim agri-park and will stay there. The satellite agri-park is an off-site land tenure cluster. There are three satellite clusters in Nwanedi in Limpopo, where 50 female farmers farm on 500 hectares (between 8 and 10 hectares each) on land they rent from the tribal authorities. Timbali has a full-time consultation role, with business support officers going to each cluster every week with training. Timbali is not as prescriptive in the satellite agri-park:

> We heavily influence the progress and adherence to quality standards. We can tell them what to do, but whether they do it or not is up to them. (TCEO, Interview, 4 September 2014).

Out-growers have been to the Friedenheim agri-park for training, and can then graduate to their own districts to farm independently. They deliver their produce to Timbali's packhouse to access the market, with Timbali offering offsite assistance. Timbali anticipated that the amaVeg farmers would become out-growers (De Klerk, 2013), but only five of the original amaVeg farmers did so, with the rest remaining in the incubation system (TCEO, telephone interview, 31 August 2017).

Of the farmers interviewed, seven are located in the Friedenheim agri-park. One, TE6, has graduated to become an out-grower.

4.4.6 Benefits and contributions

Timbali cites the benefits of its incremental incubation model as low barriers to entry for farmers who would be unable to navigate sophisticated supply-chains and markets on their own, learning to plan and deliver on the plan, to manage risk and a reduced drop-out rate. Other benefits are the sense of achievement experienced by farmers when they succeed in setting goals, assessing progress, achieving milestones, and making personal choices. The personal development journey is explicitly facilitated to build the confidence and decision-making abilities required to become an entrepreneur (Timbali Technology Incubator, 2015).

Farmers in the agri-park pay rent and levies to Timbali, which includes their water, electricity, the cost of a spray technician, and market fees. Levies are based on a percentage of turnover. Trainee farmers do not pay until they become SMMES:

> We want them to become successful first. As soon as we see that this farmer has made money, they must start paying levies to take that responsibility. (TM2, Development Manager, 3 September 2014)

Timbali does not pay trainees a stipend, but has a fund that offers interest-free loans to trainee farmers until they start producing. This loan is recovered from sales.

4.4.7 Partners and funding

Timbali distinguishes between development costs, which include training, skills and business development, and farming costs. Farming costs are covered by product sales and rentals, but development costs need to be funded by private and public sector partners.

> Turnover per hectare in Nelspruit is over a million rand a year. (TCEO, Interview, 4 September 2014)

Meaningful partnerships with government are key to Timbali's expansion:

> Timbali is a magnificent pocket of excellence. But if we don't partner with government we can't upscale. (TCEO, Interview, 4 September 2014)

Financial partners include the Mpumalanga Economic Growth Agency (MEGA), previously called the Mpumalanga Agriculture Development Agency (MADC), which first risked lending money to Timbali when the Land Bank would not. Provincial government funding from the Limpopo Department of Agriculture supports Timbali's involvement in Nwanedi. The National Department of Agriculture Forestry and Fisheries (DAFF) is an important government partner piloting the model, and seeks to duplicate it in all provinces. Success in attracting funding from the Jobs Fund has seen Timbali build four additional agri-parks.

4.5 The Timbali farmers

4.5.1 General profile

Timbali offers entry level opportunities for people with little formal education beyond secondary level or work experience. 28% of all Timbali farmers have no education, 17,6% have completed Grade 7, 13.5% have completed Grade 10 and 18.9% have completed Grade 12 (De Klerk, 2014b). Many of those with Grade 12 are the amaVeg farmers. Grade 12 was one of the selection criteria initially stipulated by the funder, SSACI, together with participants being under 35 years old. Age and qualification do not, however, predict success:

> The gogos up there in Nwanedi, the older people, they earn more than anyone else. TE1 is not old, but she is not qualified at all. She doesn't have matric. She is our biggest earner here. (TCEO, Interview, 4 September 2014)

The majority of farmers in the programme are women, increasing from 60% 2011/2012 to 77% in 2013/2014, the result of Timbali's assisting the mostly female farmers in Nwanedi. Vegetable farmer TE4 offers her perspective on why women outnumber men:

> You know if your child is really hungry, who is going to suffer to get her stomach full, it is the mother. That's why lots of mothers are here because they are doing this for their children. (TE4, Interview, 3 September 2014)

4.5.2 The interview respondents

Of the eight farmers interviewed, six are under 35 but are older than 30. Only two, both trainees, are in their twenties. Two farmers are in their forties, both flower farmers, but were under 35 when they joined Timbali. Seven women and one man were interviewed. With one exception, TE1, all speak SiSwati as their home language.

In terms of the Timbali model, five consider themselves SMMEs (they run their own operations, but are members of the cluster), two are trainees, called projects (pre-incubation), and one is a graduate who is becoming an out-grower.

Three respondents are flower farmers, the other five grow baby vegetables. TE1 and TE8 grow gerberas, and TE2 grows lisianthus. TE3 grows baby vegetables at Timbali's nursery. TE4 grows baby vegetables, but also works three days a week as the packhouse supervisor. TE5 and TE7 are the trainees growing baby vegetables. TE6 was an SMME, and is now a graduate who will become an out-grower at his village, growing baby vegetables. The other seven are all located at the agri-park at Friedenheim farm in Mbombela. Table 5 provides details of the farmers interviewed.

Table 5

Profile of Timbali Farmers Interviewed

	TE1	**TE2**	**TE3**	**TE4**	**TE5**	**TE6**	**TE7**	**TE8**
Age	44	32	31	34	21	30	22	42
Gender	F	F	F	F	F	M	F	F
Length at Timbali	11 years	6 years	2 years	8 years		1 year	9 months	5 years
Type of farmer	Flower	Flower	Vegetable	Vegetable	Vegetable	Vegetable	Vegetable	Flower
Highest education level	Gr 9		Gr 12			Gr 12	Gr 12	Gr 12
Home language	XiTsonga	SiSwati	SiSwati	SiSwati	SiSwati	SiSwati	SiSwati	SiSwati
Formal registration	CC	CC	None	None	None	None	None	None
Structure	SMME	SMME	SMME	SMME	Project	Graduate: Out-grower	Project	SMME
No of employees	4 (full-time)	2 (full-time)	0	0	0	0	0	0

None of the farmers has progressed beyond a Grade 12 education level. One has completed Grade 9, and three did not indicate their education level. TE6 is the only farmer interviewed who did any post-school training, learning woodworking at a training centre.

Tenure at Timbali ranges from nine months to eleven years. TE1, a gerbera farmer at Timbali, has been there for eleven years, employs four people and has a Grade 9 education. She joined Timbali at the age of 32. Only two farmers employ staff. When asked about formal registration, those two indicated that they have registered a close corporation and are part of the cluster. All others just noted their participation in the cluster.

4.6 Pathways to entrepreneurship

Timbali's most successful farmers have been rural women with previous experience working on a farm, discipline, a strong work ethic, and little formal education Pathways taken towards independent farming by interview respondents illustrate how Timbali's traditional strategies for recruiting farmers have been more effective than the specific ones adopted to target young people for the amaVeg programme.

4.6.1 Background experience

Timbali has always tried to recruit people with some farming experience. Farmers interviewed either grew up in households engaged in subsistence farming, with farm-labourer parents, or had worked as farm labourers themselves. TE1 was employed by a tobacco farmer, TE3 worked as a picker at a macadamia farm. TE4 and TE5 lived with their mothers, who grew crops in the yard. TE6 helped his father, who grew maize. His grandparents were also farmers. TE2's parents were farm labourers, while TE3 learned to grow vegetables from her granny:

> She showed me how to use a hoe. At home she grew vegetables. We grew vegetables. Whether you wanted to or not, you had to hoe. I enjoyed it. (TE3, Interview, 3 September 2014)

Most respondents did not join Timbali specifically to become independent farmers. They started out working for other people and developed the interest and passion from that:

> I came here to work for someone at Timbali, Johan. He trained me. (TE1, Interview, 3 September 2014)

> I came to Timbali in 2008 as an assistant. I was assisting in the vegetables here and there, then Timbali gave me the chance to work as a project. It was not good. It was so hard. Then I was promoted to become one of the SMMEs, I was given the opportunity to grow gerberas. (TE8, Interview, 4 September 2014)

TE6 is the exception, intending to become an out-grower from the start. After working for furniture removal companies and after an unsuccessful attempt to start his own furniture business, he came to Timbali. He was sent by his father, the village chairperson of Masibuyele Emasimini ('Let us return to the farm'), a programme encouraging people to take advantage of the government's agriculture projects.

In contrast, attracting young people to the amaVeg cluster by promoting it as an entrepreneurial opportunity has been difficult, despite the poverty and high unemployment in the area. Development Manager TM2 discusses the apparent inability of potential young recruits to see the opportunity Timbali provides:

> The biggest challenge we are sitting with is getting people to come and farm. They say they'd rather work in a nursery. We get people from all over, we bring them in by bus to come and look at Timbali's concept, but there is little interest …. We are sitting in the position where we have the market but we can't supply. (TM2, Interview, 3 September 2014)

The Centre Manager elaborates on recruiting strategies used to attract young people:

> I've gone to local radio stations to explain the opportunities. I've been to churches, put up posters that clearly explained …. I normally check what they understand. But I know that at the back of their mind, the majority of people see this as a job. They don't stay because farming is very hard work. Our turnover, especially in the first two months is high. (TM1, Interview, 4 September 2014)

TE3 and TE4 feel that young people do not really know what farming is about when they join:

> The young ones feel that maybe farming is to sit in an office and just turn around in the chair, but farming is not like that. Farming needs hard people. (TE4, Interview, 3 September 2014)

> I think they can't do it from the start, they don't know what it is about. Me, I started at home, I know what it is about. I know it is difficult. (TE3, Interview, 3 September 2014)

Even young recruits who studied agriculture at the nearby agricultural college have not been successful:

> The top performers from the agricultural college came in the first round. They only lasted four or five months. It is hot, it is hard, difficult work. It's not an air-conditioned office where you sit behind a computer. And you sometimes have to get up early. (TCEO, Interview, 4 September 2014)

4.6.2 Role models

Role models are influential in encouraging people to farm, if participants are open to learning. TE1's interest in farming was encouraged by her employer, Johan. She, in turn, has played a significant role in the development of other farmers. TE4 came to Timbali to work for TE1:

> I am from a very poor family, and I was only looking for a job. TE1 took me in because I was desperate. She trained me, how to use flowers, how to grow flowers. My mind started changing, I felt interested. I learned everything I can from her …. Then I worked for a guy James who was doing research on citrus trees. That is where the passion for the farming just came up. When Timbali decided to have amaSpice[7] in 2011, I applied and started planting basil, wild rocket and coriander. (TE4, Interview, 3 September 2014)

The backgrounds of young entrants to the amaVeg programme show little exposure to small business or entrepreneurship in their families. This makes it difficult for them

[7] amaSpice was started before amaVeg, growing herbs, but has become part of the amaVeg brand.

to understand what it means to run a business. They know much more about being employed and working conditions:

> I often ask them who has a family member who has some business, a spaza, or anything. There was one person in a class of 65 who did, his mother had a chicken farm just outside Hazyview …. They all understand trade unions because their families belong to trade unions. (TCEO, Interview, 4 September 2014)

4.6.3 Selection criteria: Education and age

Traditionally, Timbali has targeted people with little formal education. As mentioned earlier, none of the farmers interviewed had gone beyond Grade 12. Insistence on Grade 12 as a criterion for the amaVeg programme proved problematic, and eventually fell away:

> People with matric don't want to farm, and those who are farming can't do basic maths. The people who really want to farm who don't have a matric can't come here. So they are left out, and they are who we should be focusing on. (TM2, Interview, 3 September 2014)

Although staff and farmers feel that the most successful recruits are female, slightly older, over 25, with children they need to support, these criteria cannot be strictly applied. TE7, who is 22 years old, believes that attitude is key, irrespective of age:

> I don't think age matters. If you have the heart to be a farmer you will do it. If you don't you won't. They don't say I am too young. They take us seriously because we respect each other. (Interview, 4 September, 2013)

4.7 Challenges

Challenges affect Timbali farmers at different levels. At a practical level, they experience ongoing operational challenges. More difficult to overcome, as perceived by staff, are farmers' limited self-confidence and their lack of ability to take control of and manage their environment, as well as the challenges embedded in certain cultural practices:

> That's the easy part, to put up the infrastructure, to give the money. The difficult part is the emotional part … when things go horribly wrong. The management challenge, that is what we live with here. (TCEO, Interview, 4 September 2014)

> Their self-confidence is very low. They don't see themselves as people who are able to initiate certain things and take control. With the graduates, there is a big change. (TM1, Interview, 4 September 2014)

4.7.1 Operational challenges

Diseased plants, seasonality, the physical nature of farming, and managing staff are examples of farmers' operational challenges:

> Last year I had a lot of customers but not enough flowers because they had a disease. I sprayed but the disease was already resistant to that chemical. I was stressed. In May we wanted to supply for Mothers' Day, so to ensure that those customers didn't go away, I bought flowers from the cluster. (TE1, Interview 3 September 2014)

Farmers need to plan for seasonal income differentials:

> Sometimes there are a lot of flowers in the market. We won't get nice prices, my business goes down. I have to make other efforts, like grading and giving my customers quality. (TE8, Interview, 4 September 2014)

> We have flowers for about nine months. I have to make more in those months. Last year this time we had the long flowers, now we don't. At the end of the month when the statement comes I will have a loss. When we do the budget, we look at the statement for last year, and I see that I have to save maybe R10 000 to pay those expenses. (TE2, Interview, 3 September 2014)

Farming requires discipline and consistent attendance at work in the early hours of the day, it is not easy. Younger farmers, in particular, struggle to understand the discipline required by the market.

> You have to be there all the time. If you are not there, your produce is not going to the market. And there is sun out there, there is hail out there, there is rain out there. It needs a hard-working person to remain. (TE4, Interview, 3 September 2014)

> The ability to supply a good product 365 days a year, that's the difficult part. You can do it well for maybe 2 or 3 months, the honeymoon period. That is our challenge. (TCEO, Interview, 4 September 2014)

> If you have the market you have to plant what the market wants …. Young farmers do not always understand this concept, and sometimes we don't supply the market enough. (TM3, Development Manager, Interview, 3 September 2014)

TE1, who employs four people, underlines the necessity to focus fully on the business, as well as on the need to be physically present when managing her staff:

> Managing staff is a challenge. I don't sleep at home because I have assistants here. If you sleep at home your assistants don't do the things you want. If you don't always think about the business, you want to sleep, or whatever, it is not good. But my business is 100% because I am always here to check. (TE1, Interview, 3 September 2104)

4.7.2 Cultural challenges

Staff mentioned certain challenges arising from cultural practices, which often entail farmers negotiating different roles at home and at work:

> People are living in two worlds. When they get off the bus in their communities they have to go back to that. Then when they get on the bus and get off here they have to forget and be different. So it is a balancing act, there are days when it is much more difficult. (TM1, 4 September 2014)

Examples of cultural challenges are male farmers unwilling to work in the fields, and men feeling entitled to make decisions on their farmer wives' behalf:

> In the old days the husband used to sit at home and the women worked in the field. We have had some male farmers here who refused to pick, saying it's a woman's job. They even refused to be in the packhouse. It is starting to change now. (TM3, Interview, 3 December 2014)

> In Nwanedi we only work with women. They [*the farmers]* are all on land claim. Often the farm is rented to the husband, and the husband lets part of the farm to his wife. But when it comes to the decisions, it's a family decision. Except for a few, they can't take their own decisions. (TM3, Interview, 3 December 2014)

4.7.3 Timbali's response to challenges

Timbali's structured environment and cluster model creates a framework for addressing challenges:

> We have created what we call a broken window syndrome, based on Alvin Toffler's book, The Third Wave. When people look around and they see chaos, they see pointlessness and feel powerless. Give them a structured environment and then they know what is expected of them. (TCEO, Interview, 4 September 2014)

> We have to follow the system. It is easier. (TE4, Interview, 3 September 2014)

Coping with challenges also requires problem solving, discipline, and the ability to do things differently. The cluster encourages people to participate and share in finding solutions, even if they do not always agree:

> You know when you are working in a cluster, some agree with you, some do not agree …. We do work together to understand each other. We have to talk. (TE7, Interview, 4 September 2014)

Some farmers, however, especially the younger ones, may value participation in the cluster, but still feel unable to challenge more established farmers openly. TE5, a trainee farmer says:

> All of the people here at Timbali, they are open. You can be free. Even if it is the first time, you can say everything because they are open. (TE5, Interview, 4 September 2014)

Asked, however, whether she would say if she disagreed with something in a cluster meeting, she indicated that she would keep quiet and tell her friend later on.

4.8 Measures of success

Different types of respondents describe success differently. Staff members are concerned with programme outcomes which are usually negotiated with funders. These include profitability, the ability of farmers to compete commercially, and job creation. Farmers measure their success in their descriptions of how they provide for their families.

4.8.1 Success for Timbali

The established amaBlom programme is measured by how successfully it competes in the market:

> AmaBlom farmers supply 25% of all gerberas and 20% of all lisianthus cut flowers to South African consumers. The young, female, previously unemployed, unskilled, rural-based amaBlom farmers have consistently outperformed the Multiflora Flower market average price per stem for the past 6 years. (TCEO, Interview, 4 September 2014)

The initial goal for the amaVeg programme, agreed between Timbali and SSACI, the funder, was that farmers would graduate to become out-growers. New intakes could then take their place. The target for the original twenty amaVeg farmers to become independent out-growers was not met. Only five became sustainable farmers on their own land, the remaining five, who did not drop out of the programme, relocated back to the agri-parks.

Most did not want to return to their own land, where there was no infrastructure and where they had to negotiate with tribal authorities (TCEO, telephone interview, 31

August 2017). For younger farmers, the agri-park, with its support structures, offers a better option than the out-grower model:

> In our surveys we see that most say they want to be like TE1. They don't want to go back to their domestic arrangements. Most rent land from the chiefs. It is not a structured environment. But there are some of them who want to go back. So there is a mix, not one simple answer. (TCEO, Interview, 4 September, 2014)

Apart from TE6, who always planned to be an out-grower, the farmers who express a wish to farm outside of the Timbali structure see it as a long-term plan. Their motivation for doing so is to assist others in finding jobs, rather than to explicitly grow their businesses:

> In the future I want to go to my parents' place and try to farm there. There is land there, my parents' land. So we can use that to try to change other people's minds. There are people skilled, just sitting home, not doing anything. Yes, after 10 years, if I got a lot of money, I would go and farm. (TE4, Interview, 3 September 2014)

Staff members also look at how farmers use what they learn, and the outputs they achieve. In Nwanedi, for example, Timbali train women in technical skills and record keeping:

> I would say at the beginning I had about 40% of farmers filling in the expenses and income. Now I have all farmers. (TM3, Interview 3 September 2014)

Timbali's growth necessitates increasing the number of agri-parks that give farmers access to their supply chain. Although it started after this research was conducted, the Jobs Fund project, involving four new agri-parks, created 300 permanent and 500 casual, seasonal jobs. These permanent jobs are now self-sustaining forms of labour intensive self-employment, able to compete commercially in the agriculture sector. Timbali's support continues after project's three year duration, funded by levies paid by farmers (CEO, telephone interview, 31 August 2017).

4.8.2 Success for farmers

In describing their achievements, farmers name factors other than their average monthly turnover. They see their success as being able to assist family members with houses, pay for children's education, and not being dependent on their parents or their husbands.

Growth for the vegetable farmers is hindered by the amount of land available in the cluster, and for the flower farmers by the potential negative effect on prices per stem of an oversupply. The flower farmers who want to expand will go into farming vegetables, for which there are large unmet market needs:

> With the flowers, I won't get another greenhouse. The challenge with the flowers is the market. We supply from the cluster. If we grow more flowers, the price will go down, so we can't. To grow we have to do other things, maybe vegetables. (TE1, Interview 3 September 2014)

Livelihoods, however, remain tenuous for many of the farmers, which makes it difficult for them to take a long-term view. Asked if they would accept a job where they could make more money, TE7 and TE3 indicated that they would find it difficult to refuse. The more established farmers were more definite about not taking a job if it was offered.

4.9 How farmers learn

Learning is intrinsic to Timbali farmers' business activities, and is an ongoing process:

> When young people come here, they don't know what to do. They don't know what a leek is. Timbali gives guidance, it is a process. (TCEO, Interview, 4 September 2014)

TE6 outlines what he has learned:

> I came here not knowing much. I have learned how to prepare soil, to plant and to grow, to fertilise, to harvest, to know how to sell things to the market, to know if this is quality or not quality. And the spec of what they need, I have

> also learned that, and the business things. (TE6, Interview, 4 September 2014)

Descriptions of how farmers learn, and from whom, range from learning from employers, from mentors assigned by Timbali, from cluster meetings, and from life-skills training. Above all, however, they learn by going through the Timbali business development process and by receiving ongoing feedback and measurement on their key performance indicators.

4.9.1 Learning from the Timbali business development model and cluster

The process, through the cluster model, offers a structured way for farmers to address challenges and to respond to key events. Through feedback, the system also responds to farmers' needs:

> It's not teaching. It is exposing them to the reality that they feel. This is our model, they learn as they do. Our farmers know this. It is not a training programme. This is their life and it goes on and on. (TCEO, Interview, 4 September 2014)

> Each farmer has technical KPIs. They have programmes for everything which they need to fill in once a day. (TM2, Interview, 3 September 2014).

> There are systems, that's one of the things we introduce from the word go. If you don't work through the system, you will fall out. And those not complying will be picked on during the meeting and asked why they didn't tell us on time that they had challenges … but it can't be one system for everything. At times we realise that we can't get the result we want so we have to modify it to make it work better. (TM1, Interview, 4 September 2014)

At the same time, the cluster promotes collaborative learning from other farmers through weekly quality management meetings, monthly cluster business meetings, life-skills training and mentorship. The cluster makes people work together, even though they have their own units. TM1, who is also responsible for much of the life-

skills training at Timbali, believes that the cluster suits the collectivist practices innate in the farmers' own cultural backgrounds:

> The fact is that black people love working in groups. That's what I think. The clustering does work in their favour. At times when you try to be too individualistic it can be a very lonely journey. I've seen that many times, especially when it is hard, they come together and start singing, and you can hear that even though it is hard, they are sort of enjoying themselves and work together (TM1 Interview, 4 September 2014).

4.9.2 Learning from mentors

TE6 credits his formal mentors for teaching him technical aspects of farming, such as dealing with pests:

> I have learned most from mentors. Things like spraying, spray problems. (Interview, 4 September 2014)

As they gain experience, farmers also offer advice and informal mentoring to other members of the cluster. TE2 explains:

> I have a mentor here. It was Maurice who helped me, now we have TM2. He helps me because sometimes when I don't know something he helps me to know how to manage and to treat my customer. Maybe when someone else doesn't know about planning or about what to do I can help and give advice. (TE2, Interview, 3 September 2014)

Previous employers act as role-models and informal mentors, and play a vital part in farmers' learning. TE1 learned from her previous employer. TE4 attributes her success to assistance from TE1, and to a researcher she worked with at Timbali:

> That guy who was doing his PhD, when he was here I was so interested in farming. He was teaching me big things that changed my mind from looking for a job to becoming a business owner. Then when it comes to TE1, I used to talk to her a lot. No matter I wasn't working for her, I was just on the citrus. I used to ask her many things, about chemicals, pests. She even trained me to scout for a big farm. She still teaches me, even now. (TE4, Interview, 3 September 2014)

4.9.3 Learning from life-skills training

Life-skills training, a key element of the Timbali model, helps the farmers understand themselves and how they can take action to improve their lives:

> She [*the Centre Manager*] showed them two pictures, one was a fish in a river, and the other a log. She tried to explain that the log can only go where the stream goes, but the fish can swim upstream where there is better food supply and the opportunities are better. We just choose, are you a log or a fish, can you go where you want to? So that's the training she gave them. (TM2, Development Manager, Interview, 3 September 2014)

Many of the challenges farmers and staff face in addressing cultural issues are addressed in the life-skills sessions.

4.9.4 Reflections on transformation

In reflections on changes to farmers, staff refer to fundamental transformations that take place over time, such as a change in orientation from being a worker to being self-employed, cultural changes, and a growth in the self-confidence of individuals who are then able to initiate things and take control of their environment. These result from Timbali's process, and from the farmers being able to adapt to the work ethic and discipline of farming.

Farmers offer more concrete examples of changes to their lives, described earlier in how they measure success, by assisting families, making decisions independently and leaving a legacy for their children. These examples point to a considerable positive change in their perceptions of themselves as a result of their experiences at Timbali:

> If there was no Timbali there was no TE4 today. I am glad to say that I am a pastor. I am a mother of two. I am a single parent …. And I've got my own house and I am managing to do everything for my kids and for myself because of this place. I see Timbali as a role model in my life. (TE4, Interview, 3 September 2014)

TE1 speaks about the impact her business has had on her children, and herself:

> A lot has changed. My child is at university. If I didn't have this business I don't think my child would be at university. But because I have this business my child is getting the best treatment …. I want my children to know what is happening here. When I die they are going to take it over. So it gives me respect. (TE1, Interview, 3 September 2014)

Other personal changes for farmers have been an ability to accept the discipline needed to farm, to perceive a future, to delay gratification, to think in the longer term and to plan ahead:

> When I came here I did not see my future going forward. Now I see that there will be a change in my life. (TE6, Interview, 4 September 2014)

> I always think ahead. Already I have a bigger house, but because now I am busy with my house I am not running to buy a car. Because if you buy a car, you will drop everything, it needs petrol, service, everything. After I finish the house, then I will buy a car. (TE1, Interview, 3 September 2014)

> I am not sure how I have changed, but the discipline has changed. I did not wake up in the morning at 3:30 but now I do because I am working at Timbali. (TE7, Interview, 4 September 2014)

Although farmers were able to reflect on personal changes during their interviews with the researcher, the Centre Manager finds it difficult to get them share their self-reflections in their life-skills sessions:

> In August I asked what it is that you as a person have learned? How has it changed you? How has it changed the way you do things in your business? I find that they battle with those questions. (TM1, Interview, 4 September 2014)

4.9.5 Employee to self-employed entrepreneur

For Timbali and the graduate farmers, being a self-employed entrepreneur entails taking ownership and responsibility for their units and for what they produce, and doing it for themselves:

> I was a project for about 6 months. Then I moved to the SMME stage. To be an SMME means that I need to put more pressure on what I am doing. I must be responsible for everything that is happening. (TE6, Interview, 4 September 2014)

Once farmers have their own units, they see them as their own businesses, even though they are part of the Timbali cluster. The trainees interviewed do not yet share this view:

> Everything I do is for myself, when I make a profit and a loss. Yes it's mine not Timbali's. They assist us to run the business. If I make a loss, it comes from my reserve profit. (TE1, Interview, 3 September 2014)

> That farm, that open land over there is mine. The one you see with the small cabbages, we planted it yesterday, it's mine. (TE4, Interview, 3 September 2014)

Since most of the farmers joined Timbali as employees, the change from employee to becoming self-employed requires a fundamental change of mindset, and takes place gradually, often with the help of a role-model:

> You can't grow something today, harvest in three months' time and make a profit. You have to do this over and over again. TE1 was one of the first. The others on the cut flower side see what she has gone through and she's still here and she's making it. She becomes their role model. So they are willing to bite the bullet because it is a long process. (TM2, Interview, 3 September 2014)

Staff members notice a change in farmers when they realise what they can do to affect their income:

> When they come to you realising that for them to start making money they must also save on the expenses. That's when you see there is a bit of a change. And also the penny drops when they start making profit because they realise it won't be the same every month …. The amaVeg farmers are not there yet. (TM1, Interview, 4 September 2014).

4.9.6 Growth in confidence and cultural changes

Growth in self-confidence among farmers is evident when they are able to make changes and decisions on their own. These often involve resolving conflict:

> They start to take more and more decisions on their own. You throw a challenge at them in the cluster meeting and walk out, asking them how they are going to solve this. Then you leave them, you don't interfere and they brainstorm. (TM1, Interview, 4 September 2014)

Cultural changes occur when challenges impacting on a business are addressed, and are often the result of increased confidence. Such challenges, described earlier include overcoming of the initial unwillingness of male farmers to pick and work in the packhouse, and female farmers beginning to take decisions on their own. In Nwanedi, farmers' husbands, who rent land to their wives, still feel they can take decisions, even though they are not farming. At times, female farmers are able to challenge these practices:

> Something changes, they just click. Firstly they have the guts to say no this is my land and farm and I will make my own decisions .... The kids make them stand up. (TM3, Interview, 3 September 2014)

Other cultural issues that arise are willingness to deal with conflict, overcoming the sense that it is disrespectful to look people in the eye, talking openly with white people, speaking about pregnancy and illness and saying how they really feel:

> Initially when they walk in there are certain cultural things that we have to root out. For example, they can't look you in the eye. It's our culture because it's disrespectful. But in the western world you are shifty if you can't look someone in the eye, you are hiding something. So here we try to overcome such things. Also in our culture conflict is avoided. Mostly they try to avoid conflict. (TM1, Interview, 4 September 2014)

Cultural challenges are not always resolved, and often require greater sensitivity to the racial and cultural backgrounds of the farmers, sometimes presenting challenges for facilitators. The Centre Manager, who is black, noted that farmers sometimes

resist transformation where they feel others have no right to question their cultural practices:

> At times it puts you on the spot as well. They think, you are black, why don't you get it? I don't think it is addressed enough .... I also have a challenge because my experience is different to theirs. I grew up in an environment where a lot of us had already transformed. [*The white marketing manager]* has a very strong relationship with them, they also go to her unless they feel it is a cultural issue that they can't discuss with a white person, I don't know why. (TM1, Interview, 3 September 2014)

4.9.7 How transformation takes place

Farmers' experiences at Timbali highlight a crucial transformation they need to make, from seeing themselves as employees to working for themselves. Effecting such change among farmers is difficult; it is one of the most difficult aspects of the programme to implement. Role-models play an important part in helping farmers to make changes:

> Change is difficult, I have seen that at times it is very difficult to modify the system and get their buy-in …. We use role models. If you introduce it like that gradually, it becomes much easier for them to adapt. So we don't take the entire group at first. We get the earlier buy-in from graduates, people we know have an influential role. Then we explain and workshop them first. They become the ones who communicate the change to others. It's easier that way. (TCEO, Interview, 4 September 2014)

Change is effected by both the business development process and by specific critical events. When they are mutually supportive, the experiences can be transformative for the farmers. Timbali's process and structures offer a way for farmers to address challenges and to respond to critical incidents.

4.9.8 The business development approach and cluster

Staff members see the combination of the structured business development approach with the activities that form part of the cluster as the way transformation takes place. They see it happening incrementally:

> The nature of the work helps to filter out those who won't succeed. (TM1, Interview, 4 September 2014)

Cluster business meetings are a forum in which farmers are encouraged to talk about issues that concern them. To reach this point, however, takes time and the provision of constant feedback:

> Weekly meetings encourage people to talk about things, but I have to say, in the first few months you battle. It's really difficult. What normally pushes them from our side is if they receive feedback timeously. If you don't give feedback they think this can't be serious. But if you give them feedback and say guys, this is how you performed, these are the guys who were outstanding, and you make them stand up and acknowledge them with a clap, the rest of you were mediocre, you need to improve. Then they see that as a challenge. The next time, there will be more volunteers, more people willing to participate. (TM1, Interview, 4 September 2014)

4.9.9 The hailstorm and the strike: transformation from critical events

Critical junctures can generate transformative experiences. These emerge from moments of crisis and potential disaster for the enterprise which provide the impetus for transformative learning. Two such incidents were a hailstorm that took place at the end of 2013, and a strike by amaVeg trainee farmers in April 2013. TE4 speaks about the devastating effect of a hailstorm on her crop:

> Last year the hail beat all my marrows here. I was really sick, it seemed like the hail beat my own child. The whole block where you see we have planted cabbage, the hail just came and beat everything.
>
> At first I cried. And then I stood up and took everything out because you cannot sit and look at it die. We took it all out. There were two blocks. We

> replanted in the third block over there, and I am selling marrows now. Timbali helped us to stand up and carry on. (TE4, Interview, 3 September 2014)

That experience triggered a different form of learning, which involved better planning forward thinking and problem solving:

> I think it showed us that in future we just have to try to protect our vegetables as early as we can. If I can go home to farm, I have to think of a shelter to cover the vegetables. Also I need to save from my profits so that if the hail comes I can manage. (TE4, Interview, 3 September 2014)

The second event was a strike by trainee amaVeg farmers. Prior to locating amaVeg farmers to Friedenheim, Timbali employed a different approach for the project. This entailed renting space at an existing commercial farm, called Green Veranda, and contracting the farmer to run the project and provide mentoring services for the trainee farmers, who worked adjacent to the farm employees. Despite the training and specific project inputs they received, trainee farmers saw themselves as employees. The farmer also tended to see them as employees who were not as productive as his own (De Klerk, 2013).

In April 2013, probably influenced by a national transport strike, the trainee amaVeg farmers went on strike. Timbali asked three of its current SMME and graduate farmers to assist in communicating with the striking young trainee farmers. Much of their communication was about the differences between being an employee and a trainee farmer (De Klerk, 2014a).

> They were doing exceptionally well. It's just that they didn't want to be part of the system. It was a bit of rebelliousness, a lack of trust, and no insight into what it really is to own a business (TCEO, Interview, 4 September 2014).

TE1's experience, and her standing among the trainees, was critical in assisting with this understanding:

> If it wasn't for TE1, there would not be Timbali here today. The young people were toyi-toying under the trees. She was the one who said to them this business is for me, it is not for Timbali (TCEO, Interview, 4 September 2014).

As a result of the strike, the model was adapted, and ultimately the AmaVeg farmers who did not drop out were relocated to Timbali's Friedenheim location, where the amaBlom farmers are. For many of them, as the only bread-winners in their families, their immediate earnings were more important than the long-term benefits of waiting for their own businesses. They also struggled with the work ethic required of them, and did not want to be part of the Timbali system (De Klerk, 2014a).

The amaVeg farmers' experience at Green Veranda and Friedenheim respectively illustrates some of the challenges and opportunities of isolating youth initiatives from mainstream work activity. At Green Veranda, trainee farmers worked with farm-workers who had a clear understanding of their roles and what was expected of them. The Timbali farmers felt like employees, but could not manage a similar work discipline. At the Friedenheim agri-park, by contrast, having younger farmers working alongside older ones is helpful, and allows farmers to learn from more successful role-models. The Centre Manager explains:

> It tends to bring discipline. The older ones are more grounded and reliable, they become role models for the younger ones. (TM1, Interview, 4 September, 2014)

4.10 Youth entrepreneurship development: Programme considerations

Considerations arising from the interviews about youth entrepreneurship interventions have already been addressed in this chapter. These are primarily about recruitment, dedicated programmes for youth, and the importance of life skills.

Life-skills help to address soft skills that have been absent in young farmers' home and educational backgrounds. The Centre Manager elaborates:

> You can see our syllabus, understanding the self, valuing relationships, building friendships, facing choices, building character, respecting others, character matters, role models, right choices, gratification and so on …. We can give them a tool to work with, but they don't connect the dots. There is a lot of entitlement and not understanding how a business operates. They don't take ownership, so you have to actually develop that in them. (TM1, Interview, 4 August 2014).

In addition to these, working with young people can present challenges that may be generational:

> One day they are fine, they are doing the work really well. The next day they just rock up, put on their earphones. It is one of the things we discuss at our weekly meetings. (TM1, Interview, 4 September)

> You have to make allowances for some unique things. You can't always say this is the system, this is a problem and you have to get on with it. We should be able to be sensitive. (TM1, Interview, 4 September 2014)

> Sometimes we think differently, but if you think you have what you need to be in the business, you should do the right things, I think so. (TE7, Interview, 4 September 2014)

4.11 Conclusion

Timbali's experience demonstrates how a structured approach to farming and entrepreneurship, called the yellow brick road by the CEO, can help people with few other options enter into the economic mainstream. Successful farmers in this approach are rural, uneducated and do not own their own land or assets, factors usually considered constraints for entrepreneurs.

Timbali's model is market-driven. A guaranteed market for what farmers grow through a Global G.A.P. accredited packhouse ensures quality products that meet the demands of high-end retailers like Woolworths and Shoprite, export markets, and the Johannesburg Fresh Produce market. The focus on entry into established product supply chains differentiates Timbali's small-scale farmers from subsistence-level farmers who are only able to sell their produce locally.

The model, however, requires substantial resources and investment in infrastructure and an enabling environment that provides support and specific procedures to farmers at each level of the value chain. This support is offered primarily through a cluster model that allows farmers to achieve the economies of scale needed to

compete commercially, share the costs of inputs, and access training in technical farming, business and life-skills.

The best results have been achieved through farmers entering the agri-park itself, where Timbali is able to prescribe procedures and ensure adherence to quality measures, and through satellite agri-parks where farmers are clustered together with Timbali acting in a consultative capacity, but still providing market access through its packhouse. Lesser success has been achieved with farmers graduating from the agri-park to become out-growers in their home areas on land obtained through arrangements with traditional authorities, still with access to Timbali's packhouse, but without the infrastructure and support of the agri-park.

Comparisons between sub-programmes shows that recruitment strategies targeting youth with a potential business opportunity are less effective than recruiting people with some prior background in subsistence farming. They also show the value of a mix of ages, where older farmers act as role models for younger ones.

Despite all the support Timbali offers, successful farmers have to make a transition from their self-perception as employees, to becoming entrepreneurs able to take full responsibility for what they do, and to take control of their environment. Not all recruits are able to do this. Those who do have the discipline and work ethic, and benefit from support structures and learning opportunities that enable personal transformations to take place.

Chapter 5 Maxum Incubator: The incubator in the ecosystem

5.1 Introduction

5.1.1 The Maxum Incubator, Innovation Hub

The Maxum Business Incubator is a sub-programme of the Innovation Hub, a science and technology park in Pretoria. The Innovation Hub's mission is to promote the socio-economic development and competitiveness of Gauteng by fostering innovation and entrepreneurship (GGDA, 2015). A wholly-owned subsidiary of the Gauteng Growth and Development Agency, it falls under the Gauteng government's Department of Economic Development.

Designed to accelerate the growth of high-potential technology start-up companies, the Maxum Incubator provides business mentorship, life cycle business development and other necessary support to start-up companies.

Four technology programmes at the Innovation Hub act as pipelines for companies to enter the Maxum incubator. These are:

- The Biopark, which focuses on the bio-economy (agro processing and pharmaceutical) sector
- The mLab, which supports mobile technology entrepreneurs
- The ICT (information and communication technology) cluster and advanced manufacturing, which aims to stimulate innovations in smart technologies programmes on site
- The Climate Innovation Centre (CIC), which focuses on the green economy (water purification, waste management and renewable energy).

The Maxum incubator has a pre-commercial or pre-incubation programme called the Innovation Factory and a commercial programme called Maxum Core. In the pre-incubation programme, Maxum assists entrepreneurs to develop their ideas and a product. In pre-incubation, companies do not generate revenue. When they move to full incubation at Maxum Core, they focus on commercialisation, revenue growth and

sustainability (The Innovation Hub, n.d.). To be in the Maxum Core incubator, companies need to have:

> made a sale, have a commitment for a sale, a first customer, or a contract of some sorts. (MM2, Interview, 28 October 2104)

Maxum incubates potential high growth technology companies which they believe can make an impact on the economy and society. Companies in Maxum Core have this potential, but do not yet earn a consistent profit. According to two staff members interviewed:

> That's why they are still in the programme, they need the services. We subsidise the office space and they get the mentoring and the training for free. We give them three years to be in the programme hoping that in the three years they get to the stage where they can be sustainable. (MM3, Interview, 28 October 2014)

> If they succeed, there's an opportunity for them to really make some useful impact and that will result in societal impact as well. (MM1, Interview 17 September, 2014)

Graduating companies rent space elsewhere on the Innovation Hub campus or find their own premises. In 2014 there were 44 companies in Maxum Core, 64 in the pre-incubation programme and approximately 70 others located on the Innovation Hub campus. When this research was conducted in 2014, the model and its variations had expanded to other locations such as Maxum Digital in Braamfontein, Maxum Media Accelerator in Randburg, and iKasi Lab in GaRankuwa and Soweto.

5.1.2 Structure of the case study

This chapter follows a similar structure to the previous case study, according to the main themes identified so as to facilitate comparisons in the cross-case analysis.

The first section outlines Maxum's approach to enterprise development, the model and what it offers. The second presents a profile of the entrepreneurs interviewed, a general profile of entrepreneurs in the incubator, followed by their pathways to

entrepreneurship. Measures of success used for both Maxum and individual entrepreneurs follows, with an examination of the challenges to the model and to entrepreneurs after that. The chapter then discusses what and how entrepreneurs learn, and presents reflections on their personal transformations, and how these take place. Finally, respondents' views on issues related to youth entrepreneurship are presented.

Since the narratives for two very different types of programme differ, the order and organisation of information into sections and headings is not exactly the same as in the Timbali chapter. This allows the unique nature of each case to be captured accurately.

5.2 The Maxum approach to enterprise development

Maxum's approach combines its environment and infrastructure with a three-tiered programme of technology inputs or product development, market development, and professional and value added services for entrepreneurs. Training and mentoring are part of this programme.

5.2.1 The environment and infrastructure

The environment and infrastructure of the Innovation Hub science park creates an ecosystem with interconnected components. Entrepreneurs can network and interact with each other, with partners, with other stakeholders, and with physical aspects of their environment, to achieve their goals. The Innovation Hub is located close to other agencies who seek synergies between government policy, academia and industry in order to facilitate innovation.

Agencies include the Council for Scientific and Industrial Research (CSIR), the National Research Foundation, the City of Tshwane's Research and Innovation Department, the South African Innovation Network (SAINe), and the Technology Innovation Agency (TIA). The Innovation Hub works with the Department of Science and Technology (DST) and the Department of Trade and Industry (dti), and

collaborates with universities in Gauteng. Through such partnerships, the Innovation Hub facilitates local and international exposure for entrepreneurs.

The Innovation Hub has a Start-Up Support Programme (SSP) offering grants of up to R1m for enterprises in its incubation and mLab programmes. Funding for the SSP comes from the private sector and government agencies such as the TIA and Gauteng Enterprise Propellor (GEP). Corporates can ring-fence money in that fund to get enterprise development points on their B-BBEE scorecards.

5.2.2 A three-tiered programme

The first tier of Maxum's model is product development, or technology input, in order to get a customer. Staff members call this the fail fast fail cheap model, and present it to entrepreneurs as feedback from the market rather than failure.

> If you can get through the first six months by getting a customer who's going to buy your product or services, then we'll put you through to the next phase. If not then we'll exit you. That's the litmus test. (MM1, Interview, 17 September 2014)

The second tier is customer development, which takes place once the entrepreneur has entered the full incubation phase. Entrepreneurs remain in Maxum Core for a maximum of three years. At this stage, the focus is more on business development to grow revenue than technical expertise.

> We try and build a strong sales and marketing capacity behind the business as an engine for growth. Our main thing now is to put numbers on the board. (MM1, Interview, 17 September 2014)

The third tier of the model is the professional and value-added services offered to Maxum entrepreneurs. Maxum fosters relationships with companies supplying whatever entrepreneurs need in their value chain, or to get customers. Services include accounting, compliance, tax and VAT information, intellectual property (IP) support, computer software, market access research tools, and legal services with commercial lawyers, all at subsidised rates.

Quarterly meetings with Maxum's executive committee open doors from a customer and market access perspective. Maxum also offers opportunities to entrepreneurs by obtaining briefs from corporates, and sending these on for them to pitch.

5.2.3 Training

Ideas workshops, business simulation games, biomimicry, business model canvassing and intellectual property are some of the training topics offered. High-level partners either offer these services for free or at rates Maxum entrepreneurs could never afford on their own.

5.2.4 Mentoring: a hands-on approach

Mentoring is a key service offered at Maxum, with each company allocated a mentor for three hours per month. Maxum's approach to mentoring is hands-on and starts at the pre-incubation stage. Maxum contracts highly skilled and experienced mentors who entrepreneurs can relate to. Their brief is to assist entrepreneurs with market access, and to add value to their businesses in whatever ways then can. Mentors see their role as far more than a weekly or monthly meeting where they give advice.

Business Consultant 2 believes contracting mentors at the pre-incubation stage differentiates Maxum from other incubators.

> That is a complete reversal of how the other guys do it. The fact that mentorship happens before the guys get into the incubators gives them an 80% higher probability of success than the other guys. (MBC 2, Interview, 27 November 2014)

Maxum uses business consultants, who are the most skilled, lead mentors, and mentors:

> Our lead mentors are ex-CEOs, industry professionals who understand environments very well. Our business consultants are the ten lead mentors; and the mentors are people with specific skills, whether in policy, in technology transfer, marketing, branding, digital law or whatever. (MM2, Interview, 28 October 2014)

Profiles of the two business consultants interviewed illustrate such skills. Both are successful young businessmen in their own right, and play multiple roles at Maxum. They were attracted to Maxum by the Innovation Hub environment and services. Business Consultant 1 is white, 24 years old, and runs a real-estate investment company. He has been trading since he was fifteen years old, winning an investment-trading competition while at school. He came to the Innovation Hub because his investment company was taking longer than expected to get established and he had some spare time. As well as mentoring, he sits on the investment committee at Maxum.

Business Consultant 2 is black, 31 years old, and runs his own strategic consulting company with a focus on the small business sector:

> I specialise in providing my services to agencies that support small businesses, like incubators, government departments, and privately run incubators. I am contracted to them, but the beneficiaries are the small businesses. (MBC2, Interview, 27 November 2014).

Business Consultant 2 first approached the Innovation Hub for office space. He did not get it, but was referred to MM2 who was recruiting new mentors. He currently mentors three companies and sits on the selection committee for new entrants to Innovation Hub programmes, and participates in open innovation exchange sessions with entrepreneurs.

Maxum mentors are expected to add value in practical ways, not just offer theoretical advice:

> To distil it into something very simple, all these guys sitting here want one thing, and that is traction in the market. And that's my job. I am not here to once a month talk a bit, see how it goes and write a report back. I get heavily involved in the business and do whatever I can to help …. It's like any relationship. You need that trust and then they are open to suggestions. (MBC1, Interview, 30 October 2014)

> There is a danger that it flips very quickly where the mentor relationship becomes a chore ... and then to them it becomes reporting, or a bit of admin, or something they have to do in order to make nice with the Innovation Hub. Then it becomes useless for both parties. (MBC2, Interview, 30 October 2014)

Entrepreneurs value this approach. ME3's negative experience of a mentor from another agency shows the difference:

> There was a challenge between me and that business coach. She always told me do this, do that …. It didn't work because she was just asserting herself. She did not understand. (ME3, Interview, 20 October 2010)

> A mentor is not someone who gives you advice theoretically about how to do business. The biggest value-add is the ability to say, you know I know someone at Telkom. The purpose is to open doors, to empower you, allowing you to talk to certain people. (ME4, Interview, 20 November 2014)

5.2.5 A different type of South African incubator

Respondents perceive Maxum more positively than they do other South African incubation programmes, especially in the public sector. This has to do with the types of high-tech innovative businesses incubated, and its approach to enterprise development.

> It is more technology start-ups with innovative ideas, whereas with my other incubation clients, there are guys who just do tenders and that is all they do … contract cleaning, catering, construction, but nothing complex or capital intensive. The brief from those incubators is to teach these guys how to improve their chances of getting tenders. Those are two vastly different conversations. (MBC2, Interview, 27 November 2014)

> We're one of the only incubators playing in that high-tech, high-innovation space. For a government agency that's very exciting. (MM2, Interview, 28 October 2014)

Such perceptions were not always the case; they result from major changes in the Innovation Hub's approach and a turnaround strategy within Maxum. Maxum is now seen as an exciting space offering valuable networking and other opportunities:

> We come from a very broken background. They brought me in to do this turnaround strategy, and that's what we've been building for a year and a half. (MM2, Interview 28 October, 2014)

> We have seen a lot of change in this place, the team changed. We used to say that this is where ideas come to die. I basically used the space at first for the Internet. It wasn't as interesting as this …. But now things have changed. Yesterday I was at the US Embassy where we were invited for the Young Leaders Africa Summit, initiated by Obama. I met people who will be interesting contacts. (ME4, Interview, 20 November 2014)

5.2.6 Recruitment and selection: the entrepreneurial pipeline

Maxum recruits entrepreneurs from different pipelines. The majority come from the general population in Gauteng, but strategic partners like the CSIR and universities refer people. Competitions form an important source of entrepreneurial talent.

The Innovation Hub runs four annual competitions under the GAP (Gauteng Acceleration Programme) umbrella. The top three winners win money from the Start-up Support Fund, a portion of which is cash, with the rest used for incubation at the Maxum incubator.

Three of the four entrepreneurs interviewed came through such pipelines. Their experiences illustrate the advantages of clustering the types of stakeholders in one place that the Innovation Hub has been able to do, and which allow entrepreneurs to feed off the environment and off each other.

ME1 was first referred by the South African Bureau of Standards to build his prototype. ME2 and ME3 were prize winners in the GAP ICT competition. ME2 first heard about the Innovation Hub through one of his partners, who has another business there, and they entered their idea into the competition.

The established pipelines do not always work, and as ME4 found, may get mired in bureaucracy. When he received no response from emails to the Innovation Hub he found a more unorthodox entry point. A chance encounter at a conference with the Gauteng MEC (Member of Executive Committee) for Economic Development at the time led to success:

> It seems people respect power, or money, more than anything else. They responded and within a week I was invited to come through. They interviewed me and accepted me into the programme. It was luck and timing. (ME4, Interview, 20 November 2014)

Maxum receives approximately 500 applications per year, including competition entries. Companies are shortlisted if they fit the Maxum mandate, which means that they fit the provincial plan and the National Development Plan, as well as supporting high innovation and high technology.

Final selections take place after companies pitch to a panel of external experts and experienced entrepreneurs. Pitches are scored on a matrix of five categories, namely the business model, the market opportunity, whether it is innovative, the team composition in relation to the industry, and the individual entrepreneur. Each category has a different weighting, with the highest being for the business model and the market potential. Maxum has an annual target of 26 new companies in pre-incubation and 16 in full incubation (GGDA, 2016).

5.2.7 Contributions and benefits

The Maxum incubator is highly subsidised. Entrepreneurs with office-space pay rent at below market rates; they pay their own telephone bills but do not pay for any of the other services offered, such as training and mentoring. Those in pre-incubation do not pay at all. An informal calculation by MM2 placed the value of what an entrepreneur could receive from Maxum at one million rand per year.

Maxum offers entrepreneurs significant benefits such as infrastructure, access to funding from the Start-Up Support Fund, office space and facilities, training,

professional services and access to marketing opportunities. A young entrepreneur acknowledges:

> I am grateful to this place. They have accommodated me from idea to product. They have given me access to facilities, a landline, and now an office. The biggest support they have given me is the SSP funding to convert the product from the metal prototype to plastic …. They also give us access to certain information that comes at a cost if you are outside. (ME1, Interview, 20 October 2014).

The environment creates a pressure to perform that entrepreneurs find helpful:

> When I'm here I know I am here to work and at least when targets are set and shared with the committee, you know you have to meet them. And it always helps being here. (ME2, Interview, 20 October 2014)

Ultimately, for interveners and entrepreneurs alike, it is the way the space is used and the linkages it facilitates between the people there that creates the most value:

> It creates that ecosystem for those networking opportunities. (ME1, Interview, 20 October 2014)

> It's a community. We're always talking, sharing difficulties or how we've overcome specific difficulties, sharing networks, sharing resources in terms of skills. Being around other entrepreneurs also pushes you more. (ME2, Interview, 20 October 2014)

> What you need for innovation is cross pollination between silos. You sit there and then you start checking what is this guy doing? Then you start talking, and that is when innovation starts to happen. But you have to create spaces for that. That is what the Hub is, at the heart of it, collaboration among a lot of entrepreneurs. That is the magic. (MBC1, Interview, 30 October 2014)

5.3 The Maxum entrepreneurs

5.3.1 General profile

Maxum entrepreneurs are mostly under 35 years old, with start-up companies in technology sectors. They are new market entrants, “trying to come up with the next big thing” (MM1, Interview, 17 September 2014):

> They are all techies. We come in with the business side of things, because they never think business. They're all consumed in their in their little innovation and products. (MM3, Interview, 28 October 2014)

The focus on younger people happens organically, Maxum does not stipulate age as a criterion for entry. Tertiary education is also not a prerequisite, although most entrepreneurs have some form of it.

Maxum is governed by the GGDA’s legislative mandate which includes the Employment Equity Act of 1998. Although available material in the public domain from the GGDA does not indicate specific equity targets in terms of the race, gender and age (GGDA, 2015; GGDA, 2016), staff nevertheless refer to equity targets in their interviews:

> We do have targets from GGDA to shift towards a more equitable-based programme. (MM1, Interview, 17 September 2014)

> Eighteen percent of our programme is female. We've got a drive towards beefing that up, but that's not by saying choose between the guy and the girl. We choose the better. We've got sixty-five percent black-owned businesses. (MM2, Interview, 28 October 2014)

5.3.2 The interview respondents

Demographic details of the four entrepreneurs interviewed are shown in Table 6.

Table 6

Profile of Maxum Entrepreneurs Interviewed

Interview Code	ME1	ME2	ME3	ME4
Age	26	24	29	31
Gender	M	M	M	M
Race	Black	Black	Black	Black
Title	Founder and MD	Founder and MD	Founder	Founder
Incubation phase	Incubation	Incubation	Pre-incubation	Incubation
Sector	Green	ICT	ICT	ICT
How long business existed	7 years (since 2007)	2 years (since late 2012)	11 months (registered January 2014)	3 years (since 2012)
Structure	PTY (Ltd)	PTY(Ltd)	PTY(Ltd)	PTY (Ltd)
No of employees	5 permanent, 4 part-time at peak	4	0	3
Average monthly turnover	Less than R80000	Less than R80000	None	Less than R80000
Revenue source	Grant funding from SSP and others Water bottling business	Grant funding from SSP	Grant funding from SSP	Grant funding from SSP
Highest education level	Diploma in small business and entrepreneurship (UNISA). Doing BComm through UNISA	BA in integrated marketing communication (AAA School of Advertising)	2 years accountancy at Walter Sisulu University. Banking certificate.	Honours in Actuarial Science

ME3 is in the pre-incubation phase, ME2, ME4 and ME1 are part of the full incubator. ME1 received special consideration to enter the incubation programme because he is not fully commercial, but receives considerable funding based on the potential value of his business. ME2 and ME4 have both individual and corporate customers and are generating some turnover, even if it is at an early stage and quite small. ME1 and ME3's products are not ready for market.

The businesses are all registered Pty (Ltd), and are not yet in a high growth phase, having turnover of less than R80 000 per month. ME3, still in pre-incubation, is not generating turnover. All the entrepreneurs have some form of tertiary education;

Three of the entrepreneurs have businesses in the ICT sector, and one in the green economy. The benchmark technology of ME1's company, Water Hygiene Convenience (WHC), is a leakless valve, a device put into toilet systems to save water in leaking toilets. WHC also bottles premium spring water for events and corporates (Water Hygiene Convenience, n.d.). Tour 2.0, ME2's company, is a marketing and booking platform to showcase cultural and community tourism in Africa (Tour 2.0, n.d.).

ME3's company, Safe & Sound is developing a mobile application and wearable sensor, similar to a smartwatch, to enhance the lives of deaf or hard of hearing people by connecting them to what is happening in the environment around them.

C-Flow, ME4's company, does data visualisation. The platform takes large amounts of data, whether text, files or financial data, and visualises it in ways, such as mind maps, that assist people to get insights and make decisions.

5.4 Pathways towards entrepreneurship

Details on the ideas behind the companies, entrepreneurs' formative backgrounds, and types of assistance received provide some clues about the pathways young people take towards this kind of entrepreneurship, and how their environment, family and prior work experience shape their direction.

5.4.1 Ideas behind the businesses

Experience of a problem or opportunity in the founders' personal environment plays a role in these types of businesses. ME1 and ME3 got their ideas from something they experienced with family members, ME2 wanted to do something he was passionate about, and ME4's idea came from his technical skills in the corporate

world. They started with what they saw in their environment, and then related it to what they can do, and who they knew who could help them.

ME1 responded to a leaking toilet in his grandmother's house. That led him to research toilet systems and to look for an automated system that could control leaks. A circuitous route to find support for his idea eventually led to the South African Bureau of Standards, who referred him to what was then the Fablab at the Innovation Hub to build a prototype. He used the facilities to build his first prototype long before he entered the Maxum programme:

> My first appearance at the Innovation Hub was in late 2008. There was a Fablab down there. It was more like an open garage for people to explore their mechanical skills. I was taught how to use the computer and the machinery. It was free. (ME1, Interview, 20 October 2014)

After spending time travelling, ME2 and his partners started their business because of their desire to share an image of Africa different to people's stereotypes, and their passion to showcase what makes each African community unique. He met one partner at a youth entrepreneurship conference in late 2012 and discussed:

> how best to destroy the single stereotype that's been created about the African continent. (ME2, Interview, 20 October 2014)

ME3 grew up with a deaf aunt:

> I always wanted to do something for her, like find some technology that could assist her and millions of other people out there to get connected with our world. (ME3, Interview, 20 October 2014)

While employed at an investment bank, ME4 saw an opportunity he thought he could translate into a business:

> I wasn't confident in the platform, and I wasn't an entrepreneur at the time, and I didn't know how to take advantage of opportunities. But I had a great opportunity there. (ME4, Interview, 20 November 2014)

5.4.2 Previous experience

Previous formal work experience, self-employment or employment in a family business, paved the way for these entrepreneurs to bring their ideas to Maxum. Although all left the security of a monthly salary to concentrate on their businesses full-time, their prior exposure to entrepreneurship helped them make this change.

After leaving school, ME1 started an outdoor media business with a friend, using bicycles. He left a business administration learnership with good prospects for permanent employment to concentrate on developing his leakless valve full-time, helped by the proceeds from his outdoor media business.

ME2 spent much of his high-school years working for his mother, who ran a number of businesses. His formal work experience was in marketing consulting for an advertising agency.

For ME3, entrepreneurship has always been circumstantial. During his school years he sold sweets at school and peaches from his garden to make money for transport to school and to help at home. He had never heard of entrepreneurship at school:

> There are things that we do that stem from how we grew up. We were indoctrinated to be professionals, not business people, but most people didn't even go on to study. Our schools don't have things like guidance, that stuff just doesn't exist. (ME3, Interview, 20 October 2014)

> What helped me there was poverty, that gave me a slap, got me to be focused as an individual. (ME3, Interview, 20 October 2014)

ME3 started two businesses before this one, the first cleaning dustbins, and the second manufacturing interlocking construction bricks. The brickmaking business was motivated by the lack of infrastructure in his home in Cofimvaba in the rural Eastern Cape. He worked in the formal sector concurrently, first in banking, then with an accounting firm, and finally with Eskom before leaving due to the demands of the brickmaking business.

5.4.3 Family background

The primary influence of a mother in the entrepreneurs' backgrounds is discernible. All four speak admiringly of a parent's overcoming obstacles to earn a living and encouraging their independence. At least one parent, especially mothers, had some education, working as teachers or clerks, and in ME2's case starting and running her own businesses.

Unlike many other children, who were "programmed to go and find a job" (ME4, Interview, 20 November 2014), ME2 grew up in a home with an entrepreneurial orientation, although his mother always advised him to get a job.

> She's experienced what it is like firsthand. She knows it's not the easiest thing to do. (ME2, Interview, 20 October 2014)

ME2 grew up with both parents, who immigrated to South Africa from Kenya when he was very young. He was heavily influenced by his entrepreneur mother:

> My mom has run various businesses. One was an African arts business which she started early in 1995, when she came here, and she grew it to a stage where she was supplying a lot of African and overseas galleries. (ME2, Interview, 20 October 2014)

ME1, from Garankuwa, north of Pretoria, was raised by a single mother who divorced when he was three. She worked at three jobs at a time to make ends meet, selling clothing and insurance as well as being a teacher. As a child he moved around a lot:

> She sent us to boarding school so she could juggle the balls better and give us a life she never had. So growing up I had to be an independent thinker, given that I had to be at boarding school, I needed to be self-reliant. (ME1, Interview, 20 October 2014)

> My upbringing, my mother for one, instilled a lot of confidence in me. She taught me humility, she taught me values. She really worked on my self-esteem. (ME1, Interview, 20 October 2014)

ME4 grew up in Soweto, and was also raised by a single mother from an early age after his father passed away. She was a principal at a primary school in Soweto, but made sure he went to a private school, in the south of Johannesburg.

Although he had both parents growing up in Cofimvaba, ME3's father was a migrant worker, a miner. His mother played the primary role in his upbringing:

> She was a clerk at the development corporation in farming there. When the corporations were closed down she was unemployed. (ME3, Interview, 20 October 2014)

5.4.4 Sources of funding

Funding for the entrepreneurs came from grant funding, competition prizes, investment from proceeds of previous businesses, entrepreneurs own savings, and in one case, help from family. Commercial banks play no role in funding these businesses. All four received a grant from the Innovation Hub's Start-Up Support Programme. ME1 obtained a cash grant of R600 000 from the SAB Foundation. ME4 borrowed from his mother:

> My mother was the biggest investor, and I am still paying her back. (ME4, Interview, 20 November 2014)

5.4.5 Factors assisting businesses

Factors perceived to have helped entrepreneurs fall into two categories. The first relates to personal attributes, and the second to more concrete elements such as funding, skills and winning competitions. MM1 believes that the right personal attributes come from a particular mindset that solves problems and looks for solutions to challenges. This type of mindset is also important in the corporate world. He believes:

> It's really just a mindset. You have to inherently have a problem solving type of approach to life, a bit more optimistic …. If you're wired like that, it's easier to become entrepreneurial but you can just as well be entrepreneurial in the corporate world with that mindset. (MM1, Interview, 17 September 2014)

Personal attributes important for entrepreneurship include the ability to attract and co-ordinate resources, the ability to judge who and what adds value to the business, a willingness to learn, taking a long term view and delaying gratification. Persistence and determination are a prerequisite.

> You need a good element of stubbornness …. It's a long-term project, we are all aware of that. We're only going to start bearing the fruit maybe five years from now. This, and skills and persistence has got us to the stage where people were comfortable enough to say let's allocate some funding to these guys to get them to the next stage. (ME2, Interview, 20 October 2014)

ME1's skills in marshalling financial support and persistence have helped him build a network of stakeholders. He does not view access to finance as an obstacle. His support has come from local and provincial government, academic institutions, and overseas entrepreneurial development programmes such as the Unreasonable Institute[8] at the University of Colorado, and Junior Achievement International:

> I must say money is everywhere. I research certain entities and what they are all about and what they want to do for the youth. I then see if I fit and if I need their systems. Then I approach them and persuade them. For every ten doors you knock on, only one opens. There is a lot of knocking. (ME1, Interview, 20 October 2014)

With no paid employees, ME3 mobilises family and friends, and people he meets at the Innovation Hub to help him for free:

> I have as a team member a guy who is a PhD candidate in computer systems engineering … I don't pay him, but he liked the vision and is thinking long-term. (ME3, Interview, 20 October 2014)

With resources like this available, ME2 and ME4 warn about being discerning about the help they:

[8] A global organisation that seeks to help entrepreneurs with potential to address major problems like poverty, lack of education, and access to clean water. Retrieved from http://unreasonableinstitute.org

> You have to know what wastes your time, and what actually adds value. It's important to tell the difference …. When things start picking up, you'll know who your real friends are, and more importantly the negative implications of having hangers on. People always think you are great, but keep people around who are willing to be critical and very honest about you and your progress. (ME2, Interview, 20 October 2014)

Practical things that have helped include getting to places like the Innovation Hub, winning competitions and funding. ME2 commented:

> Winning the GAP ICT and SAB Innovation award were good to keep the business alive and obviously just resuscitate our hope that we're onto something. Getting funded for us was a big vote of confidence. (ME2, Interview, 20 October 2014)

5.4.6 Entrepreneur or employee

Entrepreneurs have ambitious plans for their businesses which, from their perspective, are disincentives for them to return to formal employment in the corporate world. All four have received offers to do so. Key to their seeing themselves as entrepreneurs rather than as employees, is their ability to take a long-term view, adapt to uncertainties and delay gratification, even if it is difficult:

> All I am saying is it will make all these years worthwhile. Worst case scenario, we are looking at R5m revenue per month. That's the plan. (ME1, Interview, 20 October 2014)

> You want to know that what you are doing, and spending, is worth it. But it can be painful. I had a couple of job offers last year. It was difficult for me to stay on the road, and stay focused …. It's not just about me. I want to give my family the best I can, like any other parent. So if that starts to suffer, and I can see that I am impacting negatively, that I am not moving, and there is no light, then I would shut down. But being an entrepreneur you get used to the fact that your future is uncertain, so you adapt to that. (ME4, Interview, 20 November 2014)

ME4 plans to move out of the incubator into the enterprise building at the Innovation Hub once his contract with Maxum Core is over. His business is at a more advanced stage as a result of being at the Innovation Hub. He would eventually consider selling his business, or part of it, but not simply for short-term financial gain:

> I would consider, but they have to bring more than just the money. (ME4, Interview, 20 November 2014)

Staff believe the ability to take a long-term view is true of most entrepreneurs in Maxum. MM1 recalls a discussion between two black entrepreneurs at an Innovation Hub event:

> One said he's proud to say he's never worked for a company or for a boss. He started his business straight after university. And the other guy said “yes, me too, I felt so good to turn down my Polo job". Most of their mates get employed either by the banks or the IT firms. They now get a salary and the first thing they can afford is a Polo. The guy said "I didn't want to get a Polo job. I would rather wait until I can afford my Bentley.” He said it anecdotally, but it talks to the mentality in terms of what he's thinking …. It's a totally different mindset and it was very encouraging to see that. (MM1, Interview, 28 October 2014)

5.5 Measures of success

Formal measures of success for the Maxum Incubator are derived from indicators specified in their Annual Performance Plan for the GGDA. Entrepreneurs are measured by their progress towards milestones Maxum sets. Neither type of measure, however, presents a complete picture of what takes place.

5.5.1 Success for Maxum

Indicators of success in Maxum’s Annual Performance Plan are the number of companies in the pre-incubation programme, the number of new companies incubated, and the number that have graduated from the incubator. Numbers entering from pipeline programmes like the GAP competitions, the iKasi Labs in Garankuwa and Soweto, are also measured (GGDA, 2015, p.43).

Against these measures, Maxum is doing well. The 2015/2016 Annual Report shows that Maxum either met or exceeded the targets set for that year. These measures are shown in table 7 below.

Table 7

Performance by Maxum incubator

	Target 2015/2016	**Actual**	**Deviation from target**
New companies in pre- incubation	26	27	+1
Companies graduated	4	4	0
New companies incubated at Maxum Core	16	20	+4
Innovations commercialised	15	18	+3

Source: Adapted from GGDA, 2016, p.68

Despite meeting targets, however, staff express frustration at the perceived narrow measures used to define impact. Impact measures don't account for contextual factors in the incubator and the long lead times certain types of start-ups need to commercialise:

> There's not a long-term picture. They want to know how many businesses you have made, and how many jobs you can create in the short-term. Every single month and quarter we get asked about impact. (MM2, Interview, 28 October 2014)

This frustration reflects how views on the objectives of entrepreneurship development differ. Maxum interveners do not necessarily concur with what they perceive as government emphasis on only the job creation aspect of entrepreneurship, which tries to create as many enterprises as possible. Interveners are more inclined to support fewer growth oriented enterprises with potential for a more significant economic impact:

> The answer should be slightly different, that growing SMEs are the cure to job creation, not just SMEs. If there are 50 hair salons, and each one only employs 3 or 4 people, they will never scale beyond the street or the neighbourhood. But if you have a hair product company that goes global, then

> you tick all the boxes, like IP, innovation, and manufacturing. The way they deploy the money is just because of a mindset that produces an annual report that says we helped 50 thousand people and that's it and not let's go and look for opportunities out there. (MBC2, Interview, 27 November 2014)

> Economic impact is far more valuable than social impact. Where there's money you create jobs, where there's money you create more business, and it's just a spinoff and a multiplier effect. (MM2, Interview, 28 October 2014)

Business Consultant 2 explains how trade-offs need to be made between volume of jobs created, and the quality of those jobs:

> The brief from those [*other*] incubators is to teach these guys how to improve their chances of getting tenders …. I know one lady who got an R80-90m construction project. From an employment perspective that is work for a couple of thousand people, but with limited time. So from an absorbing labour point of view there is a lot of that, but it is temporary, or short-term …. The businesses able to give quality jobs that are long term and at a decent salary, they just don't have the employment numbers …. The ones with the volumes in terms of jobs don't have the quality. So it's a bit of a trade-off. (MBC2, Interview, 27 November 2014)

Such views have led Maxum to develop a system that captures broader measures of impact to include an assessment of the economic, social and technical aspects of a business, and establish benchmark scores for each element of those aspects. They believe this system would weigh the impact measures and give an ideal score for an ICT incubator in the country, thus reflecting more accurately on what companies in the incubator are doing.

5.5.2 Success for entrepreneurs

Maxum uses milestones to assess the progress of businesses in the incubator towards commercialisation:

> Our very simple milestone in our commercial programme is growth and sustainability. (MM2, Interview, 28 October 2014)

Targets are reported on in quarterly meetings with the investment committee. Entrepreneur ME2 sees the value of milestones in showing the direction of the business, and what has been achieved:

> When you're reporting back you're going to say this is what we achieved, this is maybe what we missed, but really this is what we're doing to actually remedy that. It's critical to have that. (ME2, Interview, 20 October 2014)

Few entrepreneurs, however, have moved onto a different growth trajectory, despite meeting milestones:

> I have seen guys reach milestones and succeed, where we started off in terms of the projections that they can move from a turnover of R50 000 to R80 000 per month. A couple of months later we are talking R100-R200 thousand …. I see a lot of that … but in terms of pure success stories where this enterprise came in at this level and has moved to that level, I haven't seen a lot of that. (MBC2, Interview, 27 November 2014)

5.6 Challenges for the Maxum model

Interveners believe that the Innovation Hub's government ownership and mandate, and an emerging enterprise development support industry in South Africa, contribute to an environment that protects entrepreneurs from real competition:

> By creating a unique support structure in South Africa we have created a unique set of problems as well. I think this hurts black businesses more than white businesses. That is a major challenge for business within South Africa specifically, on top of the usual stuff, access to finance, clients, which are stumbling blocks that all businesses face all over the place. (MBC2, Interview, 27 November 2017)

5.6.1 Government ownership

Maxum's legislative mandate precludes it from taking equity in the businesses it incubates. Interveners believe this attracts the wrong types of entrepreneurs, who

see it as a place where they can get things for free. Having no stake makes it difficult to assess impact and does not contribute to the sustainability of the incubator.

> I would want to run a full-profit incubator where you take equity because you want companies to survive and grow. People are attracted to the Innovation Hub because they can get things for free rather than to help them grow …. This is a very different mindset and mentality that doesn't breed competition, and entrepreneurs are about competition. (MM1, Interview, 17 September 2014)

> As soon you're not taking equity or don't have a stake in the business, you have no invested interest post the event …. If I were to run a programme like this on a private scale, that would be my sustainable factor, bringing in that equity, royalty generation, or profit share back into the company so that it can feed new companies. (MM2, Interview, 28 October 2014)

5.6.2 The enterprise development support industry

Enterprise development, as part of the B-BBEE requirement for corporates, has offered opportunities for both private and public agencies to support the development of small enterprises in South Africa (Rogerson, 2013; RSA, 2013b). It plays an important role in funding these agencies, and seeks to assist entrepreneurs to set up businesses in the value chains of established companies.

ME1's persistence in understanding corporate B-BBEE requirements has enabled him to attract a major corporate to partner with him in manufacturing his valves. This mutually beneficial arrangement is a positive example of how the B-BBEE codes can be used effectively for enterprise development when objectives are in alignment. The listed company benefits in all aspects of their B-BBEE scorecard. They claim supplier development points, as a supplier of ME1's business themselves, and for their corporate social responsibility focus on the environment and saving water.

One of the business consultants interviewed plans to use enterprise development funding from corporates to set up a venture capital fund. He has seen an opportunity

to recruit entrepreneurs and take equity in their businesses. The Innovation Hub itself is looking towards enterprise development funding as a future funding avenue.

On the negative side, the conflation of B-BBEE with entrepreneurship has created an environment where much entrepreneurial energy is channelled into accessing sources of funding, and that protects entrepreneurs from the rigours of the market. Interveners see entrepreneurs' perceptions of money being easy to get as counter-productive to entrepreneurial success:

> There's a lot of money out there. The issue is maybe that entrepreneurs are misguided or led to think that it's easy money. (MM1, Interview, 17 September 2014)

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> I think that is becoming a stumbling block for businesses, but the entrepreneurs themselves don't see it ... these businesses are built to be dependent on enterprise development or grant funding, or the dti, or the grant to give you ISO certification. I am worried about the sustainability of the businesses because truth be told it is a venture able to syphon off funds that are available out there for enterprise development, but it's not really a business. (MBC2, Interview, 27 November 2014)

> It has helped the guys to survive, to tick along. But I haven't seen a beneficiary of an enterprise development programme that has gone and listed their company. And for me that is the measure. (MBC2, Interview, 27 November 2017)

Negative perceptions from abroad about South African entrepreneurs have also resulted assumptions that B-BBEE measures and entrepreneurship are the same. Business Consultant 2 shares a client's experience of a global entrepreneurship conference in Washington D.C. where people were only interested in her business once she mentioned her operations in Kenya and Nigeria:

> It says a lot about perceptions of business in South Africa, where from an international perspective we have this cocoon environment where there are tenders, grant money, all these fancy incubators competing for the same

> businesses. So there is a sort of artificial environment where businesses do succeed. But when people think entrepreneurship in Africa or in emerging economies they are more likely to think of Kenya or Nigeria, or Ghana, anywhere but here. (MBC2, Interview, 27 November 2014)

Business Consultant 2 perceives government targets or quotas as having contributed to incubators competing for the same entrepreneurs, or accepting entrepreneurs already in other incubators:

> We are sitting here at the Innovation Hub pitching session and I see two guys who are currently in another incubation programme. That used to be a negative point on the business's chances of getting into the programme. But nowadays the competition for these businesses is such that I just get told to score them …. You end up being complicit because now you are just playing the game, you know the guy is milking the system. It is an exercise in what can I get where. They are chasing all these pockets of money, of funding, or free services. The result is you sit having a mentorship conversation with a person who sees the mentorship as something they have to endure in order to get those things. (MBC2, Interview, 27 November 2014)

5.7 Challenges for entrepreneurs

Entrepreneurs own perceptions of their challenges differ from those who support them. The major challenges for entrepreneurs are financial, followed by finding and managing the right mix of skills. Interveners perceive the commercialisation of ideas to be the major challenge for entrepreneurs at Maxum.

5.7.1 Finance

The strain of relying on diminishing savings requires discipline from entrepreneurs. ME2 started with ten months' worth of savings:

> But the non-income period lasted much longer. So it's a lot of personal difficulty, you need persistence to still stick to the idea and push through. It would be easier to say let me just go back to corporate. (ME2, Interview, 20 October 2014)

> In the first quarter of the year I survived through my savings. I exhausted them and then I started using the R60 000 cash prize. It requires a lot of discipline, there is no luxury. (ME3, Interview, 20 October 2014)

5.7.2 The right skills

The Innovation Hub provides networking opportunities for entrepreneurs to interact with skilled individuals who would like to be part of developing an exciting innovation. This saves significantly on costs. ME3 alluded to this earlier as something that has helped his business. ME1 has leveraged his partnerships with certain organisations to convince them to second staff to his business.

A disadvantage of this is that these people are not directly accountable to the entrepreneur. They sometimes do not deliver what is expected of them, or come to the end of their contracts with the agency that pays them.

> The designs of our website developer and in house graphic designer didn't meet our expectations, so we decided to part ways …. Some of the staff are given to us and covered by another agency like the Department of Environment Affairs. (ME1, Interview, 20 October 2014)

Similarly, understanding how to harness technical skills more specialised than their own can be difficult, but can ultimately lead to a better skills set for the entrepreneur. ME4 shares his experience:

> The lesson I learned is that I must be very careful because people can lead you on, especially in programming because most people don't understand. I used another company but they didn't have the mathematical and the statistical skills to pull it off, so I took the project on myself …. It was a big lesson in that sense, but it was worth it when I look back. I have a broader range of skills and a rare combination. I understand the business side, and I understand the technical side as well. That has made me a more rounded CEO, or MD. (ME4, Interview, 20 November 2014)

5.7.3 Commercialising: From inventor to entrepreneur

Maxum entrepreneurs do not need to transition from employee to entrepreneur, but from inventor to entrepreneur:

> I am not a scientist. That is one of the reasons, why it took so long to commercialise, my lack of that background. (ME1, Interview, 20 October 2014)

Senior staff members at the incubator see commercialising of entrepreneurs' products as their biggest challenge. Building a concept is not enough.

> There's quite a big drive towards inventors and academically skilled individuals coming into the system who want to be entrepreneurial. So it's a challenge to take that and change the mindset. (MM2, Interview, 28 October 2014)

ME4 understands the importance of commercialising ideas, as well as difficulties associated with it. It requires entrepreneurs to adapt to feedback from others:

> My first mentor helped me to take my idea from a very raw form to something I can make money from. I thought I was changing the world, but he showed me that ideas are a dime a dozen. Don't be delusional as well, don't go to your mother and say I've got a great idea and that's all you're going to do. There's a peer review process, other people have to agree … entrepreneurs fall in love with their ideas and then are unwilling to change them. (ME4, Interview, 20 November 2014)

5.8 How entrepreneurs learn

5.8.1 What entrepreneurs learn

Maxum's training and mentoring interventions emphasise hard technical and business skills. Personal development and lifeskills are not offered explicitly.

> My brief to the mentors is business development. And in there, you're going to hopefully have a bit of character building and that's nice if you have that sort of rapport with the mentor. But it should be fairly simple, look at the numbers and what they are they telling us. (MM1, Interview, 17 September 2014)

Technical and business skills are the foundation of the business development process, without which other learning is unlikely to be effective. Despite this, however, entrepreneurs' reflections on what they have learned refer more to personal development and life-skills. A large part of entrepreneurs' personal development is getting to understand themselves better:

> Don't underestimate the benefits of financial knowledge. It's imperative. It has to be there. It's actually a non-negotiable. But all-in-all it's big personal learning. It's about self-management. (ME2, Interview 20 October 2014)

> My previous mentor taught me to answer two questions, who are you, and why are you here. Who are you doesn't mean you are ME1 from Garankuwa, you are black. It means who is the you inside of you, and what is your purpose in life. That was the first lesson. (ME1, Interview, 20 October 2014)

The four entrepreneurs learn from their own experiences, from reading extensively, and from formal and informal mentors. They also learn from key moments and mistakes. The business development offered by Maxum provides a context for these types of learning to take place.

5.8.2 Self-learning

These entrepreneurs are largely autonomous or self-directed in their learning, and empower themselves with knowledge gained from reading or the Internet. Often books are recommended by mentors.

> I told my brother that Robert Kiyosaki[9] and Richard Branson are my business coaches but they don't even know that I exist. It's the power of reading. I attribute a lot of what I do to what I read. (ME3, Interview, 20 October 2014).

ME1 has been heavily influenced by Dale Carnegie's *How to Win Friends and Influence People:*

[9] The writer of Rich Dad Poor Dad, a self-help personal finance and investment book.

> That book changed my life. After that there were many others. I have read a lot but I haven't read enough. (ME1, Interview, 20 October 2014)

Entrepreneurs also take advantage of the resources available on the Internet to upskill themselves:

> We had to produce sketches of the mobile application, the feel, what it is going to look like …. So I took my laptop, looked on the Internet at how to do that. The huge part of it is just self-learning. (ME3, Interview, 20 October 2014)

5.8.3 Learning from mentors

All four entrepreneurs have benefited from formal and informal mentoring relationships. Formal mentors are those paid by an agency like the Innovation Hub. Informal mentors are not paid, but are people the entrepreneurs encounter on their own:

> I access them through books, my own inspiration, aspirations. People I will contact and say look I like what you are doing, I need your assistance. I associate with people who know more than I do, it shortens my journey. (ME1, Interview, 20 October 2014)

> I was fortunate in 2012 and last year to work with a decent businessman, and he was able to share a lot of lessons in terms of saying this is what you're going to go through. (ME2, Interview, 20 October 2014)

The match between formal mentors and entrepreneurs in terms of the skills they offer and their approach is important. Not all formal mentors have been helpful. ME4's best experience was with a mentor with whom he had much in common. Other mentoring relationships were not as successful. His experience, after a successful first mentoring experience at Maxum, illustrates this:

> After that I went to another mentor who wasn't as useful. I think he was too busy…. So I moved on MBC1. He's a trader, I've worked with traders. We share a lot in common, we read the same types of books, things we are

> interested in, we clicked. We could find symmetries, and he could understand what I was trying to do as well. (ME4, Interview, 20 November 2014)

5.8.4 Learning from mistakes and key incidents

Mistakes at key moments in the business have been important, albeit painful learning experiences, such as having the wrong partners, or realising that they have committed to a wrong course of action:

> Other lows were when the people who should be on your side are not, and those who are on your side are hypocrites. These emotional factors were big lows. Others are when you think you are on the right track but find out you are wasting your time. But although a low, there was always a lesson. (ME1, Interview, 20 October 2014)

5.9 Reflections on transformation: A shift in mindset

In reflecting on what has changed for them, entrepreneurs and interveners emphasise the need for a shift towards a more entrepreneurial mindset. This mindset entails an ability to see the world differently, to embrace uncertainty, and to take responsibility for changing their reality. According to MBC1:

> There is a saying that illiteracy in our age will not be the inability to read and write, but the inability to think laterally and change and adapt. So a lot of guys are very well educated but they can't change and adapt and apply their skills differently. That makes the market say we just can't use you. (MBC1, Interview, 30 October 2014)

The changes that occur as a result of the entrepreneurs' experience at Maxum refer again to their personal qualities rather than to technical or business skills acquired. Personal growth and the ability to differentiate themselves from peer practices and pressures are such changes.

5.9.1 Personal growth

Entrepreneurs believe they have experienced profound personal changes in themselves as a result of their experience at Maxum. Examples of positive personal

changes have been greater confidence and a sense of purpose in their lives, self-discipline, resilience, and becoming more value-focused:

> I have learned a lot about myself that I never knew. Resilience, humility, the value of money, and that I can sacrifice that which I thought I could not live without. At times I have no choice but to live without. It has really taught me to keep on keeping on, a phrase I learned from my grandmother. (ME1, Interview, 20 October 2014)

> When you've gone through what you think was the worst, you'll be surprised at what that does in terms of confidence and your ability to just see things through and ensure that you stick to something until it's done. Before that one was not really tested. (ME2, Interview, 20 October 2014)

> I am more conscious of people I let into my life. You let people in based on the values that you believe you can impart and also receive. (ME2, Interview 20 October 2014)

> In my family there is no-one like me. In a lot of families, entrepreneurs get this from talk about values and these kinds of things at the table. There was none whatsoever in my family. (ME3, Interview, 20 October 2014)

ME4's outlook on the world has changed:

> I see the world very differently. I understand a bit more about how you change things, how you build things, how you connect with people and how important people are. I think now if I had to go back, I wouldn't be the same. It would be so easy now if I wanted to move up in the ranks, I wouldn't have the fear. I don't fear people. You grow some teeth as well. (ME4, Interview, 20 November 2014)

Interveners believe this growth comes from an increased mental toughness:

> What people miss about entrepreneurship is the mental aspect of it. 80% of it is being mentally extremely tough …. I think for them it is to realise that they can change their own reality. If I can help them to realise that, that is enough.

> What I am trying to indicate to them is that they are not powerless. That is the transformative thing, but it starts with a spark. So I think initially the biggest thing is to get guys to reconnect with that spark. (MBC1, Interview, 30 October 2014).

5.9.2 Embracing uncertainty

Whereas ME4 comments about having adapted to the uncertainties of entrepreneurship, Business Consultant 1 makes embracing uncertainty an essential component of entrepreneurial growth:

> The future is to an extent, uncertain, but you have to bring certainty to it, you know. I think that is the biggest skill of an entrepreneur. (ME4, Interview, 20 November 2014)

> You jump from having been in a corporate environment for a few years to this. Until you make peace that there are no hours, there is no security, and there is no status, you will not move forward as an entrepreneur …. The moment you see it for what it is, you are free. Then you can start moving, only then. (MBC1, Interview, 30 October 2014)

5.9.3 Taking responsibility

Entrepreneurial growth includes entrepreneurs taking responsibility for themselves and not seeing themselves as victims:

> It is just taking responsibility for yourself. This is what I say to young people, when things don't go well. Even if there was no apartheid, the people blaming the legacy and history of the country would still find someone to blame. (ME3, Interview, 20 October 2014)

This is an opposite mindset to one noted by staff earlier, in which incubation tenants expect things for free and do not take responsibility for growing their businesses.

5.9.4 Transcending expectations of conformity and networks of need

Personal growth and the values acquired in the process of their entrepreneurial journey have served entrepreneurs well in developing their ability to follow an individual path and invest in their businesses. They perceive that these values allow them to detach themselves from some lifestyle pressures, the family expectations they face and the career expectations they grew up with:

> My peers do things in a certain way, and expect me to do the same. Success to them is a German car, a big house, branded clothing, the right labels, that kind of a lady, that kind of a lifestyle. That doesn't resonate with me .... For them to live this lifestyle they need to earn a certain amount in order to get access to credit. I think otherwise. I buy things with cash, live within my means and reinvest all proceeds into the business. (ME1, Interview, 20 October 2014)

> Fortunately I am not into buying expensive suits and those kinds of things. A lot of guys that I know get that pay-cheque, and don't reinvest in the business. They go out there and have fun, enjoying the money. (ME3, Interview, 20 October 2014)

Entrepreneurs have to be disciplined to achieve the goals they set themselves, to use money wisely and to discern the agendas of people who advise them and want to work with them, especially when they start getting money. ME1 describes what happened when he won an award:

> An official of Technology Innovation Agency came to me and said let's go and double your money at the casino. But I just let it be. There is a lot of that kind of pressure. (Interview, 20 October 2014)

Family and community expectations make investing in their businesses difficult for entrepreneurs.

> Sometimes you get this huge lump sum of money and keeping that requires discipline, when you are under severe poverty. There are a lot of people around your life driven by desperation. There are things they want you to do,

> silly things. And you get into it because your situation is difficult. (ME3, Interview, 20 October 2014)
>
> As a first-born son at home I feel obliged to assist my parents, but back then I had a job to back me up. That is the reason why I pay myself a salary. At home people didn't understand, and I received a lot of bashing. When I left Eskom I even had to lie to my parents, telling them I am going to work for a small company …. My parents saw people I went to school with buying cars, even paying lobola and getting married, and it's not happening with their son. I realised I had to tell the truth. (ME3, Interview, 20 October 2014)

5.9.5 How transformation is effected – does Maxum have a role?

There may be unanimity about the need for shifts in entrepreneurs' mindsets, but interveners are divided about Maxum's role in effecting the kinds of personal transformations described above. Some staff members believe this kind of entrepreneurial mindset is not acquired at Maxum, whereas others believe entrepreneurs shift through the experiences that take place at Maxum, some gentle and some less so.

> You should arrive like that. The programme is not designed to do that. It is designed give you a kick start and help you get out of it quicker. It's really about a way of thinking. You can be entrepreneurial anywhere. It's thinking that creates value at the end of the day, or adds value to other people's lives. It's difficult for me to teach you. (MM1, 17 September, 2014)
>
> You beat it into them …. I find a lot of entitled entrepreneurs. As soon as they arrive, even at our first pitching session I always say to them this is not school. You are the captain of your ship here, and we are a supporting function. We are not here to take over your business for you. (MM2, Interview, 28 October, 2014)

Even business consultants are ambivalent. Mentoring affects the transformation in people's perspectives if they are open to it, but only if there is a perceived value in

how it adds to business development, and if the mentor is completely hands-on and engaged. Then entrepreneurs are more likely to take advice on other things:

> It's about building the relationship. Then you start building strategy and the business around the uniqueness of that person. You don't do it for them; you can help that person on their journey to rediscover their own spark. I can build your financials, I can do your spreadsheets for you, whatever. But at the heart of it, if that magic is not there, I can't help you. So that is where I start. (MBC1, Interview, 30 October 2014)

For changes to be sustainable, entrepreneurs need to be able to step back from their daily operational challenges and look at their businesses from a more strategic perspective:

> The problem is not that the lights come on, but how they stay on. In the context of a programme or even mentorship sessions, you can see that shift. They come with a serious concern, and by the time they walk away you have addressed that concern. Unfortunately as soon as that conversation ends, the phone rings, the truck has broken down etc. So they have a higher likelihood of rolling back into past behaviour than of sustaining it …. I think that most of the entrepreneurs I see in these programmes just aren't at that level. They are still running around within the business, not working on the business. So you tend to find that the learning moments don't stick. (MBC2, Interview, 27 November 2014)

Entrepreneurs' own reflections on their personal transformations, however, suggest that these changes do take place at Maxum alongside business development, even if they are not conscious of them and they happen incidentally.

5.10 Issues for youth entrepreneurship

Maxum is not specifically targeted at young people, but the majority of entrepreneurs there are under 35, probably because of the types of businesses it supports. Respondents' comments and suggestions, specifically about youth entrepreneurship, centre on advantages and disadvantages, with programme considerations directed at entrepreneurs of all ages.

5.10.1 Advantages of a high tech niche

Much of the literature about young entrepreneurs centres around what they lack and how difficult it is for them. ME3's comments about the difficulties young people face in business echoes this:

> Youth lack access to microfinance, collateral, and access to packaged information that would disseminate information to companies looking to incubate upcoming businesses. (ME3, Interview, 20 October 2014)

Disadvantages for young people entering into entrepreneurship are the absence of a track record, not knowing particular work conventions and protocols, unwillingness to persist with hard work, and unrealistic notions of entrepreneurship. The following comments illustrate:

> In some industries people trust grey-haireds, especially in the tourism industry where relationships were formed maybe fifteen, twenty years ago. (ME2, Interview, 20 October 2014)

> The difficulty about jumping into business straight out of varsity is you tend to miss simple things like drafting minutes after meetings, corporate hierarchy and dealing with colleagues. These are those things you don't know if you're not exposed to them. (ME2, Interview, 20 October 2014)

A lack of originality sees many youth-owned businesses replicating what already exists. According to MBC2, this is a more generalised comment about other enterprise development programmes rather than what he has seen at the Innovation Hub:

> We tend to create the same thing over and over again, or see the same types of businesses. They tend to look out in the market and see who is doing what, and then they jump onto the bandwagon. With the older guys it is more what industry do I know, or am I bringing something new into the market. (MBC2, Interview, 27 November 2014)

Interveners believe that young people from disadvantaged communities have a different set of challenges, sometimes fuelled by unrealistic expectations. The MM1 sees it as an unwillingness to put in the necessary work, whereas MBC1, who runs an entrepreneurship club for learners at Pretoria Boys High School, believes it is driven from a need to access resources:

> You'll find that in poorer communities, you might have bright ideas and bright sparks, but it's the grind that really delivers. That's what entrepreneurship is about. And most young people are not prepared to put in the grind. (MM1, Interview, 17 September 2014)

> What I find is that from disadvantaged communities their primary aim is very much resource driven, they want to start a business to survive…For both them and white guys from Boys High, their idea of entrepreneurship and business is formed by the media …. They see the before and the after. They don't see the in-between, the real difficult graft. That's what I try to dispel every week when I go there. (MBC1, Interview, 30 October 2014)

No-one mentioned the age of an entrepreneur as either a help or a hindrance in raising capital or getting a grant. As a positive, young people may have fewer responsibilities.

> I don't have a bond or a home. I wasn't paying monthly car payments. I don't have any children. So it makes it much easier. And there is an element of naiveté in terms of just running with things. (ME2, Interview, 20 October 2014)

However, Maxum's experience, as described by a manager, offers a different view of the possibilities for youth entrepreneurship:

> In my little bubble here, the young black male is hungry and they're coming in with incredible skills and drive. There is a maturity that you do see in some of the companies run by older people, but, these guys coming out of high school are so self-sufficient and confident that they are picking that type of maturity up very quickly (MM2, Interview, 28 October 2014).

In the hi-tech space, younger people may be more comfortable with new technologies. The recruitment pipelines clearly target those with innovative ideas, technical skills and often work experience. Young entrepreneurs have the time to dream and explore before they are weighed down by other commitments. Business consultant 1, himself 24 years old, sees this as a big advantage they have over their older counterparts.

> As we grow older, you have to constantly fight against your thoughts becoming narrow. They don't have that yet …. That allows them to try stuff other guys would never try. (MBC1, Interview, 30 October 2014).

5.10.2 Programme considerations

There were few suggestions about what to include specifically in a youth enterprise development programme, perhaps because most of the entrepreneurs at Maxum are already considered youth in the South African context. Most of the interveners, however, had some ideas of what they would do if they could design their own programmes. These ideas included targeting only start-ups and taking equity in them, incorporating a greater tolerance of failure, using experience of practitioners to try new, innovative models, and resolving contradictory messages about the purpose of entrepreneurship development.

MBC2 is already thinking about a company that can use enterprise development money to set up a venture capital company:

> I wouldn't bother with existing businesses. I would do purely start-ups. I would recruit entrepreneurs, build a business around them, take an equity stake, drive it and have a customer at the end of the day. Would that lead to sustainable businesses? I don't know. (MBC2, Interview, 27 November 2014)

The stigma of bankruptcy in South Africa hinders potential entrepreneurship. MBC2 would like to see an environment more tolerant and nurturing of failure:

> I wish we could have the American mindset with regards to failure. In South Africa from a regulation and a society point of view it is frowned upon to become bankrupt. In the States you just go again. We need to nurture that spirit. (MBC2, Interview, 30 October 2014)

5.11 Conclusion

The high-tech innovative space at Maxum offers opportunity to a certain type of entrepreneur to access technology and business skills, learn from established and emerging entrepreneurs, and commercialise their ideas.
Through its infrastructure and environment in a technology park, Maxum seeks to produce high growth high impact technology start-up businesses rather than many businesses that operate at above subsistence levels and do not have the potential to grow signifcantly. It does this through a model comprising product development, market development and professional services, coupled with support infrastructure which is offered to entrepreneurs at little cost. Grants from Maxum's Start-up Support Fund assist entrepreneurs in the developmental stages of their businesses.

The incubator creates space and opportunities for entrepreneurs to collaborate and create linkages with established players in the corporate sector, including potential investors. Beneficiaries are generally under 35, urban, black and very comfortable with technology. They are also highly educated and employable in the corporate sector.

Through Maxum's processes, entrepreneurs make important transitions. One of these is shifting from a self-perception as an inventor to becoming an entrepreneur through the commercialising of their products. Doing so requires a mindset shift, and develops through the Maxum model and training, as well as from a hands-on model of mentoring from young, highly skilled mentors who are often entrepreneurs themselves.

Successful entrepreneurs in this space tend to be self-directed in their learning, and recognise the personal growth they have experienced, which includes the ability to adapt to uncertainty. Since they are highly employable, and probably become even more so as a result of their interactions at Maxum, they have to learn to take a long-term view for growing their businesses. Those views may be at variance with those of their peers who have been socialised into finding employment that can deliver

more immediate material rewards to themselves and their families. Such changes require personal transformations for entrepreneurs.

Chapter 6 Cross-case analysis

6.1 Introduction

Chapters 4 and 5 provide a thick description of two cases of entrepreneurship development. Thick description refers to “a description of the setting and participants of the study, as well as a detailed description of the findings with adequate evidence presented in the form of quotes from participant interviews, field notes and documents” (Merriam & Tisdell, 2016, p.257). Data from interviews and documents converged in the analysis of each case, which according to Yin, maximises the use of a case study design, as opposed to being presented separately (Yin, 2014).

The cases examine in-depth how different role-players, whether interveners or beneficiaries, experience certain variables within each entrepreneurship programme. These variables have been synthesised into themes.

Findings on Timbali Technology Incubator and the Maxum Incubator have been presented separately to give the reader a clear understanding of the individual nature of each case. This discussion chapter offers a cross-case analysis that discusses findings from these two chapters in relation to research questions posed, and the themes derived from the literature, particularly in relation to aspects of entrepreneurial theory and transformative learning.

In using a cross-case analysis of findings from two cases, and inductive reasoning relating to the theoretical argument in the literature review, this dissertation hopes to generate new insights on the application of that theory. Qualitative, inductive, multi-case studies seek to build abstractions across cases (Merriam & Tisdell, 2016) in order to generate findings that are more robust than from a single case (Yin, 2014).

In answering questions about what models of entrepreneurship intervention are appropriate for certain types of South Africans, and how young entrepreneurs learn, the findings presented in this chapter fall into three main parts.

The first part interrogates certain assumptions that have become embedded in policies designed to promote youth entrepreneurship actually contribute to the failure of these policies to reach their goals. The discussion presents findings on how these myths or mis-assumptions play out in real situations, and how they affect measures used to assess the success of entrepreneurship development programmes.

Examination of the paradoxes inherent in these assumptions leads to the second major part of the discussion. This part presents findings on a different way of thinking about youth entrepreneurship development, as suggested by an analysis of the approaches and innovative components adopted by the two cases.

Before moving to the third central concern, of how entrepreneurs learn in these programmes, the chapter presents additional findings on the types of inputs required to support Timbali's and Maxum's approaches, and on the challenges young entrepreneurs in these programmes face. The challenges are presented as a precursor to the central analysis of entrepreneurial learning, which takes place in response to the challenges encountered. Challenges at three levels are discussed, namely general challenges shared by young entrepreneurs in South Africa and elsewhere, specific business challenges, and deeper underlying and cultural challenges.

Findings are viewed through a theoretical framework of transformative learning in response to a state of liquid modernity (Bauman, 2000). The personal development of the target entrepreneurs themselves, the types of learning and personal transformations that take place, how they happen, and whether and how the two programmes actively promote these, are examined in relation to the theoretical positions outlined in the literature review.

The chapter uses insights from both developed and developing countries and considers their applicability to South Africa. In analysing the data in this way, the discussion draws attention to some of the underlying assumptions about entrepreneurship development in South Africa, the paradoxes embedded in these assumptions, and how they affect practice to either help or hinder further

development in this area. This culminates, in the next chapter, in some conclusions about a contribution to the theoretical foundation of a new way of thinking about entrepreneurship development for young people in South Africa.

6.2 Paradoxical assumptions about entrepreneurship development

Certain assumptions about the potential of entrepreneurship development to solve social and economic challenges are that:

- Entrepreneurship can be a solution for those not in employment, education or training (NEET)
- The small business sector and entrepreneurship creates significant employment
- Enterprises grow on a continuum, from informal micro enterprises to growth oriented small, or larger businesses
- The diverse goals of entrepreneurship are compatible
- All that is required are certain limited inputs such as finance and training.

The discussion that follows highlights the contradictions that arise when these assumptions in policies designed to promote youth entrepreneurship development are accepted uncritically.

6.2.1 A solution to youth unemployment

6.2.1.1 Youth profile: Organically or by design

Neither Maxum nor Timbali is targeted specifically at youth under 35, although both comprise a substantial component of young beneficiaries. At the Maxum incubator, and the Innovation Hub in general, the preponderance of young entrepreneurs has happened organically and without design. This is likely the result of Maxum's relationships with higher education institutions serving primarily young people and the recruitment pipelines emanating from them. The propensity of younger people to be comfortable with technology and see it as the vehicle for innovation is also a contributory factor.

Timbali, unlike Maxum, provides an opportunity to compare a programme designed to specifically target youth (amaVeg) with one where the significant number of farmers under 35 occurred naturally (amaBlom). The characteristics of participants in both these Timbali sub-programmes are similar in other ways. However, the farmers in the two sub-programmes have performed differently, and Timbali has faced challenges with amaVeg farmers that it did not with the amaBlom farmers.

One reason for the difficulties encountered at Timbali may be that targeting only younger people does not yield the positive effects of older role models on younger people. Another more structural and general reason may be that recruitment strategies based on uncritical assumptions about entrepreneurship as an option for large numbers of unemployed young people, even in an environment as supportive as Timbali's, are inherently flawed.

The problems young people face finding work makes them the centre of employability policies, in South Africa and all over the world (dti, 2013a; ILO, 2015; Serrano Pascual & Martín Martín, 2017). The literature shows how such misconceived policy frameworks position youth entrepreneurship as a simplistic response to economic crises. Developed countries in Europe, such as Spain, which are still affected by the 2008 global recession in the form of growing levels of youth unemployment, have likewise persisted with strategies that contain similar contradictions and misconceptions (Serrano Pascual & Martín Martín, 2017).

Pascual and Martín Martín's research on employability policies for young people in Spain highlights how notions of employability have been reformulated to focus more on entrepreneurship, with an almost mythical representation of entrepreneurs as having the personal qualities to make up for what they lack in financial and other systemic support. Pascual and Martín Martín criticise the growing emphasis on individual responsibility in response to the increasing vulnerability of young people in an under-performing, changing economy characterised by growing casualisation of employment. The very skills necessary for entrepreneurship development are precisely what these young people lack (Serrano Pascual & Martín Martín, 2017). Similar paradoxes exist in South African youth employment policies (dti, 2013a).

Marketing and promoting Timbali's amaVeg programme as a business opportunity for young people has not yielded the desired results. Timbali is located in a part of South Africa with high levels of youth unemployment, 48,4% (CDE, 2017b). Surprisingly, Timbali finds it difficult to recruit young people to the amaVeg cluster, even though there is an established market with a demand for amaVeg products. The amaVeg cluster also experiences a high turnover of people in the early months, with young participant farmers generally unable or unwilling to adapt to the rigour and discipline required to farm. Recruiting participants through networks with existing farmers has been much more successful, even with young recruits.

6.2.2 A tool to fix development challenges

The notion that employment, and entrepreneurship opportunities will fix developmental challenges inherent in poor communities is a complex one, which transcends time, place, nationality and race.

Connor's analysis of the difficulties in developing a work ethic and culture of entrepreneurship in a Soviet economy transitioning from a collective to a market economy in the late 1980s (Connor, 1991), and Vance's account of unemployed people in the Kentucky Rust Belt in the United States in 2016, despite the availability of certain types of work (Vance, 2016), place the participants' expectations of what work is, or should be, in a global perspective. These examples from other countries also suggest that the unwillingness of young people to accept any type of work is not simply a case of a lack of opportunity resulting from being caught in-between two waves of rapidly changing societies. These perspectives support the view that there are other factors, aside from the availability of work, at play as well.

Timbali's experience suggests that a similar scenario is playing out in South Africa. A specific conception of what work is, or ought to be, may be one of the things preventing people from taking up the opportunities that may be available to them, even if they are not ideal.

Connor (1991) describes a particular mindset inculcated in the Soviet era, and even in the pre-Soviet Tsarist era, where a culture of work linked expected employment

security with low levels of effort and modest material gain. Entrepreneurship was inimical to these social and cultural systems. Attempted reforms in the late 1980s, albeit limited as they were to the development of co-operatives, had to battle against a deep egalitarian reaction, intolerant of others doing better; and incomprehension about markets and dynamics of supply and demand when divorced from state control or intervention. It was difficult to develop a culture of entrepreneurship in the absence of a culture of work (Connor, 1991).

At the opposite end of the ideological pole, is Vance's 21st century town of Jackson, Kentucky in the United States, "where poverty is the family tradition" (Vance, 2016, p.3) of the poor white population who were once day labourers in the American South, and in more recent times were machinists and factory workers. A culture of work there linked expected employment security with large factories, which have closed and moved to other parts of the world. Once the factories closed, people had no way of coping with the consequences of their closure. Their expectation echoes Bauman's analysis of the change from heavy modernity to light modernity through the example of a once enormous General Motors plant in Michigan that bonded workers to it through expectations of life-time employment (Bauman, 2007a)

Vance describes how a floor-tile distribution company he worked for part-time struggled to fill that position on permanent full-time basis (Vance, 2016, p7). The company tried repeatedly to offer this position, which was difficult but well-paying physical work and offered excellent health insurance, to young people.

In his context, Vance attributes the aversion of many young men in his community to hard work as a lack of agency, a feeling that people have little control over their lives, and a willingness to blame others for it. The assumption that their difficulties are the result of declining economic opportunities is what fuels their anger, but Vance believes it goes deeper than that, to the identities people develop as a result of their cultural circumstances:

> Our men suffer from a peculiar crisis of masculinity in which some of the very traits that our culture inculcates makes it difficult to succeed in a changing world. (Vance, 2016, p. 4-5)

Vance's memoir is a critical reflection on how negative characteristics of his culture prevent people from advancing, and how he has integrated this understanding to achieve more in his life. He believes this explains why people in his own community remain stuck (Vance, 2016).

In relating these ideas back to South Africa and this research, the lack of a work ethic is not only described in relation to potential recruits for Timbali. An unwillingness of young people to put in the hard work to really deliver on their entrepreneurial potential, which was noted by a Maxum manager, supports Masutha and Rogerson's finding on a lack of discipline and effort among both the public and private sector incubation clients they studied (Masutha & Rogerson, 2015). Furniture incubation programme Furntech experiences similar problems. Many young people who enter into the incubation programme do not succeed. They join because they have little else to do, and the expectations they had of working for a large company have not worked out (Furntech Centre Manager, Interview, 22 September 2014).

These examples strongly suggest that simply making economic opportunities such as entrepreneurship available for young people will not succeed unless they are accompanied by the type of personal growth that enables people to ultimately view themselves differently. Timbali farmers' self-identity needs to transition from employee to entrepreneur, Maxum entrepreneurs' from inventor to entrepreneur.

Transformative learning may be the theory that best describes Vance's changes and development of identity in order to cope with a modern world. Illeris's application of transformative learning (Illeris, 2014) to identity in liquid modernity encapsulates both Vance's challenges, and those of young entrepreneurs in South Africa. Young entrepreneurs need to understand what about facets of their identity, which may have roots in way they are brought up or in their cultural practices, or in media portrayals of entrepreneurial life, hinders them from adapting to changes or doing things differently. That is how youth entrepreneurs can proactively respond to liquid modernity (Bauman, 2000). Interveners also need to understand this.

How this happens, if indeed it does, with young people involved in entrepreneurship programmes in the two cases studied, will be addressed when discussing how entrepreneurs learn.

6.2.3 An entrepreneurial continuum or discrete niches

The cases examined in this research represent completely different models of entrepreneurship. They are at opposite ends of the entrepreneurial spectrum, with high growth and high income entrepreneurship at the top end, and subsistence and poverty alleviation entrepreneurship at the bottom end. Maxum occupies a space one level below high growth and high income enterprises, and Timbali is the space a level up from poverty alleviation and subsistence. Figure 5 illustrates this.

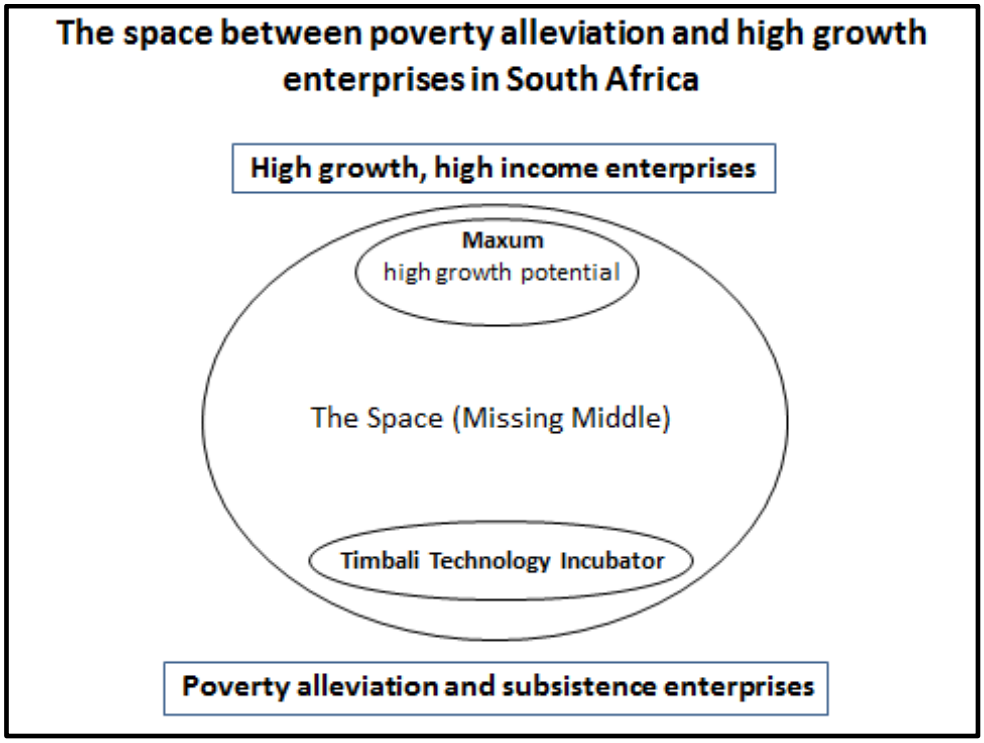


Figure 5: Maxum's and Timbali's place in the space between high growth and subsistence entrepreneurs in South Africa

Maxum Incubator's potential high growth, high value creation entrepreneurs aspire to operate Schumpeterian-type enterprises (Schumpeter, 1934) which will develop new products through innovation and creativity and which will make existing products and services obsolete. The entrepreneurs interviewed are there to take advantage of

opportunity, are urban, mostly black males, by and large educated and under 35 years old. They are the founders of innovative start-up companies trying to commercialise. All had formal employment options prior to joining Maxum, and have since received renewed offers in the corporate world. Their honed entrepreneurial skills have value in the market

Timbali's beneficiaries are primarily women, black, and rural, with a mix of ages. They have no tertiary education, very little work experience and almost no other economic opportunity. They were either unemployed, or worked as labourers or subsistence farmers before arriving at Timbali. Through the cluster and its linkages to the market, and Timbali's business development process, they have moved away from that space and are on their way to becoming small-scale commercial farmers. Without Timbali's assistance with the technology and know-how to access established supply chains, as well as its capital, they would not be able to move away from subsistence levels. Successful farmers have made a transition to seeing themselves as entrepreneurs rather than employees, but for some who are still struggling to get established, it would be difficult to refuse formal employment if it was offered.

Timbali's farmers have commonalities with other small-scale commercial farmers in the developing world who have been able to grow their businesses in a similar fashion. Small-scale farmers supplying the largest tomato processing plant in the world in Chile (de Klerk, 2014a), and Rwandan coffee producers accessing one of the United States' biggest retailers, Costco (Isenberg, 2010) are two such examples. Innovations in the product development and supply chain in Rwanda have allowed small-scale coffee producers to differentiate their produce from mass production, and compete in specialised niche markets (Antonites & Haguma, 2011).

Neither the application of an ecosystem framework, nor an entrepreneurial continuum fits well with the heterogeneous nature of entrepreneurship in South Africa. Timbali and Maxum function in specific discrete niches that are not accessible to everyone, with little interaction between them. The framework of an entrepreneurial continuum does not fit well because it is highly improbable that the

types of entrepreneur coming out of a programme like Timbali will develop a business in the space where Maxum operates. An ecosystem framework is also limiting is that it overlooks different types of entrepreneurs, and there is no space for informal and subsistence level entrepreneurship to contribute to a healthy system. Different types of entrepreneur have their own parallel ecosystems.

Each of the models, Timbali and Maxum, needs its own framework to succeed. There is little overlap between them, and their beneficiaries have very little in common. Findings from these cases affirm the view of Berner et al. (2012) that assumptions of an entrepreneurial intervention being able to move an enterprise along a continuum from micro- to small and medium enterprises through the addition of certain inputs such as finance or training, are misplaced.

A niched, variegated approach with appropriate types of support can, however assist enterprises, even at the lower end, onto a higher growth trajectory.

This research has explored one important common aspect between the two programmes, which is how entrepreneurs learn. The findings emerging from the investigation have highlighted the need for personal transformation that is the basis of the journey each entrepreneur undertakes, as well as the role of the support programme in facilitating this transformation.

6.2.4 Entrepreneurship and job creation

The literature highlights the ambiguity of the relationship between employment creation and entrepreneurship. This is evident in the over-estimation of the job creation abilities from growth-oriented businesses (Kerr, Wittenberg and Arrow, 2014; Haltiwanger, Jarmin and Miranda, 2013), and the unlikelihood of scalability from self-employment (Alvarez & Barney, 2014; Banerjee & Duflo, 2011; Isenberg, 2011).

This ambiguous relationship is seen in both programmes studied. Neither Timbali nor Maxum focus primarily on job creation on a large scale, although small-scale job creation is an important by-product. Entrepreneurs from Timbali and Maxum do not

have many employees. Only two Timbali farmers interviewed employ other people, one has four full-time employees, and one has two. Numbers employed by Maxum entrepreneurs range between 0 and 5.

Maxum assumes a spillover effect on job creation at a later stage, once the entrepreneurs' businesses are established and scaled up. This assumption echoes Isenberg's belief in greater impact created by high growth businesses (Isenberg, 2010). For Isenberg, the wealth creation, power to inspire other start-ups, and reputational value of one operation employing 500 people is much greater than 500 subsistence ones (Isenberg, 2010; 2011; 2014). This is what he envisaged in his description of the role of an entrepreneurial ecosystem in igniting venture creation and growth, and what Hausmann describes as the accumulation of know-how that contributes to the development of an economy (Hausmann, 2016).

Maxum staff and entrepreneurs hope to achieve this kind of impact. ME1 forecasts a R5 million monthly revenue once his leakless valve is in full production (ME1, Interview, 20 October 2014). ME3 intends investing in other businesses (ME3, Interview, 20 October 2014), and ME4 is considering investment by venture capital which will enable the business to scale (ME4, Interview, 20 November 2014).

For both programmes a tension exists between their pursuit of longer term impact, and the need to account for the numbers of jobs created in the short-term, as they report to a government funder trying to address the social and economic consequences of a growing population of unemployed.

These tensions manifest in policy documents about entrepreneurship and growth, such as the *National Development Plan* (NPC, 2011), *New Growth Path* (EDD, 2011) and the *Integrated Strategy on the Promotion of Entrepreneurship and Small Business* (dti, 2005) which place job creation as the central goal of entrepreneurial activity.

In South Africa's environment of net employment decline (StatsSA, 2017), however, the ability of these two programmes to create sustainable growth-oriented

employment, with potential for greater social impact, should not be dismissed on the basis of scalability constraints.

Timbali's project with the Jobs Fund, which is separate from the amaBlom and AmaVeg farmers, has a particular focus on job creation, and has resulted in 300 new self-employed farmers, who employ seasonal labour when they need it. These are sustainable businesses which will continue to use Timbali's infrastructure and market access, funded by a percentage of their sales, once the external funding from the Jobs Fund stops. Those beneficiaries, however, will remain small-scale farmers.

6.2.5 Accumulating know-how and inclusive growth

Maxum and Timbali's models are growth and market-oriented, looking at being commercially competitive. Timbali only plants what it can sell, and Maxum works to commercialise inventions and innovations. They both fit into Baumol's definitions of productive types of entrepreneurship in an economy (Baumol, 1990).

By allowing access to systems and services that people would not be able to afford on their own, and by assisting them to develop the competencies to succeed, Timbali and Maxum can be described as facilitating inclusive growth and the development of know-how, as advocated by Stern et al. (2005) and Hausmann (2016). Where entrepreneurial growth excludes poorer people, divergence, or greater levels of income inequality occurs. Where they are included in entrepreneurial growth through a diffusion of knowledge and skills, greater convergence of incomes occurs (Piketty, 2014).

Dramatic changes in production and technology experienced since the latter part of the twentieth century may be one reason for the widening gap between subsistence level and high growth entrepreneurship. Harvard development economist Hausmann attributes this gap to a lack of know-how in developing countries to take advantage of the technological and information revolution and apply these technologies creatively (Hausmann, 2016).

Technology drives entrepreneurship in innovation-driven economies, which generates further growth and development (Herrington, Kew & Mwanga, 2017; Levin, 2017). Juma (2011) argues that this is true for entrepreneurs in Africa as well despite deep poverty, poor infrastructure and lack of know-how constraining entrepreneurial activity.

A survey by the McKinsey Global Institute of the Internet's contribution to GDP in African countries highlights the transformative potential of the Internet for entrepreneurship (Manyika, Cabral, Moodley, Yeboah-Amankwah, Moraje, Chiu, Anthonyrajah & Leke, 2013). With the third largest contribution of the Internet to GDP in Africa, and its business environment and available financial capital, South Africa has the potential for significant entrepreneurial growth from this source (Manyika et al., 2013).

Investment in the Innovation Hub and Maxum, and other technology hubs such as the Tshimologong Precinct, encountered during the course of this research, supports the notion of a high tech cluster for young entrepreneurs. Tshimologong is a digital innovation precinct in Braamfontein, Johannesburg, driven by the University of the Witwatersrand with other partners, including the Innovation Hub, aiming to develop skills, encourage innovation and promote the development of new enterprises (Tshimologong, n.d.).

At Timbali and Maxum, technology is viewed as an enabler of development and accumulation of know-how (Hausmann, 2016). Both programmes invest heavily in technology and systems to enable entrepreneurs to compete in an interconnected world. The difference between them lies in the way the technology is used. Timbali uses technology and infrastructure to include people in a product support chain that creates opportunities which would otherwise be inaccessible to them. Timbali manages the technological process and innovations on behalf of the farmers. This makes it possible for the types of people they target to participate in an increasingly capital intensive and technologically savvy industry, where traditional farming methods are no longer sufficient for farmers to survive in business and to provide food security (De Klerk, 2014a). Antonites and Haguma's study on innovations for

small-scale Rwandan coffee farmers supports the importance of mediating technological change in this way (Antonites & Haguma, 2011).

Maxum entrepreneurs, by way of contrast, are the innovators, new technologies are their entrepreneurial *raison d'étre.* Maxum invests in systems and cultivates linkages and active partnerships with public and private sector organisations in order to facilitate the development and commercialisation of their innovations.

6.2.6 Compatibility of entrepreneurial goals

When the goals of entrepreneurship, whether for economic growth, improving global competitiveness, promoting employment and redistribution, are assumed to be inherently compatible, contradictions emerge about how the objectives of programmes are realised, how national resources are allocated, and how success of intervention programmes is measured.

In their nationwide survey of incubation programmes in South Africa, followed by a more in-depth examination of four specific cases, Masutha & Rogerson (2015) found a difference in the major objectives of public and private sector incubation programmes. The core objectives of most public sector incubators are to broaden economic participation in South Africa by creating employment and transferring skills. Most private sector incubators focus on growing businesses into assets of value by maximising their profit and turnover (Masutha & Rogerson, 2015). Their target beneficiaries are therefore different, with public sector incubators more likely to target entrepreneurs at the lower end of the economic spectrum than private ones would.

As with most public sector incubators, Timbali has a sectoral focus, and is located outside of the major metropolitan regions of the country where most economic activity takes place. It has succeeded in broadening participation by focusing on commercially viable small-scale farmers. It has also done this in a way that absorbs unskilled labour in a region with an estimated youth unemployment rate of 48.4%

(CDE, 2017b). Without Timbali, most of its beneficiaries would fit into the NEET category.

Although Maxum is wholly owned by a provincial government agency, it has tried to align its operating strategies more to those of private sector incubators, with varying degrees of success. Its legislative mandate to include entrepreneurs who meet certain demographic equity targets has made them accept candidates who may already be part of other programmes, or who approach the incubator for free services rather than to grow their businesses.

6.2.7 The enterprise development support industry – unique opportunity or own goal

The redistribution goal has resulted in a unique set of conditions for entrepreneurship in South Africa. Findings from Maxum in particular show that B-BBEE measures have added a level of complexity to entrepreneurship development in South Africa that may be at odds with strategies encouraging growth.

Primarily redistributive legislation, such as B-BBEE, has effected an unlocking of money for enterprise development and entrepreneurship in South Africa (Levin, 2017). One of the results has been the growth in the number of incubators and support agencies permeating the enterprise development landscape in South Africa (Levin, 2017; Masutha & Rogerson, 2014). The growth in these support agencies, as well as the shift in government policy to support more meso-level interventions has allowed for a greater role for the private sector (dti, 2005*).*

Some B-BBEE interventions focus on supplier development, others on training or bringing in equity partners (Rogerson, 2013; RSA, 2013b). Expertise which may previously have been affordable only in large organisations has become more available for small entrepreneurs. Maxum's business consultant 2 is an example of this. He is able to offer services to different programmes because the agency, and not the individual entrepreneur, pays him.

A further positive effect of B-BBEE for Timbali has been increased willingness of larger retailers and wholesalers to buy from their Global G.A.P. accredited packhouse, and a growing awareness on Timbali's part of other potential markets. In return, Timbali has to ensure a consistent, quality product that competes with other larger commercial farmers.

The two programmes analysed here have not yet relied on that type of redistributive funding from the corporate sector as they have been primarily government funded. They are, however, looking at those sources to fund their future sustainability. In Maxum's case it is to use enterprise development money as a basis for venture capital funding. In Timbali's it is to sustain the type of development needed to fulfil their inclusion mandate.

On the negative side, the performance of the many incubators and support agencies is mixed. The emergence of an enterprise development support industry, largely funded by government or funds obtained from redistributive B-BBEE measures is another example of policy inadvertently hindering the success of entrepreneurial interventions. While there are notable exceptions, on the whole they fail to create high potential scalable start-ups (Levin, 2017). Levin's discussion paper on accelerating the South African start-up ecosystem highlights a disproportionately high number of organisations providing support to South Africa's entrepreneurs. With 340 incubators, accelerators and other support agencies, South Africa has more than India and Israel combined (Levin, 2017). Most of these are funded by the corporate sector to obtain B-BBEE points for enterprise development activities (Levin, 2017).

Table 7 highlights this disproportionality by comparing data on the major cities involved in innovative start-up entrepreneurship in India with its large population, Israel with its human capital and vibrant entrepreneurial ecosysytem and South Africa. The table presents the population of those cities, the global ranking of their entrepreneurial ecosystems, and the numbers of startup enterprises. The numbers of support organisations assisting entrepreneurs are for the countries as a whole. The

data is obtained from Levin's study (2017), and Startup Genome's *Global Ecosystem Report 2016/12* (Startup Genome, 2017).

Table 8

Entrepreneurship support organisations in South Africa, India and Israel

Country	**Population (metropolitan area)**	**Global Ranking of major city's entrepreneurial ecosystem (2017)**	**Technology and innovation start-ups**	**Support organisations (countrywide)**
South Africa				**340**
Johannesburg	4.4 million	Not yet ranked	200-500	
Cape Town	3.7 million	Not yet ranked	700-1200	
India				**140**
Bangalore	8.6 million	8	1800-2300	
Israel				**130**
Tel Aviv	3.7 million	6	2200-2700	

Source: Levin (2017) and Startup Genome (2017)

While one could argue that South Africa's low levels of entrepreneurial activity require greater support, such dramatic growth in the number of support agencies in South Africa has not translated into greater entrepreneurial success (Herrington, Kew & Mwanga, 2017). The data provides an indication of the amounts of money available for enterprise development, and confirms the opinion of a Maxum entrepreneur that "money is everywhere" (ME1, Interview, 20 October 2014). Enterprise development funding has created business opportunities for meso-level interveners that do not necessarily benefit entrepreneurs who can contribute to inclusive growth through value-adding activities.

The conflation of B-BBEE with entrepreneurship has also resulted in an artificial environment that discourages competition, and contributes to negative perceptions of black entrepreneurs. Knowing how to access money from an available grant pool requires a particular set of skills, but does not always help entrepreneurs to generate turnover, move towards commercialisation or build sustainable businesses (MBC2, Interview 27 November 2014).

Applying South Africa's racial prism to these unintended consequences, black entrepreneurs have to compete with their white counterparts who have no choice but to sharpen their competitive edge without grant money which may be largely unavailable to them.

The types of businesses Maxum business mentor 2 assisted to obtain tenders in support programmes apart from Maxum, are examples of unproductive entrepreneurship. They are generally the result of policies that seek to include people by redistributing existing resources rather than creating value through growth. While they may be able to create more jobs in the short term, these are not long-term, sustainable forms of employment.

The positive and negative effects of B-BEEE legislation on entrepreneurship illustrate the difficult trade-offs that need to be made between growth and equity. By framing the debate in Baumol's definitions of productive, unproductive and destructive entrepreneurship (Baumol, 1990), conscious choices about the effects of an essentially redistributive measure need to be made. It can either lead to more examples of unproductive entrepreneurship, or, if applied creatively, can promote a more productive type of entrepreneurship enabling growth and inclusion.

6.2.8 Measures of success

Measures of entrepreneurial success tend to follow objective notions of what has been achieved, with financial gain, or the number of jobs created as the principal measures (Parker, 2009). The reports Timbali and Maxum generate for their funders follow this tradition (GGDA, 2016; Timbali Technology Incubator, 2013). They report on the numbers of participants in their programmes, new entrants, throughput, and on the numbers of jobs created. These types of measures reflect assumptions about entrepreneurial activity and job creation, and the relationship of growth and job creation. Such measures are the same for both programmes.

Maxum entrepreneurs will ultimately leave the incubator and go off on their own, even if they remain on the Innovation Hub precinct. They may stay in the incubator for longer than staff may wish, but will leave once they are operationally independent. Maxum gives entrepreneurs three years, which is comparable to the time offered by other incubators such as Furntech, Softstart Business Technology Incubator (both public sector), and Shanduka Black Umbrellas and Aurik (private sector) (Masutha & Rogerson 2015).

Timbali has not seen large numbers of graduates becoming out-growers in their home districts. Only five of the original amaVeg farmers have done so. Communal land access arrangements, lack of a structured environment and infrastructure, and family issues are some of the reasons more did not. Younger farmers especially preferred the structure of the cluster.

Findings from this research show that entrepreneurial success should be judged in other ways as well. Subjective views of entrepreneurs influence their perceptions of success which differ considerably between the programme management and their government funders, between interveners and entrepreneurs, and between different entrepreneurs themselves. Maxum staff, who see their role as assisting high impact businesses, do not believe these measures fully capture the impact of what they do, and are devising broader indicators to benchmark success.

Wach, Stephan and Gorgievski's (2016) research on multi-factorial measures of entrepreneurial success supports a position that a narrow focus on financial indicators does not fully capture the notion of success. They identify five factors as important to entrepreneurs themselves, ranging, in frequency order, from firm performance, workplace relationships, personal fulfilment, community impact to personal financial reward (Wach et al., 2016). Recognition in the community and among peers rates above personal financial reward. This was the case across entrepreneurs of both genders, of different size and type, and whether they were family and non-family owned.

Wach et al's (2016) research, comprising a series of 185 qualitative interviews conducted in Germany and Poland, was followed by a survey of 184 countries. Data from Timbali and Maxum suggests that Wach et al's (2016) argument about the importance of subjective and multi-factorial measures of entrepreneurship success is pertinent to South Africa.

Binary measures of success of entrepreneurial programmes, such as creation of jobs or survival of an enterprise, are insufficient on their own. Some entrepreneurs may strive for employment and financial security, as can be seen from the Timbali farmers, while others may value independence, personal development and implementation of ideas, as with Maxum. Evidence from the case studies, taken in conjunction with Wach et al's assertion of multi-factorial measures of entrepreneurial success (Wach et al, 2016) supports Blackburn and Ram's position (2006), that if the goal of entrepreneurship is inclusion, evaluations of success should include how enterprise initiatives change individuals and their aspirations.

By examining how learning and change can be fostered in an entrepreneurship development programme, this dissertations hopes to contribute to the development of broader measures of success in both the conception and the evaluation of youth entrepreneurship programmes.

6.3 Approaches for youth entrepreneurs

Having highlighted how paradoxical assumptions about entrepreneurship contribute to the failure of the policies that espouse them to achieve their aims, findings about what can be learned from the case studies about possible approaches to youth entrepreneurship are presented in the next section.

6.3.1 A response to liquid modernity

Timbali's CEO refers to the influence of Alvin Toffler's classic futuristic book *The Third Wave* on Timbali's approach. Toffler describes societies in transition from an agrarian society (the first wave) to the second wave (industrial revolution), and to a post-industrial information age (the third wave) (Toffler, 1980). Perceived chaos in

the environment leads to feelings of helplessness, and ultimately to withdrawal and exclusion.

Although he wrote almost four decades ago, Toffler predicted many of the upheavals that have taken place as a result of the technological and information revolution since the 1980s, including outsourcing of production, artificial intelligence, and the economic and social disruptions resulting from innovation and technological changes. An extrapolation of his terminology would be to consider the age of the internet of things and artificial intelligence as the fourth wave, often referred to as the Fourth Industrial Revolution (Naudé, 2017; Schwab, 2016).

The results of this are a world characterised by a state of liquid modernity (Bauman, 2000). In liquid modernity, important changes, especially in the world of work, take place with growing frequency, requiring constant adaptation in order to negotiate them (Bauman, 2007a). In the agriculture sector, the impact of the change from heavy to light modernity (Bauman, 2007a), described in the literature review, can be seen in the move away from labour intensive farming methods to a much more technology driven process, requiring not only greater capital and economy of scale, but also expertise and know-how. A concomitant aspect of light modernity has been a substantive reduction in the need for labour, thus increasing unemployment.

Viewed as a context for entrepreneurship in the age of a Fourth Industrial Revolution, the concept of constant change, or liquid modernity, provides a useful framework for analysis. The two cases presented in this research offer very different types of response. Timbali's is a replicable franchise-type system, which makes highly complicated processes simple and accessible to people who would otherwise be completely excluded. Its strength lies in its ability to tap into new economic paradigms with the use of largely unskilled labour. Maxum, in contrast, operates in the high tech innovative space that depends on and seeks to enhance experiences in the Fourth Industrial Revolution, or Fourth Wave, to use Toffler's terminology.

6.3.2 The yellow brick road

The yellow brick road, the term used by Timbali's CEO, to describe their structured approach, provides a practical label for clear, understandable systems that allow people to negotiate uncertainties emanating from both the normal cycle of business, and from constant shifts in the way work and production are organised. This is the reality facing the people Timbali seeks to assist (TCEO, Interview, 4 September 2014).

A critical set of best practices, expressed as key performance indicators for each farmer, allows Timbali farmers to access the technology and infrastructure they need to compete effectively. Timbali maintains that on their own, farmers would be unable meet the requirements of an export market, through Global G.A.P. accreditation, or afford the necessary inputs to produce on the scale required to compete successfully in a rapidly mechanising, technologically advancing and capital intensive sector (TCEO, Interview, 4 September 2014).

The yellow brick road helps small-scale farmers to develop self-confidence and the ability to take control of their changing environment.

6.3.3 The entrepreneurial method

Maxum's approach assists entrepreneurs to use the interconnected components of the environment to access what they need. Although Maxum sets targets for and with entrepreneurs, it is up to the entrepreneurs themselves to take advantage of the resources and assistance available.

Maxum entrepreneurs used their experiences of a problem or opportunity in their own environments to develop a business idea. They related this opportunity to their skills set, and approached people in their networks for assistance, or cultivated new networks for assistance. They came to Maxum to develop this idea into a viable value proposition which they can sell to a customer.

Maxum uses an approach they call “fail fast fail cheap” to minimise the cost and risk to entrepreneurs and to themselves. Further reading on entrepreneurial approaches in order to answer the research questions led to Sarasvathy’s theory of entrepreneurial effectuation (Sarasvathy, 2008). Sarasvathy introduced her theory of effectual thinking in entrepreneurship, which she calls the entrepreneurial method in 2001 (Sarasvathy, 2001) and developed it further (Sarasvathy, 2008).

Although Maxum staff do not use the concepts explicitly, the entrepreneurial method, or effectual thinking (Sarasvathy, 2008) accurately describes the way Maxum entrepreneurs think about starting their businesses, and the way Maxum assists them. An effectual thinking approach differs from those used in programmes that see entrepreneurship development as teaching people to develop business plans in order to obtain tenders for public sector procurement opportunities.

Entrepreneurial effectuation broadly implies that entrepreneurs start with a given set of means, and allow goals to emerge over time (Sarasvathy, 2008). These means include who you are, what you can do, and who you know. This process is opposite to causation, which takes particular effects as a given, and then focuses on means to create those effects (Sarasvathy, 2008). Sarasvathy (2001) illustrates the two processes with a metaphor of cooking from a recipe, which is causation thinking, and looking in the cupboard to see what is available, and creating a meal from that, which is effectual thinking.

The business planning approach is an example of a causation process. It looks primarily at expected returns, competitive analyses, pre-existing knowledge, and prediction of an uncertain future (Sarasvathy, 2001). Entrepreneurs being assisted to get tenders start with a given goal, and look at developing a business plan to achieve that. In contrast, the principles of effectuation in business are affordable loss, strategic alliances, exploitation of contingencies, and control of an unpredictable future (Sarasvathy, 2001).

Existing enterprises are more likely to use causation processes, as they grow and become more established (Sarasvathy, 2001). Furntech, considered a possible case

study site, uses causation rather than an effectual approach. It asks potential participants in their programme to develop a rudimentary business plan, which is then used to assess their suitability for the programme (Furntech Centre Manager, Interview, 22 September 2014).

Sarasvathy (2001) views effectuation as an appropriate approach when there are generalised aspirations towards entrepreneurship and fairly limited access to resources. This is usually the case with young South African entrepreneurs. The idea of affordable loss rather than expected returns allows experimentation with greater numbers of new ideas at a low cost because if they fail, they will fail early, or as Maxum puts it, fail fast and fail cheap. Effectuation assumes that not all businesses will succeed, and that some may emerge looking very different to what their founder envisaged originally. According to this theory, entrepreneurs should be encouraged to look at different strategies with their given set of means to bring their ideas to market with as close to zero resources as possible (Sarasvathy, 2001), as opposed to looking for a missing ingredient, such as loan finance which, in the event of failure, may entail indebtedness and fear of trying again. The theory also applies to interveners, who are inclined to try and supply one or more missing ingredient, when they might be better off encouraging the entrepreneur to test the market, even if it entails failure of the venture.

6.3.4 Operating strategies

Timbali's operating strategy, in following the yellow brick road, draws on the management writings of Gerber (1995), whose book *The emyth Revisited: Why Most Small Businesses Don't Work and What To Do About It* stresses the need for explicit operating procedures on each aspect of the business. Gerber describes business owners as having three characteristics, the technician, the manager and the entrepreneur (Gerber, 1995). He believes that most small businesses fail because their owners see themselves as technicians and managers working in their businesses, rather than entrepreneurs working on their businesses with a broader perspective. His assumption is that more businesses would succeed if their owners define their operational requirements precisely, even if they are single-person operations, and then take a step back and view their businesses from an

entrepreneurs' perspective (Gerber, 1995). Timbali's farmers, essentially technicians, need to transition from working in their businesses, in Gerber's terms, to working on their businesses as entrepreneurs, who have a broader view, and are the visionaries who disrupt and try new things. Timbali farmers make these transitions slowly, with explicit processes and procedures in a replicable system, combined with a cluster model and recognition of the need to address, through life-skills, some of the developmental challenges poor, uneducated, rural people (mostly women) may experience.

In relating learning to Gerber's three facets of an entrepreneur, the technician, manager and entrepreneur (Gerber, 1995), Timbali needs to start training technicians first, before they can become entrepreneurs.

The contexts and the levels of development of entrepreneur in each case may be very different, but Gerber's (1995) description of the three characteristics of an entrepreneur applies to Maxum as well, even though they follow a more effectual route, described by Sarasvathy (2001), which assumes that not all enterprises will succeed. The process of Maxum's entrepreneurs commercialising their ideas involves the founder making the transition from technician or inventor to entrepreneur. Their challenge is also to stop working **in** the business, and start working **on** it to commercialise (Gerber, 1995).

6.3.5 Conclusion

Both Timbali's yellow brick road, and Maxum's approach which strongly resembles the entrepreneurial method, or entrepreneurial effectuation (Sarasvathy, 2008), enable entrepreneurs to negotiate uncertainties. Timbali does this through a process of making complicated processes as simple as possible for target beneficiaries with few skills and resources. Maxum does this through an effectuation process that helps potential high growth entrepreneurs in the technology space to develop a product and find a customer, using their available means, with an affordable loss, finding strategic alliances and trying to manage contingencies.

6.4 Inputs required for the yellow brick road and the entrepreneurial method

The yellow brick road and the entrepreneurial method of themselves may be appropriate approaches for entrepreneurs where there are resource constraints, but in order to achieve Timbali and Maxum's objectives they need to be allied to substantial inputs in infrastructure and an enabling environment, and sufficient resources to ensure that they function effectively.

Certain features of successful incubation programmes in South Africa (Buys and Mbewana, 2007) are applicable to this research because both Timbali and Maxum are business incubators.

These features, confirmed by Kavhumbura (2014) almost a decade later in his study on the continued relevance of these factors to the South African context, are access to science and technology, availability of funding, stakeholder support, networking and financial sustainability, stringent selection and development of entrepreneurs, and successful and competent management. Buys and Mbewana's (2007) success factors, noting Kavhumbura's qualifications (2014), are discussed in turn.

The discussion does not specifically address additional factors identified by Buys and Mbewana, such as supportive government policies and competent and motivated management, both found by Kavhumbura (2014) to have little bearing on incubator performance. The research also did not address specific questions about the management of the two programmes studied. Almost all the Maxum respondents, however, alluded to positive changes in the management of the incubator. In response to questions about what they would change or add to their programme, all entrepreneurs indicated high levels of confidence and satisfaction with the way things were done.

6.4.1 Models of incubation

While Timbali and Maxum illustrate diverse models of incubation, they have certain commonalities. They invest heavily in an environment and infrastructure so that entrepreneurs can get whatever they need, and like most other incubation

programmes, offer a phased approach, with a pre-incubation programme preceding full incubation (Masutha & Rogerson, 2015). Both models offer product development, market development, coupled with value-adding components relevant to the beneficiaries they assist, and their levels of sophitication. At Maxum these are professional services, and at Timbali they are life-skills. Value-adding components include training and hands-on mentoring. Mentors, particularly at Maxum, are hands-on and get involved in the businesses they mentor, and develop relationships with their mentees. They are not retired business people who give advice from a distance. Such mentoring is expensive.

6.4.2 Access to science and technology expertise

Neither Maxum nor Timbali operate as incubators in isolation. Maxum exists as a unit within the Innovation Hub science park, which functions more as cluster in the way Isenberg describes, where potential high growth and high impact enterprises are co-located with academic and support institutions, and professional consultants and sector service providers (Isenberg, 2010). Timbali links to an established supply chain, for which it does the marketing, and utilises a cluster model where farmers share certain inputs and expenses, but ultimately work for their own account. Through its cluster, Timbali brings in whatever technical expertise it requires in order to remain competitive.

6.4.3 Availability of funding

The two incubators do not provide direct loan funding for entrepreneurs, but play an important role in facilitating access to financial assistance for beneficiaries. Maxum beneficiaries are assisted with grant funding from the Start-up Support Programme. Maxum also arranges opportunities for entrepreneurs to pitch for venture capital funding. Timbali's relationship with the Mpumalanga Economic Development Agency (MEGA) enables graduate farmers to access micro-loans for infrastructure and improvements either for the land they rent in the cluster, or to land they use as out-growers. Trainee farmers are able to access small loans against guaranteed future sales from a specially demarcated fund until they start earning revenue.

6.4.4 Stakeholder support

Both Maxum and Timbali have broad stakeholder support. Timbali's structure as a non-profit organisation enables broad stakeholder representation on its governance structure, or board of directors. For Timbali this support includes national and provincial government departments, corporates and development agencies. Maxum has a single shareholder, the Gauteng Growth and Development Agency. As a government agency its governance structure does not include representation of other stakeholders. It has, however, developed broad support through the development of an extensive network of partnerships with organisations who support its goals or who have complementary goals. These supportive relationships with stakeholders create a structure for partnerships that allow the two programmes to provide entrepreneurs with the resources and contacts they need to succeed.

6.4.5 Networking

Timbali and Maxum have both featured in World Bank case studies on South African incubation programmes (InfoDev, 2010b; InfoDev Agribusiness, 2014), which highlight some of the benefits they offer. InfoDev's findings (InfoDev, 2010b) support observations of Maxum entrepreneurs and interveners in this study, which place collaboration and networking, access to linkages with large corporates, and cross pollination of ideas between entrepreneurs, support institutions and strategic partners as the heart of Maxum's real value add.

Benefits of Timbali's agribusiness model in creating sustainable success with relatively simple inputs and training, according to InfoDev Agribusiness (2014), are obvious. This is especially so in a rural area with large scale unemployment (InfoDev Agribusiness, 2014). The cluster itself creates the networks that enable development and collaboration to take place. This may have the effect of limiting innovation from individual farmers (InfoDev Agribusiness, 2014), but it allows them to provide a standardised quality assured product that they would not be able to do on their own.

6.4.6 Financial sustainability

Government agencies have provided the majority of financial support to both programmes. Without such support neither would be able to invest in the required infrastructure and environment they need, or sustain their activites. Different revenue models operate, however. Incubators internationally are expected to achieve some form of financial sustainability, especially as they become more established (InfoDev, 2010a).

As a non-profit Public Benefit Organisation, Timbali attracts funding from national and provincial government agencies, as well as private sector and development agencies (Timbali Technology Incubator, 2013). With the rentals it gets from the tenant gerbera farmers, Timbali could function without donor funding, but donor funding is needed to cover the costs of new development associated with the amaVeg farmers, and in satellite agri-parks like Nwanedi.

Timbali's Jobs Fund project enabled it to replicate its cluster model in an additional four locations. The inputs required to achieve that, however, are high and are not recoverable. The cost per job in that project was R300 000 per farmer, over three years. This cost would be significantly reduced by effective collaboration with existing local government institutions and the Land Bank, which could remove the necessity of Timbali buying the land first (TCEO, Telephone interview, 31 August 2017). A key lesson from the Jobs Fund Project has been that greater buy-in from local government could reduce the costs of replication of its infrastructure and environment significantly. Expectations of complete sustainability of a model like Timbali to be fully independent without grant or donor funding, however, are misplaced. The benefit derived by the farmers as a result of their inclusion into the formal economy, and the social impact of these need to be weighed against an unrealistic expectation of financial sustainability.

Timbali's economic impact lies not only in the number of jobs created for small-scale farmers. It is the economies of scale offered by the cluster, and meeting market requirements, which enables farmers to compete commercially. The lessons learned

about the types of support and inputs required for small-scale black farmers to succeed as commercial farmers, and the failure of significant numbers of graduate farmers to farm as out-growers using customary land arrangements in their home areas where they have little support, are particularly pertinent in the light of current discourses on land restitution and food security in South Africa. As Dr Mamphela Ramphele wrote in an opinion piece on the myths of land reform, the lack of infrastructure and support for small-scale farming in rural South Africa poses a significant threat to food security (Ramphele, 2018). Timbali's experience provides a salutory illustration of the complexity of providing infrastructure and support, and even a market, without an accompanying personal transformation by the individuals involved.

Maxum is a wholly owned subsidiary of the Gauteng Growth and Development Agency (GGDA, 2015). This government funding provides both opportunities and risks. Maxum faces the conundrum mentioned earlier in the literature review of negotiating the balance between purely commercially-driven policies on one hand, and government intervention on the other (Vandenberg, 2006). An incubator like Maxum, because of the sector it operates in, unlike Timbali, could become more financially self-sustaining. The findings on Maxum show, however, that government ownership does place some limitations on how it operates.

Government priorities are sometimes at odds with what is needed to support an inclusive, competitive type of entrepreneur (Isenberg, 2011). Maxum's legal mandate does not allow the incubator to take equity in the businesses they support, something staff believe would stimulate a more competitive, growth focus among the entrepreneurs it attracts. Their view, which is supported by Infodev's findings (Infodev, 2010a), is that an equity share, royalty generation or profit share would make the incubator more sustainable and maintain the incubator's interest in the business post-incubation, thus enabling a better understanding of long-term impact.

Isenberg's description of Israeli fund Yozma, a government funded fund of funds which reproduced ten venture capital funds in three years (Isenberg, 2010) is illustrative of the way government can stimulate other types of venture capital. That

is an example of a meso-level intervention creating more support for individual entrepreneurs (Berner et al., 2012). Yozma's approach is not easily replicable, and is unusual even in countries with highly developed entrepreneurial ecosystems (Isenberg, 2010). It does suggest, however, that creative strategies, with pre-planned state funding obsolescence in potentially sustainable sectors, can be effective.

The requirement to meet government targets, and the lack of a financial stake in the businesses Maxum supports does not, in the view of Maxum staff, encourage a culture of competition necessary to entrepreneurship. These are examples of how government intervention or assistance can actually have the opposite effect and contribute to failure or ineffectiveness of the intervention it seeks to support.

6.5 Levels of challenge for young entrepreneurs

Challenges for young entrepreneurs at Timbali and Maxum provide the context for what they learn, and how they learn. Participants experience challenges at different levels. The first level refers broadly to general challenges young entrepreneurs face, many in common with what their counterparts in other parts of the world experience, and some peculiar to South Africa. Uniquely South African challenges result from particular development challenges the country's historical legacy leaves to young people. Descriptions of the pathways towards entrepreneurship, backgrounds, education, previous work experience, and motivation illustrate how difficulties at this level are experienced by young entrepreneurs.

The second level challenges refer to the the operational difficulties associated with starting and running a business Challenges at the third level are deeper underlying and cultural challenges. Some surprising similarities, especially with third level challenges on how entrepreneurs experience a rapidly changing world, emerge between the two cases.

6.5.1 General challenges for young entrepreneurs

Literature on youth entrepreneurship identifies key challenges for young entrepreneurs as largely related to a lack of skills, work experience, networks and

access to finance. These are similar all over the world (Schoof, 2006), including in South Africa (dti, 2013a; Schlemmer, 2005), East Africa (Baxter et al., 2014), Latin America (Llisteri et al., 2006), and Spain (Serrano Pascual & Martín Martín, 2017). In addition to such general challenges, South Africa's aspiring young entrepreneurs confront a historical legacy, the results of which persist today, of poor quality education, lack of resources, and discouragement of entrepreneurial role models and an entrepreneurial culture (dti, 2013a; Herrington & Kew, 2016; Schlemmer, 2005).

Few of the rural, female Timbali farmers, for example, have work experience outside of subsistence farming or working on a farm, or have achieved higher than a grade 12 in formal schooling. Interestingly, there is no relationship, in this type of programme, between education levels and success. Timbali's attempts to recruit younger people with a minimum of Grade 12 schooling for the amaVeg programme, and those who had been at an agricultural college, proved problematic and were ultimately changed to include those without Grade 12. Beneficiaries have also had very little exposure to any form of small business or entrepreneurship in their families.

Although Maxum entrepreneur ME3's entrepreneurial endeavours now take place in an urban area, he too comes from a poor rural area, with little exposure to entrepreneurship while growing up in the Eastern Cape (Cofimvaba), and where discussions about values important for entrepreneurs did not exist in his family (ME3, Interview, 20 October 2014).

Timbali succeeds because it has given people, without factors others consider necessary for entrepreneurial success, such as education, networks and experience, enough support to take advantage of an opportunity. In stark contrast to the Timbali farmers, Maxum entrepreneurs' backgrounds point to the roles played in their lives by better-educated and employed parents.

6.5.2 Operational challenges

Entrepreneurs from both programmes reflect on specific operational challenges that have made running their enterprises difficult for them. Common to both programmes

are the difficulties of maintaining a positive cash flow, and for those who employ others, of managing staff. Cash flow difficulties for Timbali farmers are exacerbated by the seasonal nature of their businesses and vulnerability to natural disasters and plant diseases. Timbali farmers also sometimes struggle to understand market requirements and organise transport for their produce.

Additional financial challenges for Maxum entrepreneurs are accessing finance to accelerate the development of their businesses, managing on their diminishing savings until they start generating revenue, and finding the right combination of skills sets for their businesses. The way entrepreneurs learn to address such challenegs at Timbali and Maxum is elucidated in section 6.6.

6.5.3 Deeper underlying and cultural challenges

Timbali's farmers' lack of confidence in their ability to manage the environment, and the difficulties Maxum entrepreneurs have in commercialising their ideas and innovations can be seen in two ways, which are ultimately inter-related. The first explanation pertains to cultural challenges experienced differently by Timbali and Maxum entrepreneurs, but that ultimately require accommodation with a worldview different from one they grew up with. The second, related reason, suggested by Gonon in his article on transformative learning in a globalised world, is that individuals feel growing uncertainty and ambivalence in a globalised society shifting towards liquid modernity (Gonon, 2017).

At both programmes, the interveners (staff), with the benefit of distance and an overall view, articulate these more than entrepreneurs. This is especially true at Timbali. Maxum entrepreneurs are very aware of the peer pressures they face, but do not articulate the challenges of self-confidence and controlling their environment. Differing assessments of challenge by entrepreneurs and interveners confirm Isenberg's assertion that the views of entrepreneurs on their own challenges, while being true for them, do not always reflect a complete picture (Isenberg, 2014).

The role of social, cultural and family networks in entrepreneurship development is a complex one. Godsell's research on support networks for South African

entrepreneurs under apartheid shows that in the absence of organic networks of support for black entrepreneurs, they cultivated strategic ones (Godsell, 1991). ME1's fostering strategic networks of stakeholders to assist him with his business idea suggests that this remains the case. The use of Maxum entrepreneurs' own savings and proceeds from previous businesses to start their businesses is consistent with Godsell's findings on how black entrepreneurs financed their businesses (Godsell, 1991).

How young entrepreneurs address cultural challenges provide some answers to the question highlighted in the literature review about whether entrepreneurship development programmes for young people can help entrepreneurs to recognise and overcome aspects of their culture that push them towards conformity.

Findings on farmers living in two worlds, and relating differently to their spouses and families at home to the way they do to people at work, exemplify cultural challenges that Timbali tries to address. Family networks offer support as well, through support and childcare for farmers who are away from home a lot, and for Maxum entrepreneurs. ME2 and ME4 received financial investment from their mothers.

Cultural challenges of a different type affect Maxum entrepreneurs. Pressure to conform to certain expectations of conspicuous consumption by their peers, and to portrayals of entrepreneurship in the media, illustrate how the needs of people in entrepreneurs' networks can detract from entrepreneurial success rather than support it.

Maxum entrepreneurs resist their peers' expectations of them to buy fancy cars, and turn down what they call a 'Polo' job because that is the first thing their contemporaries employed in the corporate world buy. Many Timbali farmers enter the programme wanting to buy an expensive JEEP Pajero, but learn that they need to generate a certain income to do that (TCEO, Interview, 4 September, 2014). Temptations for young people to use newly acquired income to purchase cars are not confined to developing countries. Consistent with Timbali's and Maxum's examples of how entrepreneurs learn to delay gratification, expressed in

expectations of buying a car, is Vance's account from his experience growing up poor in the United States, and being advised to buy a less fancy car than the BMW he wanted as soon as he had some income (Vance, 2016).

A particular challenge for entrepreneurs generally in developing countries, and particularly for young entrepreneurs, is the role they play in contributing to their family livelihoods. Findings from this research show that Timbali farmers are almost wholly motivated by how they help their families, and this influences the amounts they are able to invest in their businesses. Even at Maxum, ME3 feels an obligation to draw a salary to support his parents rather than invest it all in his business. He didn't tell his parents about his business as he was afraid of what they might think about it not generating sufficient revenue.

Similar observations about the social and family pressures mitigating against saving and investing in a business are found in Mazonde and Carmichael's research on female entrepreneurs in Zimbabwe (Mazonde & Carmichael, 2016), and Baxter et al.'s research on youth entrepreneurs in East Africa (Baxter et al., 2014). Female entrepreneurs in Zimbabwe manage to balance their domestic obligations with their businesses by developing a dual sense of identity able to reconcile seemingly conflicting expectations. This is enabled by self-confidence in their abilities to fulfil both roles (Mazonde & Carmichael, 2016).

The East African examples of youth entrepreneurship programmes show how support programmes need to recognise the multiple pressures youth face in having to save and invest in their businesses, and to conform to family expectations (Baxter et al., 2014). These kinds of decisions are addressed in the life-skills components of programmes, in a similar manner to the way Timbali addresses these kinds of issues.

6.5.4 Conclusion

Overcoming challenges at both Timbali and Maxum involves managing conflict, problem-solving, discipline and the ability to do things differently. In understanding how entrepreneurs, and those who support them, address their challenges, this

dissertation adopts Cope's position of change being integral to entrepreneurship, and entrepreneurs changing as a result of what happens to them (Cope 2005a). Cope built on Gibb's earlier management writings which focused on an educational response for entrepreneurship, and small business development, in the face of globalisation and change (Gibb, 1997a; 1997b). It also affirms Packard's view of entrepreneurship being a continuously unfolding process (Packard, 2017), rather than a destination.

The discussion now turns toward the key theoretical premises of the research, what and how entrepreneurs learn in the context of the two cases.

6.6 The incubator as crucible: How entrepreneurs learn

Cope's writings (Cope, 2003; 2005a; Cope and Watts, 2000; Pittaway & Thorpe, 2012), provide a bridge between understanding economic and psychological theories of entrepreneurship, and the need to understand the personal changes entrepreneurs experience.

To understand how entrepreneurs change, maintains Cope (2005a), one has to understand how entrepreneurs learn. Cope views entrepreneurial learning as dynamic, contextual and cumulative. Entrepreneurs look outward at their wider environments and recognise opportunities, and they look forward at how they can make their businesses grow and succeed (Cope, 2005a).

Deeper, more lasting changes require a different type of learning. For this, entrepreneurs need to look backward and inward, to reflect on the relevance of past experiences, and introspect on how ready they are to enter into entrepreneurship (Cope, 2005a). Cope advocates transformative learning as the means to facilitate this kind of change for entrepreneurs (Cope, 2005a).

Gonon (2017) and Illeris (2014) take the argument for transformative learning even further, asserting that entrepreneurs in a globalising world of liquid modernity have to accommodate new perspectives and worldviews, and that transformative learning specifically is the way they do this (Gonon, 2017).

Analysis of the two cases, in relation to adult education theory, suggests that entrepreneurial learning at Timbali and at Maxum is adaptive, experiential, collaborative and transformative.

6.6.1 Learning as a response to challenges – what entrepreneurs learn

Findings on what Timbali and Maxum entrepreneurs learn fall into the five significant areas of learning that Cope (2005a) maintains are important to the dynamic nature of entrepreneurship. These five broad content areas are:

- learning about oneself
- learning about the business
- learning about the environment and entrepreneurial networks
- learning about small business management, and
- learning about the nature and management of relationships (Cope, 2005a).

Participants in both programmes learn in response to the challenges they experience. They learn first about the business, about small business management and about the environment and entrepreneurial networks. Both programmes offer explicit opportunities for training on technical and even management issues, whether training is delivered internally or through partnerships with others.

Timbali farmers learn the technical skills and practical knowledge needed to farm, almost from scratch. Maxum entrepreneurs also learn technical skills, albeit at higher levels than Timbali's. They may need financial skills, or even programming skills to develop their products. Technical skills development at Maxum takes place mostly in the pre-incubation phase, while getting a product ready for a customer. The skills needed to commercialise their product are emphasised more strongly in the incubation phase.

Most reflections by respondents on what entrepreneurs learn, in both cases, relate more to the personal growth they experience rather than to the actual technical skills they acquire, or what Cope (2005a) calls learning about oneself. These are the

aspects of personal development a Maxum entrepreneur describes as even more valuable than some of the financial knowledge he has acquired. They are also the result of fundamental changes that take place for entrepreneurs, often in how they perceive themselves.

Studies on entrepreneurship elsewhere in Africa support the importance of personal development and initiative in improving entrepreneurial performance for young people. Baxter et al.'s comparison of three youth entrepreneurship programmes in Kenya, Uganda and Tanzania found that youth entrepreneurship is highly dependent on contextual factors (Baxter et al., 2014). Although many of these factors are outside of anyone's control, some can be addressed within the programmes (Baxter et al., 2014). Programmes therefore have to find a balance between the vocational or technical skills, business skills and life skills they offer (Baxter et al., 2014). Their findings support Schlemmer's view, expressed in 2005 that youth enterprise development support programmes in South Africa need to consider the particular challenges South Africans from disadvantaged backgrounds experience as a result of their historical legacy (Schlemmer, 2005).

A World Bank funded study on growing informal businesses in Togo compared the results of two programmes, one offering only traditional business training, and one that offered personal initiative business training (McKenzie & Goldstein, 2017). The business training focused on accounting and financial management, human resource management, marketing, and formalisation. Personal initiative training aimed at teaching a mindset of self-starting proactive behaviour (McKenzie & Goldstein, 2017). Results from the programme offering personal initiative training, measured in the revenue of the businesses assisted, far exceeded those which offered only business skills (McKenzie & Goldstein, 2017).

To illustrate their different approaches, the traditional business programme's approach to business finance taught owners to keep records, the different kinds of products banks offer, and how to apply for a loan. In contrast, the personal initiative programme taught owners to identify and approach unusual sources for money, to get themselves out of difficult situations without external help to avoid relying on

long-term loans, and to learn to cope with adversity by developing alternative plans in the face of future financial difficulties (McKenzie & Goldstein, 2017).

The difference in these two approaches is reminiscent of Sarasvathy's distinction between a causation (the traditional business programme) and effectuation (the personal initiative programme) approach to entrepreneurship (Sarasvathy, 2008), as introduced earlier in reference to approaches for youth entrepreneurs in response to liquid modernity.

This dissertation's findings on what entrepreneurs learn, coupled with those of McKenzie & Goldstein (2017) and Baxter et al. (2014), point to the value that can be derived from Sarasvathy's entrepreneurial effectuation theory, or the entrepreneurial method (Sarasvathy, 2001; 2008), as an appropriate approach for young entrepreneurs in South Africa.

6.6.2 Experiential, adaptive and collaborative learning – how entrepreneurs learn

Learning at Timbali and Maxum is an integral part of the business development process. Cope calls this kind of learning, which addresses the operational and concrete challenges presented by a business, adaptive or experiential learning (Cope & Watts, 2000; Cope, 2005a; Pittaway & Thorpe, 2012). Cope considers adaptive or experiential learning as single loop, or a lower form of learning (Cope,2005a)

Every Timbali farmer has systems with technical key performance indicators, and programmes for everything, to which they need to check yes or no. The structured environment enables farmers to know what is expected of them, even if they see chaos and feel powerless and helpless (Timbali CEO, Interview, 4 September 2014). Maxum too gives entrepreneurs milestones they need to reach in order to develop their businesses.

The experiential or adaptive nature of learning at the two cases echoes Gibb's view (1997a) of entrepreneurial learning:

> The predominant contextual learning mode in this … environment is that of … learning from peers; learning by doing; learning from feedback from customers and suppliers; learning by copying; learning by experiment; learning by problem-solving and opportunity taking; and learning from making mistakes. (Gibb, 1997a, p.19)

Application of learning by doing to a social context, or situated learning (Cope, 2005a; Hansman, 2001), involves constructing knowledge in distinctive settings (Zepke & Leach, 2002). It is collaborative because it depends on the interaction between people, tools and context within a learning situation (Hansman, 2001; Merriam & Caffarella, 1999; Zepke and Leach, 2002).

Collaborative learning is an integral part of entrepreneurial learning at Timbali and Maxum. At Timbali it manifests through farmers working together in the cluster, and structures such as cluster business meetings, life-skills training, and formal and informal mentoring. The space itself is the principal way Maxum engenders collaborative learning among the entrepreneurs it helps.

> That is what the Hub is, at the heart of it, collaboration among a lot of entrepreneurs. That is the magic. (MBC1, Interview, 30 October 2014)

As at Timbali, formal and informal mentoring are other important forms of collaborative learning at Maxum. Like Timbali, its mentoring model is hands-on.

The findings also reveal two important ways in which learning differs between the two cases. The first difference, probably related to their different levels of sophistication, is that Maxum entrepreneurs are more self-directed than Timbali's, and learn more on their own. They are better educated, read a lot, and use resources available to them, such as the Internet. Learning at Maxum fits into Gonon's description of entrepreneurial learning in a globalised world, which aims:

> to be a more self-directed and self-organized capability, within a context that emphasises an ethos of creativity and innovation. (Gonon, 2017, p.264)

The second difference is in the creation of explicit or incidental spaces for personal development to take place. Participation in Timbali's cluster, and the regular life-skills workshops indicate the seriousness with which Timbali tries to address the development challenges their farmers face as a result of their background. These are explicit measures. At Maxum, in contrast, the personal development entrepreneurs describe, actually happens as a by-product of business development. It is incidental.

Findings from this study build on Antonites and Van Vuuren's research, which tries to address a gap in the content of entrepreneurship programmes in a university setting pertaining to creativity, innovation and opportunity finding (Antonites & Van Vuuren, 2005). They found that students were more likely to exhibit those behaviours from the introduction of creativity and innovation in an explicit way and from more appropriate pedagogical methods than traditional didactic ones. They are acquired through action learning, where entrepreneurs reflect on a situation and take action to correct it. Those methods are similar to the experiential, adaptive and collaborative learning methodologies described in this research, and are considered as single loop learning (Cope & Watts, 2000).

6.6.3 Higher levels of learning

Experiential and self-directed learning may lead to adaptive and collaborative learning, which helps entrepreneurs meet certain operational challenges but these are not necessarily sustained, nor do they always lead to change (Brookfield, 2012). Maxum's Business Consultant 2's example of entrepreneurs reverting to past behaviour in response to immediate business needs is an example of the short-term nature of certain types of learning from a mentoring session. This research develops Antonites and Van Vuuren's (2005) ideas a step further, suggesting that for the types of creative and innovative skills they describe to be sustained, a higher level of learning is required. Programmes that can facilitate some form of transformative learning help their beneficiaries to achieve greater self-confidence, problem-solving, initiative, independence and ability to innovate (Gonon, 2017).

Such higher learning in the entrepreneur's personal dimension is transformative, which requires a greater degree of critical reflection on experiences than with single loop learning (Cope, 2005a).

6.6.4 Transformative learning

Findings from both cases indicate that in response to entrepreneurs' challenges, the major changes entrepreneurs undergo, perceived both by entrepreneurs and interveners, are about identity and how they see themselves. These include growing self-confidence and willingness to take decisions on their own, initiative and ability to take control of their environment even if they see chaos. They also refer to a changed outlook on the world, a reflection on cultural practices and the habits of peers around them, and understanding how these can inhibit their progress.

For the farmers, the shift in perception of themselves from employee to entrepreneur is a fundamental one, and takes place at Timbali. It entails their taking ownership and responsibility, even though their unit may be part of the cluster. Although Maxum expects entrepreneurs to have made this shift before they get there, significant personal changes still happen through the incubation experience. ME4, for example, sees the world very differently, and is less afraid:

> I think now if I had to go back, I wouldn't be the same. It would be so easy now if I wanted to move up the ranks, I wouldn't have the fear. (ME4, Interview, 20 November 2014)

Bringing some kind of certainty to an uncertain future is ME4's biggest learning, and illustrates what interveners, in both cases, describe as entrepreneurs needing to learn to adapt to uncertain circumstances and develop an optimistic mindset with a belief in their ability to solve problems and take control of their environment. These examples are evidence of higher level changes that have taken place in relation to the identity of entrepreneurs, and how they view the world.

Transformative learning in relation to identity, which explicitly includes the combination and interaction between the individual and the social environment, and how this influences the development of the individual (Illeris, 2014), seems an

appropriate descriptor for these deeper level transformations. They are changes that can be described as happening in the layers of preference and personality which surround the core identity, as described by Illeris (2014).

By helping entrepreneurs to reflect on their experiences and identities, transformative learning plays a role in engendering a different mindset and greater confidence. This allows entrepreneurs in Maxum to transition from being inventors to entrepreneurs, and at Timbali from being employees to entrepreneurs. It enables entrepreneurs to take responsibility for changing their reality, and not be overwhelmed by constant changes in an increasingly complex and changing world of liquid modernity (Bauman, 2000).

Findings show that entrepreneurs do not only need to be able to adapt, or learn from single loop experiences. They also shape the world around them, especially in niches like the ones Maxum operates in. To do this, they need to think of themselves and their identity differently, and that ability results from transformative learning. Transformative learning is acquired through a deeper critical reflection on more fundamental and deeply challenging, and usually personal exposures (Cope, 2005a). It is then often followed by a period of more adaptive learning.

Gonon (2017) makes an even stronger case for the decisive role of transformative learning in entrepreneurship development in a context of liquid modernity, where well-defined ends are not clear (Bauman, 2000).

> For more and more individuals it is important not just to adjust to developments but also to try to think and act in ways which always transcend the actual situation (Gonon, 2017, p.267).

6.6.5 Markers of transformative learning

The literature review notes the difficulties of planning for, capturing or evaluating transformative learning (Merriam & Bierema, 2014). Indications of transformative learning expressed in the theory are the ability to reflect and get feedback in an iterative process (Mezirow, 1997; Merriam & Bierema, 2014). This research employed in-depth interviews, where learners tell their stories of change. Mezirow

(1991) and Merriam and Bierema (2014) consider the in-depth interview as the most common method used to evaluate transformative learning.

Findings indicate that Maxum entrepreneurs are better able to reflect on their own personal development than Timbali farmers are. This may relate to their different levels of confidence, sophistication and life experience. Some of the fundamental changes experienced by Timbali farmers, especially in relation to cultural backgrounds that farmers are not always comfortable talking about, are expressed more by the interveners.

Farmers' experiences can still be considered examples of transformative learning because they are able to reflect on and articulate what has changed in their lives, as they did in the interviews. Their accounts are consistent with those of their interveners.

The personal transformations experienced by entrepreneurs in both cases appear to conform to the six steps Mezirow described when he revised his original ten phase process for transformative learning (Dirkx & Mezirow, 2009). These steps, in summarised form are:

1. Recognition of the need for an alternative way of understanding a problem.
2. Awareness of the sources, nature, and consequences of an established belief.
3. Critical reflection of the assumptions behind the established belief.
4. Validating a new belief by some kind of assessment.
5. Coping with anxiety over the consequences of taking action.
6. Taking reflective action on the validated belief.

This is a similar process to that described by Timbali's centre manager as taking place in the life-skills component of their programme, where farmers reflect among themselves, and arrive at alternative solutions to problems that may have their roots in traditional cultural practices.

ME3's example of the process he went through to tell his parents he had started his own businesses and was not employed in a corporate illustrates this process. He describes growing up in an environment with very few examples of entrepreneurship, and where entrepreneurial values were never discussed. The established belief of his upbringing was to obtain employment in the formal sector, to aspire to be a professional. ME3's anxiety about telling his parents lay in how he perceived their expectation of him at a particular stage of life, in comparison with his peers. ME4 learning not to fear failure is another example of a personal transformation in how entrepreneurs see themselves.

The findings thus show that some form of transformative learning occurs in entrepreneurship development programmes for young people, and can help them to understand and transcend aspects of their upbringing and culture that may inhibit entrepreneurial behaviour.

6.6.6 How transformative learning happens – implications for practice

The case study findings show how Timbali and Maxum entrepreneurs learn. Learning occurs from a structured business development process, from key moments and external events. It also emanates from mentors, from constant feedback in cluster meetings (Timbali), or quarterly management meetings (Maxum) from mistakes they make, from books and from role models.

Antonites and Van Vuuren's study (2005) shows how the experiential, collaborative and adaptive learning that takes place at Timbali and at Maxum Timbali's can be simulated in a classroom situation in explicit ways, with the appropriate pedagogical methods. Not being classroom-based, learning at Timbali and Maxum is both explicit and incidental. Cumulative experiences leading to transformative learning are those implicit in the business development processes both programmes follow, whether life-skills and other types of intervention designed to foster personal development are present or not. Timbali shows how life-skills often need to be delivered explicitly, especially for young, people with greater development needs.

Transformative learning, in contrast, is almost always the outcome of something else learned, rather than the primary goal of an education intervention (Merriam & Bierema, 2014). In this research, transformative learning takes place in parallel to business and personal development. It is incidental by nature, with no specific methods that guarantee transformation (Cranton, 2002). Programmes can only set the stage and create an environment in which entrepreneurs have the opportunity to reflect critically on their assumptions and perspectives (Cope, 2005a; Cranton, 2002).

Mezirow articulates two paths towards transformative learning, from critical events, where major changes in orientation or habits of mind are associated with significant life crises, and cumulative, where a progressive sequence of events results in changes in points of view, leading to transformation (Mezirow, 2009). In applying these paths to entrepreneurial learning, Cope (2005a) refers to learning from routinised events as well as from critical incidents, although he maintains critical events play a bigger role (Cope, 2003).

Both paths are present in the case study findings. Challenges resulting from critical incidents for Timbali are natural disasters such as a devastating hailstorm that destroyed all the amaVeg farmers' crops at the end of 2013, and a strike by amaVeg trainee farmers in April 2013. For Maxum entrepreneurs, learning from mistakes made in selecting the wrong partners in their businesses, as ME1 and ME2 did, are critical incidents described in the findings. Transformative learning from critical events, therefore, emanate both from external factors and self-imposed ones (Cope, 2003).

Since experiences lead to either single loop or higher level learning, motivation becomes an important factor for entrepreneurs in order to trigger transformation. It can't simply be imposed on entrepreneurs (Illeris, 2014). Thus the rapport entrepreneurs establish with formal or informal mentors, or even role models, is very important. Timbali uses successful farmers, such as TE1 and TE2, as role models to transmit ideas, or to resolve problems. Some mentors deal with practical and technical issues, leading to single loop learning, like TE6's mentor at Timbali who

taught him a lot about spraying plants, or Maxum mentors focusing on aspects of business development.

Taking ultimate responsibility for oneself, as an entrepreneur, is a mindset opposite to one which encourages entrepreneurs to join Maxum to get free services and not take responsibility to grow their business, or Timbali because there was no other employment option. As suggested in the findings, this is learning at a higher level. Acquiring this mentality requires certain changes in participants' perspectives. Interveners can assist entrepreneurs to reflect more critically by offering challenging questions at the right times, and constantly shifting the balance of challenge, support and empowerment (Cranton, 2002). Interveners can also recognise that at times, it is the entrepreneur's journey, and it is ultimately their choice to transform

6.7 Conclusion

Transformative learning is not easy, and learners, or entrepreneurs in this case, may resist because it is too difficult for them. Findings on life-skills training at Timbali confirm that it takes time and trust to get people to open up, particularly about cultural issues. For higher level, or transformative learning to take place, a deeper connection between the mentor and entrepreneur is required. Illeris (2014) asserts that the key to promoting transformational learning is to find and connect to the psychological or practical, internal or external potentials in the learners' existence and life world that are so strong that they justify the exertion transformative learning requires (Illeris, 2014). This is the spark Maxum business consultant 1 refers to:

> That is the transformative thing, but it starts with a spark. So I think initially the biggest thing is to get guys to reconnect with that spark. (MBC1, Interview, 20 October 2014)

Experiences from both Timbali and Maxum confirm the necessity of this kind of rapport, which has to accompany value-adding advice or assistance with business development, or financial assistance. These interactions, however, are time consuming and require resources. They are therefore unsuitable for mass entrepreneurship programmes.

Chapter 7 Conclusions

7.1 Introduction

In reframing commonly-held conceptions about the potential of youth entrepreneurship to address many of South Africa's development challenges, this study, comprising qualitative case studies of two entrepreneurship development programmes conducted in 2014, aimed to answer the following research questions:

1. What is an appropriate model for youth enterprise development in South Africa?
    a. What lessons can be learned from a comparison between the approaches, practices and results of two selected market-oriented programmes in South Africa?
    b. What innovative components and methods of these two programmes could lead to more sustainable youth businesses?
    c. How do young people learn on these programmes?

The cross-case analysis in the previous chapter identified the major themes emerging from the case studies and the literature on entrepreneurship, and applied educational theories in response to these questions. A theoretical framework of transformative learning was used to understand how enterprise development support can assist young people to grow or sustain their business activities. It can do this by developing the type of mindset or identity that enables them to respond to a context of rapid change, or liquid modernity (Bauman, 2000).

In offering some conclusions, this chapter returns to the research questions which have guided the research.

7.2 What is an appropriate model for youth entrepreneurship?

Although the study set out to identify a model for youth enterprise development in South Africa, what emerges are elements of different models. South Africa cannot afford to support just one model of youth entrepreneurship, but it also cannot afford

to support all types. Debunking commonly-held paradoxical assumptions about youth entrepreneurship is the first step towards formulating more realistic support strategies.

This research shows that entrepreneurship cannot contribute to economic growth, redistribute wealth, alleviate poverty, include people and create jobs all at once. Although these are all important objectives, they each present different challenges. The situation in South Africa is further complicated by redistributive legislation that mostly leads to unproductive entrepreneurship. The inclusion aims of entrepreneurship do not mean pushing young people into self-employment who are not suitable for it, or into saturated and overtraded markets where they are unable to compete effectively.

Blurring the distinctions between different kinds of entrepreneurship in the hope that they will provide solutions to a myriad of problems only adds to continued failure. An effective approach to entrepreneurship needs to be disaggregated into one or more niches. The same vehicle cannot do all things.

7.2.1 Definitional clarity

The Global Entrepreneurship Monitor (GEM) definition of entrepreneurial activity was adopted for this research. This definition, used since the GEM's inception in 1999, defines entrepreneurial activity as:

> Any attempt at self-employment, new venture creation, or the expansion of an existing business by an individual on their own, in conjunction with others, or by an already established business. (Reynolds *et al*., 1999, p.3; Herrington & Kew, 2016)

This definition was adopted because it describes a process. It assumes an interchangeable use of the terms entrepreneurship, enterprise development and self-employment. As the research process unfolded, analysis of the findings brought this assumption into question. This blurring of lines between different types of entrepreneurship may contribute to some of the contradictory positions entrenched in entrepreneurship policy.

Conflating high-end, innovative entrepreneurship with self-employment implies that these are not different types of activity and do not require separate types of assistance. Such conceptual confusion contributes to the failure of development interventions. The niches appropriate for young entrepreneurs, suggested in this research, require a less generic description of each segment. Self-employment to take advantage of existing opportunity (as at Timbali) is a separate niche, and should be precisely defined as such, with appropriate interventions. The high-tech high growth sector, creating innovative new products and services (Maxum) is another niche requiring different interventions and producing different outcomes.

7.2.2 The role of youth entrepreneurship

There is a pressing need to do something about youth unemployment in South Africa. Entrepreneurship is one strategy that, if conceived differently, could enable the inclusion of some previously marginalised people into the economy. It plays a direct role for small numbers of people but it can have a wider impact.

There is much to learn from Timbali and Maxum in formulating strategies for youth entrepreneurship in South Africa. The first lesson is that entrepreneurship is clearly **not** an escalator that moves young people not in education, training or employment (NEET) upward into the economic mainstream people *en masse*. The failure of many of these attempts is predictable and has many negative social and economic effects. Some of these effects are the increased indebtedness of young people who obtain loans for unsustainable businesses, unwillingness to engage in other ventures and anger at an economic system that excludes them.

Effective policies on youth entrepreneurship in South Africa should stand independently of job creation or poverty alleviation, and even of youth unemployment strategies. The state's responsibility to rectify structural challenges to the economy is a different challenge to exploring an alternative approach to systemic intervention in youth entrepreneurship development. Systemic policies and interventions can make a difference if they are reframed to draw on more realistic assumptions about entrepreneurship, and if they factor in the role of the individual (Cope, 2005a;

Packard, 2017). They need to create conditions for a rope ladder which individuals can climb, rung by rung.

7.2.3 The objective: Productive entrepreneurship for inclusive growth and development of know-how

Maxum and Timbali offer different examples of productive entrepreneurship (Baumol, 1990), leading to inclusive growth (Stern *et al*., 2005) and the development of know-how (Hausmann, 2016). Both programmes view entrepreneurship as an important bridge between the development of infrastructure and enabling the participation of poor people. By helping young people with some of the fixed costs to access infrastructure and networks, and overcoming the lack of know-how (Hausmann, 2016) that makes entrepreneurship difficult for them, the programmes encourage inclusive growth.

Hopes of financial sustainability of initiatives illustrated by these two programmes should be shaped by of the kinds of inputs required for their target beneficiaries, and their role in facilitating inclusive growth. They do not need to be the same for each of these entrepreneurial niches. Both examples demonstrate the need for partnerships to develop and maintain the infrastructure and environments they need to achieve their goals. Both examples will always require donor or government funding for the capital outlay to expand development to new entrepreneurs. Such capital outlay is not recoverable, but can be significantly reduced by appropriate partnerships between government and other institutions, including private sector, academic and financial institutions. Recovery of costs for services takes different forms. For both programmes creative ways to sustain ongoing services whether from levy payments from farmers or revenue share or equity from entrepreneurs need to be balanced against competing goals of equity and growth.

7.2.4 Measures of success

Unquestioned assumptions, especially in relation to job creation and the goals of entrepreneurial activity, makes the measurement of entrepreneurship development programmes appear easy. Programmes are measured by the numbers of

entrepreneurs they assist, and the jobs they create. By such measures, Timbali's amVeg programme was unsuccessful because few graduates became out-growers. Maxum's entrepreneurs would be considered unsuccessful because they do employ many people directly. Once these assumptions are questioned, the measures of success for entrepreneurial activity need to be reframed.

A model which proposes transformative learning also requires a different form of measurement which includes acceptance of a more subjective and multi-factorial approach, and measures on how entrepreneurship development initiatives change people and their aspirations. The Timbali and Maxum cases show that strictly binary measures do not provide an accurate picture of what these programmes do. While they may not be able to generate the kind of potential wealth of Maxum entrepreneurs, success for Timbali's farmers is measured in the security and stability they give to their families and the opportunities they offer their children. That is the kind of return on investment not measured in reports to donors.

7.3 A niched approaches for youth entrepreneurs

The vague assumption of an entrepreneurial continuum does not apply to this study, and probably not elsewhere. The first niche suggested in this study, at the higher end of the gap between poverty and alleviation and high growth, aims at high-tech start-ups like Maxum.

There is an important role for the high-tech start-up sector, which presents an opportunity for certain young people to excel. It plays to their strengths. Although it does not offer a perfect system, Maxum is an example of this. It is a model well-suited to a segment of young people in South Africa. Young, educated, black South Africans have come of age in a technological society and are emerging from higher education to an environment of new opportunities, especially those created by new technologies. Economies throughout the world need this type of entrepreneurial model in order to stay relevant and embrace the pervasive technological disruption of the twenty-first century.

This niche requires investment in an ecosystem, or environment and infrastructure that enables people to commercialise their ideas. Such an environment necessitates partnerships between technology and innovation agencies, government agencies, funders and academic institutions.

The outcomes of a high-tech high growth niche for young entrepreneurs are limited to a certain number of people, both because of the skills required from entrepreneurs, and the resources required to support them. They create economic impact through the spillover effect they have on secondary businesses and services.

The yellow brick road shows that it is possible to address poverty alleviation and unemployment for a small group of appropriate people at the lower end of the entrepreneurial spectrum by offering a franchise-type system that manages the need for innovation and investment in technology on the one hand, and access to a supply chain on the other, at least in the initial stages. This requires some kind of easily replicable approach, with high levels of infrastructure and support. This niche offers a more developmental approach, helping largely uneducated, unskilled individuals take advantage of existing opportunities by creating a structured environment that helps to incorporate them into existing supply chains, while at the same time facilitating personal growth.

Timbali's model offers a bridge towards a safe place, or island, where people can make sense of the changes around them and in so doing learn to navigate a rapidly changing society. The outcomes are limited to a small number of people, who will remain small-scale farmers. The wider impact of Timbali's activities, however, is felt in rural development and greater food security.

7.4 Innovative components of entrepreneurship programmes

All entrepreneurship entails some element of risk. Outcomes in both programmes are not guaranteed. Not all participants are successful and some may lose money.
Sarasvathy's entrepreneurial effectuation approach, or the entrepreneurial method (Sarasvathy, 2008), helps entrepreneurs to manage affordable risk, and to respond to circumstances beyond their control. The entrepreneurial method is not just

suitable for potential high-growth entrepreneurs, but is appropriate for young people with limited resources. It helps them develop entrepreneurial attitudes and orientation, rather than just business planning skills (Sarasvathy, 2001). By focuing on the “controllable aspects of an uncertain future” (Sarasvathy, 2001, p. 251), rather than trying to predict it, the entrepreneurial method embraces a context of liquid modernity, and provides young entrepreneurs with a method of navigation.

Because the entrepreneurial method looks at individual behaviours, and how they develop, it is synergistic with learning theories for entrepreneurship. Findings from both cases strongly support the belief that entrepreneurship and entrepreneurial behaviours are not intrinsic to the psychological make-up of the person, but can be learned (Cope, 2005a). Many of them can be fostered through carefully thought-out programmes.

Niches for young entrepreneurs should help them to navigate constant and rapid changes, or liquid modernity (Bauman, 2000), through a process of transformative learning. Necessary skills to help young people to this are personal empowerment, adaptability, and the ability to embrace uncertainty. This entails the development of a more entrepreneurial mindset which is achieved by creating conditions for young people to make changes to their perceptions of themselves that occurs in parallel with other assistance.

This research sheds light on how the shifts in perceptions of identity and agency, experienced both by the entrepreneurs themselves and by the people who assist them in these programmes, are achieved through transformative learning. Acknowledging what in their history, culture, world-view or family beliefs holds people back from adapting to new circumstances, and then reintegrating this into a renewed sense of identity, is the goal of transformative learning (Illeris, 2014).

7.5 How young entrepreneurs learn

The two incubation programmes provide a context for entrepreneurial learning which is adaptive, experiential, collaborative and transformative.

Learning about business processes tends to be what Cope (2005a) calls ‘single loop’ or ‘adaptive’, which may not be lasting. Single loop learning can be explicit or incidental, or both. The technical and business development processes, cluster meetings or quarterly reviews, and training offered by both programmes are explicit. Timbali offers explicit life skills to its beneficiaries because of their levels of development, whereas personal growth at Maxum is incidental.

Higher forms of learning, or double loop learning (Cope & Watts, 2000) result from critical reflection that allows entrepreneurs to analyse their own assumptions and consider how these may impact on the effectiveness of what they do. When this higher level learning relates to individual entrepreneurs themselves, it is considered transformative learning (Cope 2005a). By its nature, transformative learning is only incidental. The primary goal of both programmes is business development. Programmes cannot plan explicitly for transformative learning, but can create optimal conditions for it to happen.

These learning processes apply at both higher and lower levels of entrepreneurship, whether it is the potential high-tech success story or the rural woman providing for her family through her participation in the farming cluster.

Structures that enable collaboration and peer-learning, such as the cluster and the incubator, allow the transformation necessary for more entrepreneurial behaviours to develop. Mentoring plays a big part in this, the hands-on type, and allows entrepreneurs the time and space to reflect on challenges to their businesses. The intensely personal nature of the kind of mentoring required cannot be replicated on a mass scale.

7.6 Conclusion

Entrepreneurship is offered as one of the solutions to high levels of youth unemployment, both in South Africa (dti, 2013a; NYDA, 2015) and elsewhere in the world (ILO, 2016). This solution is based on the assumption that entrepreneurship can contribute to economic growth, creating employment, facilitating greater participation in the economy and alleviating poverty.

However, this research shows that assumptions about simultaneously addressing all these development challenges through the promotion of entrepreneurship, especially for young people, are misplaced and contribute to continual failure and waste of resources. Entrepreneurship development, of itself, is not a flying carpet that can transport masses of young people into the modern world or into productive lives, nor move a sluggish economy into a high-performance zone.

An alternative conception of productive youth entrepreneurship as an important contributor to inclusive growth and the development of know-how stands a better chance of optimizing the dividends of a youthful society and overcoming developmental challenges. Understanding the need for some transformative learning among young entrepreneurs can increase the potential effectiveness of youth entrepreneurship programmes. This can be done through the development of a mindset and skills such as adaptability, problem-solving and initiative. The required mindset, adaptive skills and attitudes will not only help a portion of young people to negotiate a changing world but to shape it as well.

References

Acs, Z.J., Stam, E., & Audretsch, D.B. (2017). The lineages of the entrepreneurial ecosystem approach. *Small Business Econ*, 49, 1-10. https://doi.org/10.1007/s11187-017-9864-8

Aghion, P. (2017). Entrepreneurship and growth: lessons from an intellectual journey. *Small Business Econ*, 48, 9-24. https://doi.org/10.1007/s11187-016-9812-z

Alvarez, S., & Barney, J.B. (2014). Entrepreneurial opportunities and poverty alleviation. *Entrepreneurship: Theory and Practice*, 38 (1), 159-184. https://doi.org/10.1111/etap.12078

Antonites, A.J., & Haguma, J.J. (2011). Assessing the innovative nature of the agricultural based small businesses in Rwanda – The case study of the coffee industry. *African Journal of Agricultural Research*, 6 (3), 757-770.

Antonites, A.J. & van Vuuren, J.J. (2005). Inducing entrepreneurial creativity, innovation and opportunity-finding skills. *South African Journal of Economic and Management Sciences,* 8 (3), 255-271.

Auerswald, P.E. (2015). *Enabling Entrepreneurial Ecosystems: Insights from Ecology to Inform Effective Entrepreneurship Policy.* Arlington: Ewing Marion Kaufmann Foundation. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2673843

Banerjee, A., & Duflo, E. (2011). *Poor economics: A radical rethinking of the way to fight global poverty*. New York: Public Affairs.

Baum, F. (1900). *The Wonderful Wizard of Oz*. Chicago: George M Hill Company. Republished 1995: Penguin.

Bauman, Z. (2000). *Liquid modernity*. Cambridge: Polity.

Bauman, Z. (2007a). From heavy to light modernity. In A, Elliot (Ed.), *The Contemporary Bauman* (pp. 34-45). New York: Routledge. (Original work published in 2000)

Bauman, Z. (2007b). Critique – privatized and disarmed. In A. Elliot, A. (Ed.), *The Contemporary Bauman* (pp. 19-26). New York: Routledge. (Original work published in 2000)

Baumol, W. (1990). Entrepreneurship: Productive, unproductive and destructive. *Journal of Political Economy,* 98 (5), 893-921. https://doi.org/10.1086/261712

Baxter, A., Chapman, D.W., DeJaeghare, J., Pekol, A.R., & Weiss, T. (2014). Youth entrepreneurship education and training for poverty alleviation: A review of international literature and local experiences. *International Perspectives on Education and Society,* 23, 33-58. https://doi.org/10.1108/S1479-3679(2013)0000023010

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report*, 13(4), 544-559.

Beeka, B. H., & Rimmington, M. (2011). Entrepreneurship as a career option for African youths. *Journal of Developmental Entrepreneurship*, 16(1), 145-164.

Berger, B. (1991). Introduction. In B. Berger, B (Ed.), *The Culture of Entrepreneurship* (pp.1-12). San Francisco: ICS Press.

Berner, E., Gomez, G. & Knorrer, P. (2012). 'Helping a large number of people become a little less poor': The logic of survival entrepreneurs. *European Journal of Development Research*, 24, 382-396. https://doi.org/10.1057/ejdr.2011.61

Blackburn, R., & Ram, M. (2006). Fix or fixation? The contributions and limitations of entrepreneurship and small firms to combating social exclusion. *Entrepreneurship & Regional Development*, 18(1), 73-89. https://doi.org/10.1080/08985620500419566

Bloem, J., Van Doorn, M., Duivestein, S., Excoffier, D., Maas, R., & van Ommeren, E. (2014). *The Fourth Industrial Revolution: Time to Tighten the Link Between IT and OT. VINT research report 3 of 4*. Groningen: Sogeti VINT. Retrieved from https://pdfs.semanticscholar.org/59ed/b39386ddfbf437a78869c37e72457b9e8235.pdf

Bohne, A., Christensen, J.D., Frölich, M., Wiesenfarth, M. (2014). *Short-term impact of the startup&go entrepreneurship education programme in South Africa*. Pretoria: International Labour Organization.

Bonito, J.D.M., Daantos, F.J.A., Mateo, J.C.A., Rosete, M.A.L. (2017). Do entreprneurship and economic growth affect poverty, income inequality and economic development? *Review of Integrative Business and Economics Research,* 6 (1), 33-34. Retreived from http://sibresearch.org/uploads/3/4/0/9/34097180/riber_h16-020_33-43.pdf

Brookfield, S. (1991). *Developing critical thinkers: Challenging adults to explore different ways of thinking and acting*. San Francisco: Jossey-Bass.

Brookfield, S. (2012). Critical theory and transformative learning. In E.W Taylor & P. Cranton (Eds.), (2012). *The Handbook of Transformative Learning: Theory, Research and Practice* (pp.131-146). San Francisco: Jossey-Bass.

Brown, R., & Mason, C. (2017). Looking inside the spiky bits: a critical review and conceptualisation of entrepreneurial ecosystems. *Small Bus Econ,* 49 (1), 11–30. https://doi.org/10.1007/s11187-017-9865-7

Bureau for Economic Research (BER). (2016). *The Small, Medium and Micro Enterprise Sector in South Africa, Research Note 2016, No1*. Pretoria: The Small Enterprise Development Agency. Retrieved from http://www.seda.org.za/Publications/Publications/The%20Small,%20Medium%20and%20Micro%20Enterprise%20Sector%20of%20South%20Africa%20Commissioned%20by%20Seda.pdf

Buys, A.J., and Mbewana, P.N. (2007). Key success factors for business incubation in South Africa: The Godisa case study. *The South African Journal of Science,* 103 (9-10), 356-358. Retrieved from http://www.scielo.org.za/pdf/sajs/v103n9-10/a0110310.pdf

Casson, M., Yeung, B., Basu, A., & Wadeson, N. (2006). Introduction. In M. Casson, B.Yeung, A. Basu & N. Wadeson (Eds.), *The Oxford handbook of Entrepreneurship* (pp.1-30). New York: Oxford University Press.

Centre for Development and Enterprise (CDE). (2007). *Young Soweto entrepreneurs: Organising for small business advocacy.* Johannesburg: Centre for Development and Enterprise. Retrieved from http://www.cde.org.za/young-soweto-entrepreneurs-organising-for-small-business-advocacy/

Centre for Development and Enterprise (CDE). (2017a). *No country for young people: The crisis of youth unemployment and what to do about it*. Johannesburg: Centre for Development and Enterprise. Retrieved from http://www.cde.org.za/unemployment/publications

Centre for Development and Enterprise (CDE), (2017b). *Business, Growth and Inclusion: Tackling youth unemployment in cities, towns and townships.* Johannesburg: Centre for Development and Enterprise. Retrieved from http://www.cde.org.za/unemployment/publications

Cheung, C-K. (2008). Entrepreneurship education in Hong Kong's secondary curriculum: Possibilities and limitations. *Education + Training*, 50 (6), 500-515. https://doi.org/10.1108/00400910810901827

Chigunta, F. (2002). *Youth entrepreneurship: Meeting the key policy challenges.* Background paper prepared for Youth Employment Summit, Alexandria, 2002. Retrieved from www.worldcat.org/title/youth-entrepreneurship-meeting-the-key.../51902859

Chigunta, F. (2017). Entrepreneurship as a possible solution to youth unemployment in Africa. In T, Abebe & J. Waters (Eds.), *Laboring and learning* (pp.433–451). Singapore, Springer.

Chigunta, F., Schnurr, J., James-Wilson, D. & Torres, V. (2005). *Being 'real' about youth entrepreneurship in Eastern and Southern Africa: Implications for adults, institutions and sector structures*. *SEED Working Paper No 72*. Geneva: ILO. Retrieved from www.ilo.org/empent/Publications/WCMS_094030/lang--en/index.htm

Clarke, M.C. (1993). Transformational learning. *New Directions for Adult and Continuing Education*, (57), 47-56. https://doi/10.10022/ace.36719935707

Clemensson, M. & Christensen, J.D. (2010). *How to build an enabling environment for youth entrepreneurship and sustainable enterprises.* Paper for the knowledge-sharing event on integrated youth employment strategies, Moscow 17-19 February, 2010. Geneva: ILO, Small Enterprise Programme. Retrieved from http://ilo.org/wcmsp5/groups/public/---europe/---ro-geneva/---sro-moscow/documents/publication/wcms_345719.pdf

Cleveland, J., & Cleveland, J. (2006). *Youth entrepreneurship: theory, practice and development.* W.K. Kellogg Foundation Youth and Education Unit. Battle Creek, Michigan. Retrieved from http://extension.missouri.edu/ceed/reports/YouthEntrepreneurshipKelloggFoundation2007.pdf

Cline, M. (2011). *Paying it forward: The relationship between mentoring and perceived ESE of Jewish South African entrepreneurs*. (Unpublished Masters dissertation, University of the Witwatersrand, Johannesburg).

Connor, W.D. (1991). The rocky road: Entrepreneurship in the Soviet economy 1986-1989. In B. Berger (Ed.), *The Culture of Entrepreneurship* (pp.188-209). San Francisco: ICS Press.

Cope, J. (2003). Entrepreneurial learning and critical reflection: Discontinuous events as triggers for 'higher-level' learning. *Management Learning*, 34(4), 429–450. https://doi.org/10.1177/1350507603039067

Cope, J. (2005a). Toward a dynamic learning perspective of entrepreneurship. *Entrepreneurship Theory and Practice*, July, 373-397.

Cope, J. (2005b). Researching entrepreneurship through phenomenological enquiry: Philosophical and methodological issues. *International Small Business Journal*, 23(2), 163-189. https://doi.org/10.1177/0266242605050511

Cope, J., & Watts, G. (2000). Learning by doing: An exploration of experience, critical incidence and reflection in entrepreneurial learning. *International Journal of Entrepreneurial Behaviour and Research*, 6 (3), 104-124.

Cranton, P. (2002). Teaching for transformation. *New Directions for Adult and Continuing Education*, (93), 63-71. https://doi.org/10.1002/ace.50

Cranton, P., & Kasl, E. (2012). A response to Michael Newman's "Calling transformative learning into question: Some mutinous thoughts". *Adult Education Quarterly*, 62(4), 393-398. https://doi.org/10.1177/o74i7i36i24564i8

Cresswell, J.W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches*. (4th Edition. International Student Edition). Thousand Oaks: Sage Publications.

De Klerk, L. (2013). *Report to funder: key lessons learnt from SSACI/Timbali amaVeg Cluster*, *26 July 2013*. Mbombela: De Klerk.

De Klerk, L. (2014a). *Timbali Model and Expansion Strategy 2014.* Mbombela: De Klerk.

De Klerk, L. (2014b, September). *Timbali Technology Incubator: Agriculture Action Dialogue.* Presentation slides for Jocelyn Smith, 4 September 2014. Mbombela: De Klerk.

Denzin, N.K., & Lincoln, Y.S. (2011). Introduction: Disciplining the practice of qualitative research. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (pp.1-19). Los Angeles: Sage Publications.

Department of Basic Education (DBE). (2016). *Entrepreneurship in Schools*. Pretoria: Department of Basic Education.

Department of Higher Education and Training (DHET). (2014). White paper for post-school education and training. *Government Gazette, 15 January 2014*. Pretoria: Department of Higher Education and Training. Retrieved from www.gov.za/documents/download.php?f=207591

Department of Trade and Industry (dti). (1995). *White paper on national strategy for the development and promotion of small business in South Africa*. Cape Town: Department of Trade and Industry. Retrieved from http://www.info.gov.za/whitepapers/1995/smallbus.htm

Department of Trade and Industry (dti). (2005) *Integrated strategy on the promotion of entrepreneurship and small enterprises*. Pretoria: Department of Trade and Industry. Retrieved from http://www.thedti.gov.za/sme_development/docs/strategy.pdf

Department of Trade and Industry (dti). (2013a). *Youth enterprise development strategy 2013-2023.* Pretoria: Department of Trade and Industry. Retrieved from http://www.thedti.gov.za/news2013/YEDS_strategy2013.pdf

Department of Trade and Industry (dti). (2013b). *Incubation Support Programme (ISP): Programme Guidelines.* Pretoria: Department of Trade and Industry. Retrieved from https://www.thedti.gov.za/ISP/ISP_Guidelines_Ver2.pdf

Dirkx, L.M. (1997). Nurturing soul in adult learning. *New Directions for Adult & Continuing Education*, 1997(74), 79-88. https://doi.org/10.1002/ace.7409

Dirkx, J.M., & Mezirow, J. (2006). Musings and reflections on the meaning, context, and process of transformative learning: A Dialogue between John M. Dirkx and Jack Mezirow. *Journal of Transformative Education.* 4(2), 123-139. https://doi.org/10.1177/1541344606287503

Drucker, P.F. (1985). *Innovation and entrepreneurship: Practice and principles*. New York: Harper & Row.

Dubihlela, J., & Van Schalkwyk, P.J. (2014). Small business incubation and the entrepreneurial business environment in South Africa: A theoretical perspective*. Mediterranean Journal of Social Sciences*, 5(23), 264-269. https://doi.org/10.5901/mjss.2014.v5n23p264

Economic Development Department (EDD). (2011). *The New Growth Path: Framework*. Pretoria: Economic Development Department. Retrieved from https://www.google.co.za/search?q=new+growth+path+pdf&oq=New+Growth+&aqs=chrome.2.69i57j0l5.4554j0j8&sourceid=chrome&ie=UTF-8

Eisenhardt, K. (1989). Building theories from case study research. *The Academy of Management Review,* 14(1), 532-550*.*

Elliot, A. (2007a). Editor's introduction. In A. Elliot (Ed.), *The Contemporary Bauman* (pp. 3-18). New York: Routledge.

Elliot, A. (2007b). The theory of liquid modernity: A critique of Bauman's recent sociology. In A. Elliot (Ed.), *The Contemporary Bauman* (pp. 46-60). New York: Routledge.

Eriksen, E.H. (1968). *Identity, youth and crisis*. New York: Norton.

Flyvbjerg, B. (2011). Case study. In N.K. Denzin & Y.S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (pp.302-316). Los Angeles: Sage Publications.

Foss, N.J., & Klein, P.G. (2017). Entrepreneurial discovery or creation? In search of the middle ground. *Academy of Management Review*, 22 (4), 735-737. https://doi.org/10.5465/amr.2016.0046

Fourie, F. (2013). Reducing unemployment: Waiting for high growth? Waiting for Godot. *econ3x3,* 2013 (3), 1-7. Retrieved from http://www.econ3x3.org/article/reducing-unemployment-waiting-high-growth-waiting-godot

Freire, P. (1970). *Pedagogy of the oppressed.* (Translation 1990). London: Penguin.

Gauteng Growth and Development Agency (GGDA). (2015). *Annual Performance Plan 2015/2016*. Johannesburg: Gauteng Growth and Development Agency. Retrieved from http://www.ggda.co.za/index.php/knowledge-centre/publicataions/category/35-annual-performance-plans

Gauteng Growth and Development Agency (GGDA). (2016). *Annual Report 2015/16*. Johannesburg: Gauteng Growth and Development Agency. Retrieved from http://www.ggda.co.za/index.php/knowledge-centre/publicataions/category/34-gauteng-growth-and-development-agency-annual-reports

Geldhof, G.J., Porter, T., Weiner, M., Malin, H., Bronk, K.C., … Lerner, M. (2013). Fostering youth entrepreneurship: Preliminary findings from the young entrepreneurs study. *Journal of Research on Adolescence*, 24(3), 431–446. https://doi.org/10.1111/jora.12086

Gerber, M. (1995). *The emyth revisited: Why most small businesses don't work and what to do about it*. New York: Harper Collins.

Gibb, A.A. (1997a). Small firms' training and competitiveness: Building on the small business as a learning organization. *International Small Business Journal*, 15 (3), 13-29.

Gibb, A. (1997b). In pursuit of a new 'enterprise' and 'entrepreneurship' paradigm for learning: creative destruction, new values, new ways of doing things and new combinations of knowledge. *International Journal of Management Reviews*, 4 (3), 233-269.

Global Entrepreneurship Monitor (GEM). (2017). *Global Report 2016/17*. London: Global Entrepreneurship Research Association. Retrieved from http://www.gemconsortium.org/report/49812

Godisa Trust (2005). *Annual report for the year ended 31 March 2005.* Retrieved from http://www.seda.org.za/Publications/Publications/Godisa%20Annual%20Report%202005.pdf

Godsell, G. (1991). Entrepreneurs embattled: Barriers to entrepreneurship in South Africa. In B. Berger (Ed.), *The Culture of Entrepreneurship* (pp. 188-209). San Francisco: ICS Press.

Gonon, P. (2017). Bildung and transformative learning in a globalized world. In A. Laros, T. Fuhr & E. Taylor (Eds.), *Transformative Learning Meets Bildung: An International Exchange* (pp. 259-268). Rotterdam: Sense Publishers.

Graham, L., & De Lannoy, A. (2016). Youth unemployment: what can we do in the short run? *Econ3x3,* 2016 (12). Retrieved from http://www.econ3x3.org/article/youth-unemployment-what-can-we-do-short-run

Graham, L., Patel, L., Chowa, G., Masa de Vera, R., Khan, Z., Williams, L., & Mthembu, Z. (2016). *Youth assets for employability: An evaluation of youth employability interventions Baseline Report.* Johannesburg: Centre for Social Development, University of Johannesburg. Retrieved from https://www.uj.ac.za/faculties/humanities/csda/Documents/Siyakha%20Report%20_%20Oct%202016%20Web.pdf

Gstraunthaler, T., & Cramer, P. (2012). The South African support system for start-up companies: Assessing the Khula indemnity scheme. *Competition & Change*, 16(1), 56-68.

Gunnlaugson, O. (2008). Metatheoretical prospects for the field of transformative learning. *Journal of Transformative Education*, 6(2), 124-135.

Haan, H.C. (1999). MSE Associations and enterprise promotion in Africa. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp.107-120). London: Intermediate Technology Development Group Publishing.

Hall, M., & Symes, A. (2006). South African higher education in the first decade of democracy: from cooperative governance to conditional autonomy. *Studies in Higher Educati*on, 30 (2), 199-212.https://doi.org/10.1080/03075070500043317

Haltiwanger, J., Jarmin, R.S., & Miranda, J. (2013). Who creates jobs? Small versus large versus young. *Review of Economics and Statistics*, 95 (2), 347-361. https://doi.org/10.1162/REST_a_00288

Hamilton, S., & Hamilton, M. A. (2012). Development in youth enterprises. *New Directions for Youth Development*, 134 (6), 65-75. https://doi.org/10.1002/yd.20016

Hansman, C.A. (2001). Context-based adult learning. *New Directions for Adult and Continuing Education*, (89), 43-51.

Hausmann, R. (2014). The economics of inclusion. *Project-syndicate*, Nov 7, 2014. Retrieved from https://www.project-syndicate.org/commentary/inclusiveness-key-strategy-for-growth-by-ricardo-hausmann-2014-11

Hausmann, R. (2016). Economic development and the accumulation of know-how. *Welsh Economic Review*, (24), 13-26. https://doi.org/10.18573/j.2016.10049

Hausmann, R. (2017). Is South Africa about to make a historic mistake? *CDE Insight.* Johannesburg: Centre for Development and Enterprise. Retrieved from http://www.cde.org.za/is-south-africa-about-to-make-an-historic-mistake-a-presentation-by-professor-ricardo-hausmann

Herrington, M., Kew, J., and Kew, P. (2014). *2014 GEM South Africa Report. South Africa: The crossroads – a goldmine or a time bomb?* Cape Town: Development Unit for New Enterprise, University of Cape Town. Retrieved from http://www.gemconsortium.org/report/49154

Herrington, M., & Kew, P. (2016). *Global Entrepreneurship Monitor South African Report 2015/16: Is South Africa heading for an economic meltdown?* Cape Town: Development Unit for New Enterprise, University of Cape Town. Retrieved from http://www.gemconsortium.org/report/49537

Herrington, M., Kew, P., & Mwanga, A. (2017). *Global Entrepreneurship Monitor South Africa Report 2016/2017: Can small businesses survive in South Africa.* Cape Town: University of Cape Town. Retrieved from http://www.gemconsortium.org/report/49833

Hiam, M., Eshghi, G., & Eshgi, A. (2017). Business impact of the Black Economic Empowerment: A critical review of four case studies. *Journal of Research in Business, Economics and Management,* 8(2), 1-11. Retrieved from http://scitecresearch.com/journals/index.php/jrbem/article/view/1028/717

Hoggan, C.D. (2016). Transformative learning as a metatheory: Definition, criteria, and typology. *Adult Education Quarterly*, 66(1), 57-75. https://doi.org/10.1177/0741713615611216

Illeris, K. (2014). Transformative learning and identity. *Journal of Transformative Education*, 12(2), 148-163. https://doi.org/10.1177/1541344614548423

InfoDev. (2010a). *Global Good Practice in Incubation Policy Development and Implementation.* Washington DC: The World Bank. Retrieved from https://www.infodev.org/infodev-files/resource/InfodevDocuments_834.pdf

InfoDev. (2010b) *Global Practice in Incubation Policy Development and Implementation South Africa Incubation Country Case Study.* Retrieved from http://www.infodev.org/infodev-files/resource/InfodevDocuments_838.pdf

InfoDev AgriBusiness. (2014). *Timbali Technology Incubator South Africa Case Study*. Washington DC: The World Bank. Retrieved from http://documents.worldbank.org/curated/en/710491468114548799/Timbali-technology-incubator-South-Africa-case-study

International Labour Organization (ILO). (2015). *Small and medium-sized enterprises and decent and productive employment creation. International Labour Conference, 104th Session, 2015*. Geneva: International Labour Office. Retrieved from http://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_358294.pdf

International Labour Organization (ILO). (2016). *World employment and social outlook – Trends for youth 2016*. International Labour Office: Geneva. Retrieved from http://www.ilo.org/global/research/global-reports/weso/2016/lang--en/index.htm

Isenberg, D.J. (2010). How to start an entrepreneurial revolution. *Harvard Business Review*, 2010 (6), 1-12. Retrieved from https://hbr.org/2010/06/the-big-idea-how-to-start-an-entrepreneurial-revolution

Isenberg, D.J. (2011). *The entrepreneurship ecosystem strategy as a new paradigm for economic policy: Principles for cultivating entrepreneurship*. Dublin: Paper presented at Institute of International and European Affairs, May 12, 2011. Retrieved from http://www.innovationamerica.us/images/stories/2011/The-entrepreneurship-ecosystem-strategy-for-economic-growth-policy-20110620183915.pdf

Isenberg, D.J. (2014). What an entrepreneurship ecosystem actually is. *Harvard Business Review*, 2014 (5). Retrieved from https://hbr.org/2014/05/what-an-entrepreneurial-ecosystem-actually-is

Isenberg, D.J. (2016). Applying the ecosystem metaphor to entrepreneurship: Uses and abuses. *The Antitrust Bulletin*, 61(4), 564-673. https://doi.org/10.1177/0003603X16676162

Jeans, A. (1999). Technology, NGOs and small enterprise: securing livelihoods through technical change. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp.169-178). London: Intermediate Technology Development Group Publishing.

Jesselyn, M., & Mitchell, B. (2006). Entrepreneurship education in South Africa: A nationwide survey. *Education +Training,* 48 (5), 348 – 359. https://doi.org/10.1108/00400910610677054

Jones, S., & Underwood, S. (2017). Understanding students' emotional reactions to entrepreneurship education: A conceptual framework. *Education + Training*, 59 (7/8), 657-671. https://doi.org/10.11108/ET-07-2016-0128

Juma, C. (2011). Africa's new engine. *Finance and Development*. 2011 (12), 6-11. Retrieved from https://www.belfercenter.org/sites/default/files/legacy/files/juma_finance_and_development_dec-2011.pdf

Kavhumbura, V.O. (2014). *Beyond Godisa: critical success factors for business incubators in South Africa.* (Unpublished masters dissertation, University of the Witwatersrand, Johannesburg). Retrieved from http://hdl.handle.net/10539/17027

Kegan, R. (2009). What "form" transforms? A constructive-developmental approach to transformative learning. In K. Illeris (Ed.), *Contemporary Theories of Learning: Learning theorists… in their own words* (pp. 35-52). New York: Routledge. (Original work published 2000)

Kerr, A., Wittenberg, M., & Arrow, J. (2014). Job creation and destruction in South Africa. *South African Journal of Economics*, 82(1), 1-18. https://doi.org/10.1111.saje.12031

Kilby. P. (1971). Hunting the Heffalump. In P. Kilby (Ed.), *Entrepreneurship and Economic Development (*pp.1-40). New York: The Free Press.

Kilby, P. (2003). The Heffalump revisited. *Journal of International Entrepreneurship*,1,13-29.

King, K., & McGrath, S. (1999). Introduction. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp.1-12). London: Intermediate Technology Development Group Publishing.

Kirzner, I. (1973). *Competition and entrepreneurship*. Chicago: University of Chicago Press.

Levin, J. (2017). *Unicorns, gazelles and leapfrogs: Fast-tracking our ecosystem, a 2017 Discussion paper on accelerating the South African start-up system towards world class.* Johannesburg: Elevation Holdings. Retrieved from https://docs.wixstatic.com/ugd/6baf89_3f0b372cd495451cba42490bfee73515.pdf

Levinsohn, J., Rankin, N., Roberts, G., & Schöer, V. (2014). *Wage subsidies and youth employment in South Africa: Evidence from a randomised control trial*. Stellenbosch: Bureau for Economic Research. Retrieved from https://www.ekon.sun.ac.za/wpapers/2014/wp022014/wp-02-2014.pdf

Liedholm, C., & Mead, D.C. (1999). *Small enterprises and economic development: The dynamics of micro and small enterprises*. London: Routledge.

Ligthelm, A. A. (2008). A targeted approach to informal business development: The entrepreneurial route. *Development Southern Africa,* (25) 4, 367-382.

Ligthelm, A.A. (2010). Entrepreneurship and small business sustainability. *South African Business Review*, (14)3,131-153.

Lincoln, Y.S., & Guba, E.G. (1985). *Naturalistic Inquiry*. Newbury Park: Sage Publications.

LListerri, J.J., Kantis, H., Angelelli, P & Tejerina, L. (2006): *Is youth entrepreneurship a necessity or an opportunity? A first exploration of household and new enterprise surveys in Latin America*. Washington DC: Inter-American Development Bank. Retrieved from https://publications.iadb.org/handle/11319/5184

M4P network. (2008). *A Synthesis of the making markets work for the poor (M4P) Approach.* Bern: Department for International Development (DFID) *&* Swiss Agency for Development and Co-operation (SDC). Retrieved from http://www.value-chains.org/dyn/bds/docs/681/Synthesis_2008.pdf

Manu, G. (1999). Enterprise development in Africa: Strategies for impact and growth. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp. 107-120). London: Intermediate Technology Development Group Publishing.

Manyika, J., Cabral, A., Moodley, L., Yeboah-Amankwah, S., Moraje, S., Chiu, M., Anthonyrajah, J., Leke, A. (2013) *Lions go digital: The Internet's transformative potential in Africa.* Johannesburg: McKinsey Global Institute. Retrieved from http://mckinseyonsociety.com/lions-go-digital-internets-transformative-potential-africa

Marsick, V.J., & Watkins, K.E. (1990). *Informal and Incidental Learning in the Workplace*. London: Routledge.

Masutha, M., & Rogerson, C.M. (2014). Small enterprise development in South Africa: The role of business incubators. *Bulletin of Geography: Socio-economic Series*, 26, 141-155. https://doi.org/10.2478/bog-2014-0050

Masutha, M., & Rogerson, C.M. (2015). Business incubation for small enterprise development: South African pathways. *Urban Forum*, 26 (2), 223-241. https://doi.org/10.1007/s12132-014-9242-4

Mathibe, M. S., & Van Zyl, J. H. (2011). The impact of business support services to SMMEs in South Africa. *International Business & Economics Research Journal*, 10(11), 101-108.

Mazonde, N.B., & Carmichael, T. (2016). The influence of culture on female entrepreneurs in Zimbabwe. *Southern African Journal of Entrepreneurship and Small Business Management* 8(1), 1-10. https://doi.org/10.4102/sajesbm.v8i1.101

McCormick, D. (1999). Enterprise clusters in Africa: Linkages for growth and development. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp. 132-143). London: Intermediate Technology Development Group Publishing.

McGrath, S. (Ed.), (2005). *Skills development in very small and micro enterprises*. Cape Town: Human Sciences Research Council.

McKenzie, D., & Goldstein, M. (2017). A better way to train small business owners: Using psychology to teach personal initiative. *Africa Can End Poverty* [Blog post]. Retrieved from http://blogs.worldbank.org/africacan/a-better-way-to-train-small-business-owners-using-psychology-to-teach-personal-initiative

Mead, D.C., & Liedholm, C. (1998). The dynamics of micro and small enterprises in developing countries. *World Development*; (26)1, 61-74.

Merriam, S.M. (2009). *Qualitative research: A guide to design and implementation.* (3rd Edition, revised and expanded from *Qualitative research and case study applications in education*). San Francisco: Jossey-Bass.

Merriam, S.M., & Bierema, L.L. (2014). *Adult Learning: Linking Theory and Practice.* San Francisco: Jossey-Bass.

Merriam, S.B. & Caffarella, R. (1999). *Learning in Adulthood* (2nd Ed.). San Francisco: Jossey-Bass.

Merriam, S.B., & Tisdell, E.J. (2016). *Qualitative research: A guide to design and implementation.* (4th Edition, revised and expanded from *Qualitative research and case study applications in education)*. San Francisco: Jossey-Bass.

Mezirow, J. (1983). A critical theory of adult learning and education. In M. Tight (Ed.), *Adult Learning and Education* (pp. 124-138). London: Croom Helm. (Original work published in 1981)

Mezirow, J. (1991). *Transformative dimensions of adult learning. San Francisco:* Jossey-Bass*.*

Mezirow, J. (1997). Transformative learning: Theory to practice. *New Directions for Adult and Continuing Education*, 74, 5-12.

Mezirow, J. (2009). An overview of transformative learning. In K. Illeris (Ed.). *Contemporary Theories of Learning: Learning theorists… in their own words* (pp. 90-105)*.* New York: Routledge. (Original work published 2006)

Miles, M.B., & Huberman, A.M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook.* Thousand Oaks: Sage Publications.

Mkandawire, T. (1999). Developmental states and small enterprises. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp. 33-47) London: Intermediate Technology Development Group Publishing.

Moore, J. F. (1993). Predators and prey: A new ecology of competition. *Harvard Business Review,* 71(3), 75–83. Retrieved from https://hbr.org/1993/05/predators-and-prey-a-new-ecology-of-competition

Mouton, J. (1996). *Understanding social research.* Pretoria: J.L. van Schaik.

Mouton, J. (2001). *How to succeed in your master's and doctoral studies: A South African guide and resource book*. Pretoria: J.L. van Schaik.

Mthimkhulu, A., & Aziakpono, M. (2016). What characterises high-growth firms in South Africa? Evidence from World Bank Enterprise Survey. *South African Journal of Business Management*, (47)4, 71-81. Retrieved from http://hdl.handle.net/10520/EJC199800

Mureithi, M. (2010). *Barriers and facilitators of youth entrepreneurship in the tourism sector in South Africa*. (Unpublished MBA dissertation. University of Pretoria, Pretoria).

Myres, K., & Venter, R. (2003). *Towards an understanding of South Africa's entrepreneurial future: The impact of awareness raising interventions on entrepreneurial motivation and career aspirations amongst young South Africans*. Johannesburg: University of the Witwatersrand.

National Planning Commission (NPC). (2011). *National development plan: Vision for 2030.* Pretoria: National Planning Commission. Retrieved from https://nationalplanningcommission.files.wordpress.com/2015/02/ndp-2030-our-future-make-it-work_0.pdf

National Treasury. (2011). *Budget speech*. Retrieved from http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=25270&tid=57402

National Treasury. (2013). Budget speech. Retrieved from http://www.info.gov.za/speech/DynamicAction?pageid=461&sid=34533&tid=99785

National Youth Development Agency (NYDA). (2015). *Strategic Plan 2015-2020*. Midrand: National Youth Development Agency. Retrieved from file:///C:/Documents%20and%20Settings/User/My%20Documents/Downloads/The%20NYDA%205%20Year%20Strategic%20Plan%202015-2020.pdf

Naudé, W. (2017). *Entrepreneurship, Education and the Fourth Industrial Revolution in Africa. Discussion Paper Series No. 10855*. Bonn: IZA Institute of Labour Economics. Retrieved from https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2998964

Network For Teaching Entrepreneurship (NFTE). (2013). *Grow the global economy: Entrepreneurship education for all youth*. White paper released at 2013 World Economic Forum. New York: Network for Teaching Entrepreneurship. Retrieved from https://www.nfte.com/sites/default/files/nfte_whitepaperfinal.pdf

Neuman, W.L. (2011). *Social research methods: Qualitative and quantitative approaches* (7th ed. International Edition). Boston: Pearson.

Newman, M. (2012). Calling transformative learning into question: Some mutinous thoughts. *Adult Education Quarterly*, 62(1), 35-55. https://doi.org/1O.1177/O74Í7I36IO392768

North, E. (2002). A decade of entrepreneurship education in South Africa. *South African Journal of Education*, 22(11), 24-27.

Obschonka, M., Hakkarainan, K, Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: entrepreneurial alertness and intention in the transition to adulthood. *Small Business Econ*, 48, 487-501. https://doi.org/10.1007/s11187-016-9798-6

Packard, M.D. (2017). Where did interpretivism go in the theory of entrepreneurship? *Journal of Business Venturing,* 32 (5), 536‑549. https://doi.org/10.1016/j.jbusvent.2017.05.004

Parker, S.C. (2009). *The Economics of Entrepreneurship*. Cambridge: Cambridge University Press.

Patton, M.Q. (2015). *Qualitative research and evaluation methods* (4th ed.). Thousand Oaks: Sage.

Piketty, T. (2014). *Capital in the Twenty-First Century (A. Goldhammer, Trans.)* Cambridge: The Belknapp Press of Harvard University Press.

Pinkovskiy, M., & Sala-i-Martin. (2014). Africa is on time. *Journal of Economic Growth*, 19 (3), 311-338.

Pittaway, L., & Cope, J. (2007). Simulating entrepreneurial learning: Integrating experiential and collaborative approaches to Learning. *Management Learning*, 38(2), 211–233. https://doi.org/10.1177/1350507607075776

Pittaway, L. & Thorpe, R. (2012). A framework for entrepreneurial learning: A tribute to Jason Cope. *Entrepreneurship & Regional Development*, 24 (9-10), 837-869. https://doi.org/10.1080/08985626.2012.694268

Posel, D., Casale, D., & Vermaak, C. (2014). Job search and the measure of unemployment in South Africa. *South African Journal of Economics, 82 (1),* 66-80. https://doi.org/10.1111/saje.12035

Prahalad, C.K. (2006). *The fortune at the bottom of the pyramid: Eradicating poverty through profits.* New Jersey: Wharton School Publishers.

Ramphele, M. (2018, March 11). Set aside these myths about land reform and let the healing begin. *Sunday Times, pp.21.*

Rana, S.S., Jain, S.K., Singh, R. & Som, B.K. (2017). A qualitative analysis of the success of entrepreneurship development programs based on segment studies. *Journal of Business Theory and Practice*, 5 (3), 235-266. Retrieved from www.scholink.org/index.php/jbtp

Ranchhod, V., & Finn, A.(2016). Estimating the short run effects of South Africa's employment tax incentive on youth employment probabilities using a difference-in-differences approach. *South African Journal of Economics*, 82(2), 199-216. https://doi.org/10.1111/saje.12121

Ray, L. (2007). From postmodernity to liquid modernity: What's in a metaphor? In A. Elliot (Ed.), *The Contemporary Bauman* (pp. 63-78). New York: Routledge.

Reddy, V., Bhorat, H., Powell, M., Visser., & Arends, A. (2016). *Skills Supply and Demand in South Africa.* Pretoria: Human Sciences Research Council, Labour Market Intelligence Partnership. Retrieved from http://www.hsrc.ac.za/uploads/pageContent/7429/LMIP_SkillsSupplyandDemand_Sept2016.pdf

Republic of South Africa (RSA). (2001). *National plan for higher education.* Pretoria: Ministry of Education. Retrieved from http://www.justice.gov.za/commissions/FeesHET/docs/2001-NationalPlanForHigherEducation.pdf

Republic of South Africa (RSA). (2004). Broad-based black economic empowerment act, No. 53 of 2003, *Government Gazette, (463) 25899.* Cape Town; Government Gazette 9 January 2004. Retrieved from https://www.environment.gov.za/sites/default/files/legislations/bbbee_act.pdf

Republic of South Africa (RSA). (2007). Broad-based black economic empowerment: Codes of good practice on black economic empowerment. *Government Gazette, no 29617*. Cape Town: Government Gazette. Retrieved from https://www.thedti.gov.za/economic_empowerment/docs/generic_code_p1.pdf

Republic of South Africa (RSA). (2013a). Broad-based black economic empowerment act: Act No 46, 2013, *Government Gazette, (583) 37271.* Cape Town: Government Gazette 27 January 2014. Retrieved from http://www.dti.gov.za/news2014/Act46of2013BEE.pdf

Republic of South Africa (RSA). (2013b). 1019: Broad-based black economic empowerment act (53/2003): Issue of codes of good practice, *Government Gazette*, *(580) 36928*. Cape Town: Government Gazette 11 October 2013. Retrieved from http://bee.b1sa.co.za/docs/Revised_BBBEE_COGP_10102013.pdf

Reynolds, P.D., Hay, M, & Camp, S.M. (1999). *Global Entrepreneurship Monitor: 1999 Executive Report.* Kansas City: Kaufman Centre for Entrepreneurial Leadership. Retrieved from http://www.gemconsortium.org/report/47099

Ricketts, M. (2006). Theories of entrepreneurship: Historical development and critical assessment. In M. Casson, B. Yeung, A. Basu & N. Wadeson, N (Eds.), *The Oxford handbook of Entrepreneurship* (pp. 33-58). New York: Oxford University Press.

Rogerson, C.M. (1999). Small enterprise development in post-apartheid South Africa: Gearing up for growth and poverty alleviation. In K. King & S. McGrath (Eds.), *Enterprise in Africa: Between poverty and growth* (pp.83-95). London: Intermediate Technology Development Group Publishing.

Rogerson, C.M. (2001). In search of the African miracle: Debates on successful small enterprise development in Africa. *Habitat International*, 25 (1), 115-142.

Rogerson, C.M. (2004). The impact of the South African government's SMME programmes: A ten-year review (1994-2003). *Development Southern Africa*, 21(5), 765-784.

Rogerson, C.M. (2006a). The market development approach to SMME development: Implications for local government in South Africa. *Urban Forum*, 17(1) 54-78.

Rogerson, C.M. (2006b). Pro-poor local economic development in South Africa: The role of pro-poor tourism. *Local Environment*, 11(1), 27-60.

Rogerson, C.M. (2013). Improving market access opportunities for urban small, medium and micro-enterprises in South Africa. *Urbani izziv*, 24(2), 133-143. https://doi.org/10.5379/urbani-izziv-en-2013-24-02-005

Roller, M. R., & Lavrakas, P. J. (2015). *Applied qualitative research design: A total quality framework approach.* New York: Guilford Press.

Ryan, G. (2012). *A comparison of enterprise development models in South Africa using case studies*. (Unpublished masters dissertation, University of the Witwatersrand, Johannesburg).

Sarasvathy, S. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *Academy of Management Review*, 26(2), 243-263.

Sarasvathy, S. (2008). *Effectuation: Elements of Entrepreneurial Expertise.* Cheltenham: Edward Elgar Publishing Inc.

Schlemmer, L. (2005). *Critical factors facilitating and impeding youth entrepreneurship in South Africa: Main report*. Johannesburg: Swiss South African Co-operative Initiative.

Schoof, U. (2006). *Stimulating youth entrepreneurship: Barriers and incentives to enterprise start-ups by young people*. Geneva: ILO, Small Enterprise Development Programme. Retrieved from http://www.ilo.org/public/libdoc/ilo/2006/106B09_94_engl.pdf

Schumpeter, J. (1934). *The theory of economic development* (15th ed). New Jersey: Transaction Publishers.

Schwab, K. (2016). *The Fourth Industrial Revolution*. Geneva: World Economic Forum.

Serrano Pascual, A, & Martín Martín, P. (2017). From employ-ability to entrepreneurial-ity in Spain: Youth in the spotlight in times of crisis. *Journal of Youth Studies,* 20(7), 798-821. https://doi.org/10.1080/13676261.2016.1273513

Shane, S. & Venkataraman, S. (2000). The promise of entrepreneurship as a field of research. *Academy of Management Review*, 25(1), 217-226.

Shane, S. (2003). *A general theory of entrepreneurship: The individual opportunity nexus*. Cheltenham: Edward Elgar.

Small Enterprise Development Agency (SEDA). (2012). *Annual report 2011/2012*. Retrieved from www.seda.org.za/Publications/.../Seda%20Annual%20Report%202011-2012.pdf

Smith, J., & Chetty, C. (2016). *GCRA CFE Entrepreneurship for Grade 9: Facilitator's Manual.* (Unpublished course material. Johannesburg: Gauteng City Region Academy).

Stake, R. (1995). *The art of case study research*. Thousand Oaks: Sage Publications.

Startup Genome. (2017). *Global Startup Ecosystem Report 2017.* Global Entrepreneurial Network (GEN). Retrieved from http://d1i53wesras4r4.cloudfront.net/reports/GlobalStartupEcosystemReport2017.pdf

Statistics South Africa (StatsSA). (2014). *Quarterly Labour Force Survey, Quarter 4 2013. (Statistical Release P0211).* Pretoria: Statistics South Africa. Retrieved from http://beta2.statssa.gov.za/publications/P0211/P02114thQuarter2013.pdf

Statistics South Africa (StatsSA). (2016). *Youth employment, unemployment, skills and economic growth 1994-2014.* Pretoria: Statistics South Africa. Retrieved from https://www.statssa.gov.za/presentation/Stats%20SA%20presentation%20on%20skills%20and%20unemployment_16%20September.pdf

Statistics South Africa (StatsSA). (2018). *Quarterly Labour Force Survey, Quarter 4 2017. (Statistical Release P0211)*. Pretoria: Statistics South Africa. Retrieved from http://www.statssa.gov.za/publications/P0211/P02114thQuarter2017.pdf

Steenekamp, A.G., van der Merwe, S.P., & Athayde, P. (2011). An investigation into youth entrepreneurship in selected South African secondary schools: An exploratory study. *Southern African Business Review,* 15 (3), 46-75.

Stern, N., Dethier, J-J., & Halsey Rogers, F. (2005). *Growth and empowerment: Making development happen*. Cambridge: MIT Press.

Stevens, J. (2013). *Shattering the boundaries through self-efficacy: Exploring the social media habits of previously disadvantaged South Africans*. (Unpublished masters dissertation, University of Stellenbosch, Stellenbosch).

Storey, D. J. (2006). Evaluating SME programmes and policies: Technical and political dimensions. In M. Casson, B.Yeung, A. Basu & N. Wadeson (Eds.), *The Oxford handbook of Entrepreneurship (pp. 248-278)*. New York: Oxford University Press.

Swiss South African Co-operative Initiative (SSACI). (2005). *Supporting youth entrepreneurship in South Africa.* Johannesburg: Swiss South African Co-operative Initiative. Retrieved from http://www.ssaci.org.za/images/stories/pdf/Supporting%20Youth%20Entrepreneurship%20in%20SA.pdf

Taylor, E.W. (2017). Transformative learning theory. In A. Laros, T. Fuhr & E. Taylor (Eds.). (2017). *Transformative Learning Meets Bildung: An International Exchange* (pp. 17-32). Rotterdam: Sense Publishers. (Original work published in 2008)

Tellis, W. (1997). Application of a case study methodology. *The Qualitative Report*, 3 (3). Obtained from http://www.nova.edu/sss/QR/QR3-3/tellis2.html

The Innovation Hub. (n.d) *Maxum Business Incubator.* Retrieved June 5 2017 from http://www.theinnovationhub.com/innovation-projects/maxum-business-

The Presidency. (2009). *National youth policy 2009-2014.* Retrieved from http://www.thepresidency.gov.za/MediaLib/Downloads/Home/Publications/YouthPublications/NationalYouthPolicyPDF/NYP.pdf

Timbali Technology Incubator. (n.d). *Timbali Corporate Profile*.

Timbali Technology Incubator. (2013). *Annual Report 2012-2013.* Nelspruit: Timbali Technology Incubator. Retrieved from http://timbali.softnet.cc/pdf/annual_reports/an2013.pdf

Timbali Technology Incubator. (2015). *Growth conversation: News from Timbali Technology Incubator, July/Aug 2015.* Retrieved from http://timbali.softnet.cc/pdf/newsletters/Growth%20Conversation%20Jul_Aug%202015.pdf

Toffler, A. (1980). *The Third Wave*. New York: Bantam Books.

Tour 2.0. *Welcome to Tour 2.0*. Retrieved from https://www.tour2-0.com.

Tshimologong. (n.d.) *About the Tshimologong Precinct*. Retrieved from http://www.tshimologong.joburg

Turner, T., & Gianiodis, P. (2018). Entrepreneurship unleashed: Understanding entrepreneurial education outside of the business school. *Journal of Small Business Management*, 56 (1), 131-149. https://doi.org/10.111/jsbm/12365

UNCTAD. (2010). *Entrepreneurship education, innovation and capacity-building in developing countries.* Geneva: United Nations Conference on Trade and Development. Retrieved from http://unctad.org/en/docs/ciimem1d9_en.pdf

University of the Witwatersrand (n.d.). *Code of ethics for research on human subjects.* Retrieved from http://www.wits.ac.za/academic/researchsupport/19111/code_of_ethics.html

Urban, B. (2006). Entrepreneurial self-efficacy in a multicultural society: Measures and ethnic differences. *SA Journal of Industrial Psychology*, 32(1), 2-10.

Vance, J.D. (2016). *Hillbilly Elegy: A Memoir of a Family and Culture in Crisis*. London: William Collins.

Vandenberg, P. (2006). *Poverty reduction through small enterprises: Unresolved issues and ILO activities*. Geneva: International Labour Office. Retrieved from http://www.ilo.org/empent/Publications/WCMS_093981/lang--en/index.htm

Van der Berg, S. (2013). Beyond expectations: Progression of poor students through university. *Focus*, 68, 6-12. Retrieved from http://hsf.org.za/resource-centre/focus/focus-68/x-%20Focus%2068%20FULL.pdf/view

Wach, D., Stephan, U., and Gorgievski, M. (2016). More than money: Developing an integrative multi-factorial measure of entrepreneurial success. *International Small Business Journal*, 34(8), 1098-1121.

Wadeson, N, (2006). Cognitive aspects of entrepreneurship: Decision-making and attitudes to risk. In M. Casson, B. Yeung, A, Basu & N Wadeson (Eds.), *The Oxford handbook of entrepreneurship* (pp. 91-113). New York: Oxford University Press.

Water Hygiene Convenience. (n.d.). *We are Water Hygiene Convenience*. Retrieved from http://whcpty.com

White, S., & Kenyon, P. (2001). *Enterprise-based youth employment policies, strategies and programmes: Initiatives for the development of enterprise action and strategies.* Working Paper, InFocus Programme on Skills, Knowledge and Employability. Geneva: ILO. Retrieved from http://www.ilo.org/skills/pubs/WCMS_104022/lang--en/index.htm

Xavier, S.R., Kelley, D., Kew, J., Herrington, M., Vorderwulbecke, A. *(2012). Global Entrepreneurship Monitor 2012 Global Report.* London: Global Entrepreneurship Research Association. Retrieved from http://www.gemconsortium.org/docs/2645/gem-2012-global-report 22 August 2013.

Yin, R.K. (2014). *Case study research: design and methods* (5th Edition). Thousand Oaks: Sage Publications.

Yunus, M (2003). *Banker to the poor: Micro-lending and the battle against world poverty.* London: Aurum Press.

Yusuf, J-E. (2010). Meeting entrepreneurs' support needs: Are assistance programs effective? *Journal of Small Business and Enterprise Development.* 17 (2) 294-307.

Zepke, N., and Leach, L. (2002). Contextualised meaning making: One way of rethinking experiential and self-directed learning? *Studies in Continuing Education*, 24 (2), 205-217.

Appendix A: Criteria for Selection of Cases

1. Where is your programme based? (note province, town or specific area)

2. Does the programme operate at one site, or are there different projects running in different locations?

3. Are the participants

All under 35	Less than half under 35	Dependent on the project	None under 35

Elaborate

4. Do you deal with

Start-ups	Existing businesses

If they are existing, have they been in business longer than a year?

5. What kinds of businesses do entrepreneurs operate?

6. How are participants chosen for the project?

7. What kind of approach do you take to enterprise development?

8. What services does your organisation offer itself, and in partnership with others?

9. What language/s do you use when interacting with the project beneficiaries, or for any of the interventions like training?

10. What are the sources of funding for the organisation? What are the sources for the entrepreneurs?

11. How is the organisation structured?

Appendix B: Interview Guides

Programme Manager

1. Introduction and background to the research

(Introduction to the research and its purpose, what I am looking at, who I am interviewing, what types of cases in addition to this one, obtain permission to record the interview, and deal with confidentiality issues if any).

2. Manager's background

Please provide an overview of your own background and experience, and how you came to be involved in this programme.

3. Background to the programme /project

3.1 Please provide a brief background and overview to the programme.

3.2 What kinds of businesses/entrepreneur do you target?

3.3 Please describe how it started, and any changes that took place, and why.

3.4 Where does your funding come from, and how is it structured?

2. The operating environment

2.1 What is your assessment of the environment in which these types of business operate (the macro environment for small and micro enterprise in the country, and the immediate environments in which they operate)?

2.2 What are the major challenges and opportunities?

3. Programme approach

3.1 Please describe the approach your programme takes to enterprise development.

3.2 What do you offer? How has this changed over the duration of the programme, and in response to what?

3.3 How does this programme work with other partners, or in providing additional services for beneficiaries?

4. The beneficiaries

4.1. Why are the beneficiaries of your programme involved in running their own businesses?

4.2. How are they selected? How long will they remain a part of the programme? What do they contribute for what they receive?

4.3. What are the most common difficulties they face in running their businesses? In what ways do you think these affect young entrepreneurs in particular? Conversely, what enables them to run their businesses?

4.4. Where do they obtain finance from?

4.5. Where do they find support?

4.6. How do you think they learn important lessons about running their businesses? From where?

4.7. What would make them close their businesses? What would help them to grow?

4.8. How have their businesses changed since they have been part of the programme?

4.9. What changes do you see taking place in the entrepreneurs themselves over the duration of the programme?

5. Assessment of the programme

5.1. How do you measure the success of your interventions?

5.2. What aspects of your programme have had the greatest impact, in your opinion?

5.3. What aspects do you, and the participants find the most difficult to implement? Why?

5.4. What feedback have you received from entrepreneurs, funders, customers, and other relevant players in the field?

5.5. In an ideal situation, what changes would you make and why? What resources would you need to be able to do that? What would you do specifically for young entrepreneurs?

6. A model for youth enterprise development

6.1. What differences do you see between young entrepreneurs (under 35) and the general population? What does this entail in terms of what you offer and the support you give?

6.2. What input would you offer if you had to contribute to a programme design on youth enterprise development?

Staff Member

1. Introduction and background to the research

(Introduction to the research and its purpose, what I am looking at, who I am interviewing, what types of cases in addition to this one, address issues that may arise regarding confidentiality, and obtain permission to record the interview).

2. Staff member's background

Please provide an overview of your own background and experience, and how you came to be involved in this programme. What is the nature of your job specifically?

3. The operating environment

3.1 What is your assessment of the environment in which these types of business operate (the macro environment for small and micro enterprise in the country, and the immediate environments in which they operate)?

3.2 What are the major challenges and opportunities?

4. Programme approach

4.1 Please describe the approach your programme takes to enterprise development.

4.2 What do you offer? How has this changed over the duration of the programme, and in response to what?

4.3 How does this programme work with other partners, or in providing additional services for beneficiaries?

5. The beneficiaries

5.1 Why are the beneficiaries of your programme involved in running their own businesses?

5.2 How are beneficiaries selected? How long will they remain a part of the programme? What do they contribute for what they receive?

5.3 What are the most common difficulties they face in running their businesses? In what ways do you think these affect young entrepreneurs in particular? Conversely, what enables them to run their businesses?

5.4 Where do they obtain finance from?

5.5 Where do they find support?

5.6 How do you think they learn important lessons about running their businesses? From where?

5.7 What would make them close their businesses? What would help them to grow?

5.8 How have their businesses changed since they have been part of the programme?

5.9 What changes do you see taking place in the entrepreneurs themselves over the duration of the programme?

6. Assessment of the programme

6.1 How do you measure the success of your interventions?

6.2 What aspects of your programme have had the greatest impact, in your opinion?

6.3 What aspects do you, and the participants find the most difficult to implement? Why?

6.4 What feedback have you received from entrepreneurs, funders, customers, and other relevant players in the field?

6.5 In an ideal situation, what changes would you make and why? What resources would you need to be able to do that? What would you do specifically for young entrepreneurs?

7. A model for youth enterprise development

7.1 What differences do you see between young entrepreneurs (under 35) and the general population?

7.2 What does this entail in terms of what you offer and the support you give?

7.3 What input would you offer if you had to contribute to a programme design on youth enterprise development?

Entrepreneur

1. Introduction and background to the research

(Introduction to the research and its purpose, what I am looking at, who else I am interviewing, how I will use information and address concerns about exposure, especially related to levels of formality, confidentiality, obtain permission to record the interview)

2. Demographic information and background

Age
Gender
Type of Business
Sector
Location of business
How long business existed
Highest education level
Home language
Formal registration
Structure (sole trader/close corporation/ partnerships)
Number of employees (excluding respondent) and types of employment.

2.1 Please give details of any previous employment, even if casual and part-time?
2.2 Has anyone in your family been self-employed? Give details.
2.3 When you were growing up, what did you think you would be doing with your life?

3. The enterprise

3.1 What motivated you to get involved in running a business? Why that one?
3.2 Please tell me about your business and what it does? Who are your customers? How do you get them?
3.3 What helped you when the business started? Who supports you with the business? (probe family, community).
3.4 What has made it difficult for you?

3.5 How have you learned about different aspects of running your business? Who do you learn from?

3.6 How has your business grown since it started?

3.7 What, with respect to your age, has made it easier, or on the other hand, more difficult for you?

3.8 Do you think it is easier or more difficult generally for young people in business? Explain.

3.9 Name some of the important events that you think have been key moments for your business? What happened? What did you learn from them?

3.10 What are the major opportunities for you to grow your business? What will you need to take advantage? What stops this from happening?

4. Involvement in the programme

4.1 How and why did you get involved in this programme? What were you doing before?

4.2 What services has the programme offered you?

4.3 In what ways has it helped your business? Was this what you expected?

4.4 What have been the most helpful aspects? And the least helpful?

4.5 What have you learned about running your business that you did not know before you started?

4.6 What has the programme not helped you with? Why do you think that is?

4.7 Do you have to pay for services or contribute in any way?

4.8 How long do you think you will be involved in the programme? Please explain.

4.9 What do you think you need to still learn about managing your business? How will you do this?

4.10 What issues, relevant specifically to young people, should the programme focus on?

5. Self-reflection

5.1 What has being in business, and being on this programme taught you about yourself?

5.2 How have the ideas you had growing up been challenged by this experience?

5.3 In what ways do you think you may have changed?

6. Future Plans

6.1 What plans do you have for your business to expand?

6.2 What changes would you like to make in your business? What do you need to be able to do this?

6.3 If, in an ideal situation, you suddenly received the resources you need, what would you do with them?

6.4 What would you do if you received a good job offer?

6.5 What would make you close your business?

6.6 How do you see yourself 10 years from now?

Appendix C: Ethics Clearance

Research Office

HUMAN RESEARCH ETHICS COMMITTEE (NON-MEDICAL)
R14/49 Smith

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER H14/09/19**
PROJECT TITLE	Finding a space between poverty alleviation and high growth - a model for youth enterprise development in South Africa
INVESTIGATOR(S)	Ms J Smith
SCHOOL/DEPARTMENT	Wits School of Governance
DATE CONSIDERED	19 September 2014
DECISION OF THE COMMITTEE	Approved Unconditionally
EXPIRY DATE	12/10/2016
DATE 13/10/2014	**CHAIRPERSON** (Professor T Milani)

cc: Supervisor : Dr G Godsell

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10000, 10th Floor, Senate House, University.

I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to completion of a yearly progress report.**

Signature

04 , 11 , 2014
Date

PLEASE QUOTE THE PROTOCOL NUMBER ON ALL ENQUIRIES

Appendix D: Participant Information Sheet

Programme Managers/CEOs

Title of Study: Finding a space between poverty alleviation and high growth – a model for youth enterprise development in South Africa.

My name is Jocelyn Smith, and I am studying for a Masters in Management by Dissertation at the School of Governance, University of the Witwatersrand.

Description: You are invited to participate in a research study that seeks to understand how approaches to youth enterprise development in South Africa can be improved and enhanced. The research will look at the lessons learned from comparing different programmes in South Africa, and what innovative components of these can lead to more sustainable youth-owned businesses.

As your programme is designed to develop and foster entrepreneurs, I am inviting you to become involved in the study, as one of the two cases that will be studied as part of the research. This will entail an interview from the programme manager or CEO, a staff member involved with the programme beneficiaries, and young entrepreneurs who are, or have been part of the programme. These interviews will take approximately 45 minutes to an hour, either at your, or the individual entrepreneur's premises. These will take place between September and December 2014.

As programme manager/CEO, the researcher would need you to facilitate access to staff members and entrepreneurs selected for the study, as well as allow observation of programme activities and access to relevant documentation that could be helpful.There are no risks associated with the study. Benefits that may result from your participation are not guaranteed, but you will receive findings from the study which will hopefully provide insights that will be useful in your practice. No payment will be made to any participant.

Subjects' Rights: If after reading this form, you agree to participate, please understand that your participation is voluntary, and that you, and potential participants from your organisation, have the right to withdraw consent or discontinue participation at any time with no penalty. You have the right not to participate.

The identities of potential participants will be kept confidential. Alternatively, participants will be asked for express permission for their or the name of their organisation to be identifiable in the final research report, even if a pseudonym is used. Participants have to right not to answer questions.

The results of the study will be reported in a research dissertation that will be available on the World-Wide Web. Should you wish, a summary of the research will be made available to you.

Contact information: Should you have any questions about this research, please contact me on the numbers or email below. My supervisor, Dr Gillian Godsell can be reached by email.

Student: Jocelyn Smith **Tel 011 7285550; 0839598135** **Email: jocelyns@iafrica.com**	**Supervisor: Dr Gillian Godsell** **Email: gillian@godsell.za.com** **School of Governance, University of the Witwatersrand**

If you agree to participate in this research, please complete the research participant consent form.

Thank you for your time.

Staff Member

Title of Study: Finding a space between poverty alleviation and high growth – a model for youth enterprise development in South Africa.

My name is Jocelyn Smith, and I am studying for a Masters in Management by Dissertation at the School of Governance, University of the Witwatersrand.

Description: You are invited to participate in a research study that seeks to understand how approaches to youth enterprise development in South Africa can be improved and enhanced. The research will look at the lessons learned from comparing different programmes in South Africa, and what innovative components of these can lead to more sustainable youth-owned businesses.

As your programme is designed to develop and foster entrepreneurs, I am inviting you to become involved in the study, as one of the two cases that will be studied as part of the research. This will entail an interview from you as a staff member involved with the programme beneficiaries. The interview will take approximately 45 minutes to an hour, either at your, or the individual entrepreneur's premises. This will take place between September and December 2014.

There are no risks associated with the study. Benefits that may result from your participation are not guaranteed, but you will receive findings from the study which will hopefully provide insights that will be useful in your practice. No payment will be made to any participant.

Subjects' Rights: If after reading this form, you agree to participate, please understand that your participation is voluntary, and that you, and potential participants from your organisation, have the right to withdraw consent or discontinue participation at any time with no penalty. You have the right not to participate.

The identities of potential participants will be kept confidential. Alternatively, participants will be asked for express permission for their or the name of their organisation to be identifiable in the final research report, even if a pseudonym is used. Participants have to right not to answer questions.

The results of the study will be reported in a research dissertation that will be available on the World-Wide Web. Should you wish, a summary of the research will be made available to you.

Contact information: Should you have any questions about this research, please contact me on the numbers or email below. My supervisor, Dr Gillian Godsell can be reached by email.

Student: Jocelyn Smith **Tel 011 7285550; 0839598135** **Email: jocelyns@iafrica.com**	**Supervisor: Dr Gillian Godsell** **Email: gillian@godsell.za.com** **School of Governance, University of the Witwatersrand**

If you agree to participate in this research, please complete the research participant consent form.

Thank you for your time.

Entrepreneur

Title of Study: Finding a space between poverty alleviation and high growth – a model for youth enterprise development in South Africa.

My name is Jocelyn Smith, and I am studying for a Masters in Management by Dissertation at the School of Governance, University of the Witwatersrand.

Description: You are invited to participate in a research study that seeks to understand how approaches to youth enterprise development in South Africa can be improved and enhanced. The research will look at the lessons learned from comparing different programmes in South Africa, and what innovative components of these can lead to more sustainable youth-owned businesses.

As your programme is designed to develop and foster entrepreneurs, I am inviting you to become involved in the study, by sharing your own experiences of starting and operating your business. . This will entail an interview of approximately 45 minutes to an hour, either at your premises, or that of the programme you attend. This will take place between September and December 2014.

There are no risks associated with the study. Benefits that may result from your participation are not guaranteed, but you will receive findings from the study which will hopefully provide insights that will be useful in your practice. No payment will be made to any participant.

Subjects' Rights: If after reading this form, you agree to participate, please understand that your participation is voluntary, and that you, and potential participants from your organisation, have the right to withdraw consent or discontinue participation at any time with no penalty. You have the right not to participate.

Your identity will be kept confidential. Alternatively, you will be asked for express permission for your name or the name of your business or organisation to be identifiable in the final research report, even if a pseudonym is used. Participants have to right not to answer questions.

The results of the study will be reported in a research dissertation that will be available on the World-Wide Web. Should you wish, a summary of the research will be made available to you.

Contact information: Should you have any questions about this research, please contact me on the numbers or email below. My supervisor, Dr Gillian Godsell can be reached by email.

Student: Jocelyn Smith **Tel 011 7285550; 0839598135** **Email: jocelyns@iafrica.com**	**Supervisor: Dr Gillian Godsell** **Email: gillian@godsell.za.com** **School of Governance, University of the Witwatersrand**

If you agree to participate in this research, please complete the research participant consent form.

Thank you for your time.

Appendix E: Research Participant Consent Form

Title of Study: Finding a space between poverty alleviation and high growth – a model for youth enterprise development in South Africa.

I, (full names)_____

agree to participate in the research project, entitled above.

I consent to this involvement and to the use of my responses in the project. I understand that my participation will include being interviewed. Participation is voluntary and does not involve any form of remuneration. I may withdraw my consent to participate at any time without penalty. I understand that information acquired will be treated confidentially without my name unless I consent to that explicitly.

Signature_____ Date_____

I agree to allow an audio device to record the interview

Signature_____ Date_____

Student: Jocelyn Smith
Tel 011 7285550; 0839598135
Email: jocelyns@iafrica.com

Supervisor: Dr Gillian Godsell
Email: gillian@godsell.za.com
School of Governance, University of the Witwatersrand

Appendix F: Permission Timbali Technology Incubator



Private Bag X11255, Nelspruit, 1200, South Africa
T: +27 13 752 4247 F: +27 13 752 5954
S25°26.275, E30°59.242

amaBrand amaBloom amaSpice amaFruit amaVeg

Jocelyn Smith
e-mail: jocelyns@iafrica.com>
Cell: 083 959 813
Tel No: 011 7285550.

21 August 2014

Dear Jocelyn,

RE: RESEARCH - YOUTH ENTERPRISE DEVELOPMENT

Thank you for approaching Timbali to be one of the case study sites for your research.

I herewith confirm that we will host you for
a) an introduction to Timbali and
b) doing the field work by means of an interviewing process with staff and farmers (beneficiaries).

Most of the farmers can understand English well enough so that a translator will not be necessary. The language most frequently used is Siswati.

We will look into sending you some reading material in preparation for the visit.
Kind regards,

L de Klerk.

Louise de Klerk (CEO)

Funded by
seda syngenta SSACI agriculture, forestry & fisheries Eskom IDC

Appendix G: Permission Maxum Incubator, Innovation Hub

Jocelyn Smith

Email:jocelyns@iafrica.com

0839598135 / 011728 5550

23 October 2014

Dear Jocelyn

Research : Youth Enterprise Development

Thank you for approaching the Innovation Hub to be one of the case study sites for your research. I hereby confirm that you have permission to visit the site, and interview relevant staff and entrepreneurs.

Kind regards,



Fredell Jacobs

GM: Enterprise and Skills Development