

**Entrepreneurial intentions among senior secondary school students in  
Ka-Nyamazane Township in South Africa**

A research report presented

By

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## **ABSTRACT**

Entrepreneurship has come to be an essential subject in recent years due to its influence in a country's economic growth and its contribution towards better socio-economic conditions. The decisions to venture into entrepreneurship are controlled by various factors and it is a planned behaviour and not necessarily an accidental occurrence.

The primary objective of this research paper was to assess the entrepreneurial intent and perseverance for secondary school learners in Ka-Nyamazane Township.

Grade 12 learners in four secondary schools were surveyed by means of a self-answered questionnaire which consisted of 29 questions. The questionnaire contained the demographics section, the Individual Entrepreneurial Intent Scale ("IEIS") section, the Grit-S section and future plans beyond grade 12 section.

The research findings concluded that the entrepreneurial intent and the level of perseverance amongst learners is high. Based on this study, there is no doubt that there is urgency for the youth to be equipped with entrepreneurial skills so that it could have an impact in the level of youth being absorbed into the labour market and venture into the field of entrepreneurship. It is essential for learners to be aware that entrepreneurship is a career option that is available to them. Learners should be exposed to the field of entrepreneurship so that they could develop more interest and have an entrepreneurial mind-set. The literature review suggests that entrepreneurship education could be a positive influence on entrepreneurial intention.

It is suggested in the literature review that by acquiring basic knowledge about entrepreneurship during a person's elementary stage could foster a positive attitude towards entrepreneurial intent. Entrepreneurship needs to be nurtured to all learners so that they could acquire the necessary skills to venture into this field given that the two major finds suggest that the entrepreneurial intent and the level of perseverance amongst learners is high.

## DECLARATION

I, **Gregory Mzwandile Njabulo Mkhathwa**, declare that this research report is my own work except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree of Master of Management (ENVC) in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.



Signed at SANDTON .....

On the 11<sup>th</sup> ..... day of June ..... 2017

## **DEDICATION**

This research report is dedicated to both my parents. My parents did not only raise and nurtured me but also taxed themselves dearly over the years for my education and intellectual development. My mother unexpectedly met her death two days before I was to present the research proposal of this study to the panel in July 2016. My father, Mr D.B. Mkhathshwa has been a source of inspiration and strength during the moments of despair and discouragement. His fatherly care and support was exemplary during those difficult moments. Both my parents have instilled in me the desire to do my best in everything I do.

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# **CHAPTER 1. INTRODUCTION**

## **1.1 Purpose of the study**

The purpose of this research is to investigate the entrepreneurial intention among senior secondary school students at schools located in Ka-Nyamazane Township. This chapter consists of the context of the study, problem statement, research objectives, significance of the study, delimitation of the study, definition of terms, assumptions, chapter layout and conclusion.

## **1.2 Context of the study**

South Africa's political landscape shifted from that of an apartheid regime to that of a democratically elected regime in the year 1994, however, a fundamental problem for this country's society is the economic exclusion of those that were oppressed pre-1994 (Zoch, 2015). Although South Africa is more than 20 years into democracy, the socio-economic conditions which existed pre-1994 are still based mainly along the same racial dimensions which existed during the segregation political system of the past (Zoch, 2015). According to Rodrik (2006), there are many challenges which are faced by South Africa such as the slow economic growth and high levels of unemployment. The 2014 Global Entrepreneurship Monitor Report ("GEM 2014") notes South Africa's rate of entrepreneurial activity as low for an emerging market when compared to other sub-Saharan African countries (Herrington, Kew, & Kew, 2015). The number of business discontinuance outstrips those of new ventures. This puts South Africa at a net loss of small business activity which translates into even higher unemployment levels (Herrington, Kew, & Kew, 2015).

An inadequately educated work force is listed as one of the most problematic factors for doing business in South Africa (GCR, 2014). According to the 2014/2015 Global Competitiveness Report (GCR 2014), South Africa is ranked last out of 144 countries world-wide in respect of the quality of mathematics

and science education. This is illustrative of the poor quality of education within the country. Various studies have shown that gaps which arise earlier on, in the lifecycle of individuals have a tendency to be long-lasting and often expand over a long period of time (Heckman, 2000). This observation is reflected in the poor quality of basic education in South Africa in as far as the level of mathematics is concerned (GCR, 2014). It is also indicative of the poor state of basic education within South Africa

Is it questionable whether there is any significant change which can be brought about by entrepreneurship education through the stimulation of entrepreneurial behaviour in learners and whether is there a relationship between entrepreneurship education and entrepreneurial intentions (Lüthje & Franke, 2003)? Numerous studies have been conducted to answer these questions, however, most of the studies have yielded inconsistencies and ambiguous findings (Lorz, Volery, & Müller, 2011).

There are a number of definitions assigned to the meaning of 'entrepreneurship' by various scholars. The word 'entrepreneur' is also defined by various theorists based on their respective background or disciplines (Venter & Urban, 2015). Schumpeter, who is an Austrian economist, describes entrepreneurship as an event that establishes new merchandise, a different product offering, new markets or new form of organisation to a particular ecosystem (Nieman, Hough, & Nieuwenhuizen, 2003).

Interestingly, there is also much debate amongst scholars regarding what embraces 'entrepreneurship' as a field of study and what really constitutes entrepreneurship curriculum in as far as the content and the method of delivering the content is concerned (Gartner, 1990). According to Venter & Urban (2015), entrepreneurship as a field of study is better comprehended through theory and practice. Entrepreneurship education is defined as the procedure of presenting to individuals the concepts and expertise which enables them to identify entrepreneurial opportunities that may not necessarily be identified by other individuals who may not have the knowledge to act where others were not eager to pursue a potential opportunity (Jones & English,

2004). Jones & English (2004) suggests that such expertise encompasses education in opportunity identification, being able to assemble the necessary resources, and the exploitation of a business opportunity in the face of risk. There are some scholars who have defined entrepreneurship education based on their various schools of thought.

This study will adopt a definition which places exceptional value on the development of secondary school students in the field of entrepreneurship. Entrepreneurship education is described as the progression and transformation that imparts intelligence, proficiencies and entrepreneurial intentions to learners in a holistic manner as part of their learning outcomes (Gedeon, 2014). According to Gedeon (2014), this enables the learner to develop an entrepreneurial mind-set which the learner could apply in future whether at their workplace, communities or their own enterprises and their lives. This definition of entrepreneurship education as defined by Gedeon (2014) is adopted as the basis of this research paper.

The GEM 2014 report has identified that in South Africa, there are few initiatives that support entrepreneurship. Entrepreneurship education could add value in the development of an entrepreneurial skill set which could strengthen the sustainability of small enterprises (Herrington, Kew, & Kew, 2015). Various studies have established that getting an education has an unquestionable influence on entrepreneurship that is not necessarily driven by necessity (Van Stel, Storey, & Thurik, 2007). Equally advanced, further education is advantageous on the transformation of informal enterprises into formal enterprises (Sonobe, Akoten, & Otsuka, 2011).

The youth of South African is subjected to exceptionally high levels of joblessness and impoverishment (Altman, Mokomane, & Wright, 2014). According to Altman et al. (2014), social assistance is not necessarily extended to the youth of South Africa unless they benefit under the disability grants which are provided for by the Department of Social Development. Approximately 20% of South Africa's population is made up of the youth aged between 15 to 24 years old (DSD, 2010). The youth that is between the age of

18 to 24 years old accounts for just over one-half of the youth that is out of school and unemployed and they also live in abject poverty (StatsSA, 2010). Statistical data solely focusing on the population of Ka-Nyamazane was not available at the time of compilation of this research. Thus, this research paper will make use of the national statistical data where necessary as a measure and apply these percentages to the Ka-Nyamazane populace where there is insufficient data.

The total population of Ka-Nyamazane is 34 593 as per the census conducted in the year 2011 (StatsSA, 2011). Only 17,9% of this population has obtained higher education and that population is between the ages or 20 and above. Only 42% of the populace aged 20 plus managed to obtain a matric (grade 12) certificate. The population of Ka-Nyamazane can be summarised as follows:

**Table 1:** Key Statistical Data for Ka-Nyamazane (StatsSA, 2011)

<b>Characteristics</b>	
Total population	34,593
Young (0-14)	27,5%
Working Age (15-64)	68%
Elderly (65+)	4,5%
Dependency ratio	47,1
Sex ratio	91,6
Population density	3199 persons/km <sup>2</sup>
No schooling aged 20+	6%
Higher education aged 20+	17,9%
Matric aged 20+	42,6%
Number of households	10,086
Average household size	3,4
Female headed households	42,9%

Formal dwellings	96,9%
Housing owned/paying off	64,3%
Flush toilet connected to sewerage	79,4%
Weekly refuse removal	79,1%
Piped water inside dwelling	79,4%
Electricity for lighting	97%

The fact that only 17,9% of the population aged 20 and above have tertiary education is rather very alarming in that how this population would acquire skills that would aid them in entering the job market or pursue entrepreneurial journeys without any adequate skills might prove to be difficult. The hypothesis which can be made based on these statistical data is that if some skills are offered at basic schooling levels, such might have an impact on the ability for the grade 12 graduates to create employment and be able to be better entrepreneurs. Ka-Nyamazane is a township which falls under the Mbombela Municipality. The Mbombela Municipal District has a total population of 588 794 (StatsSA, 2011). The youth unemployment rate sits at approximately 37,6% of the total population of the Mbombela Municipal district according to StatsSA (2011).

Statistical data released by the South African Police Service (SAPS) for the 2014-2015 period reflect an improvement in the percentage of the various types of crime in Ka-Nyamazane when compared to the crime statistical data for the 2014-2015 period (SAPS, 2015). The SAPS (2015) crime statistics reflects the following trends:



**Table 2:** Average household income data in Ka-Nyamazane

<b>Average Household Income data for Ka-Nyamazane (StatsSA, 2011)</b>	
<b>Income</b>	<b>Percentage</b>
No income	16,6%
R1 - R4,800	0,03%
R4,801 - R9,600	4,6%
R9,601 - R19,600	13,2%
R19,601 - R38,200	15,9%
R38,201 - R76,400	15,3%
R76,401 - R153,800	14,8%
R153,801 - R307,600	11,1%
R307,601 - R614,400	4,4%
R614,001 - R1,228,800	0,6%
R1,228,801 - R2,457,600	0,2%
R2,457,601+	0,3%

The population of Ka-Nyamazane is 34 593 (StatsSA, 2011). According to StatsSA (2011), 16,6% of this population has no income. This translates to 5 742 people who have no source of income. The levels of poverty for such an area seem to be high based on this statistical data presented in Table 2.

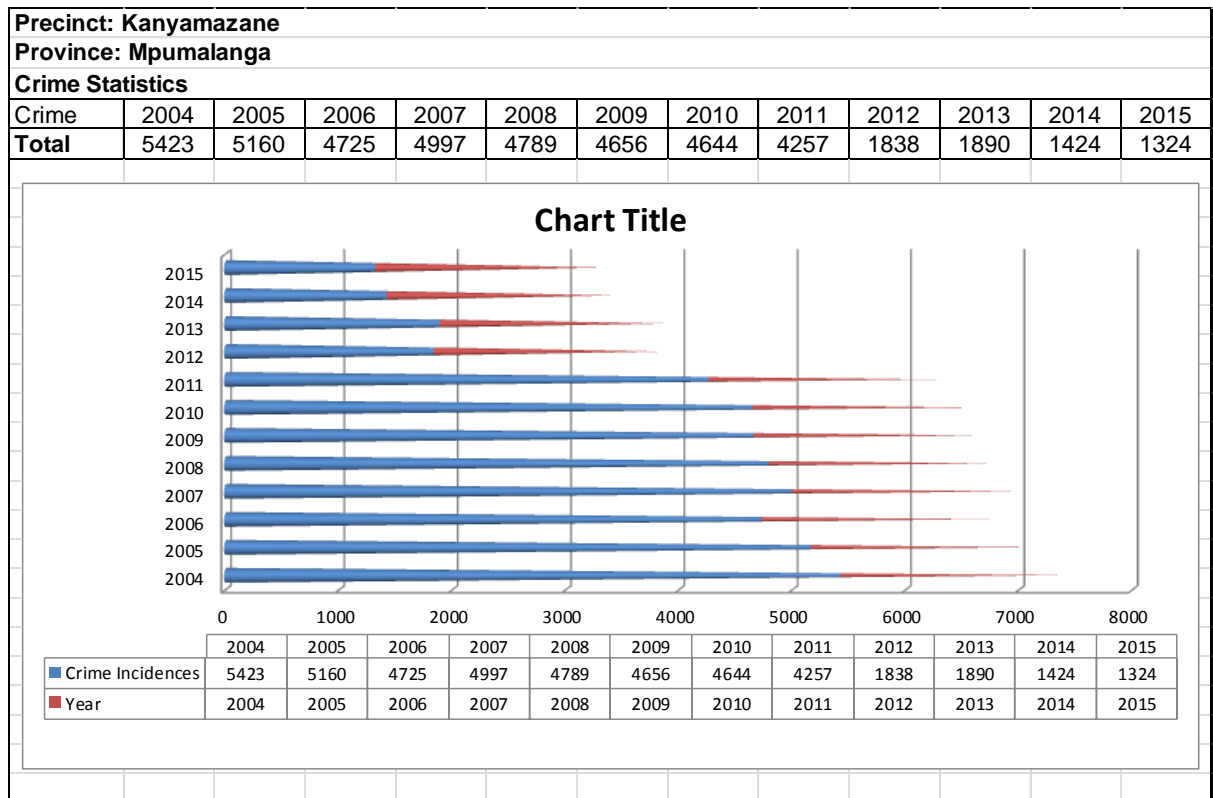
Statistical data released by the South African Police Service (SAPS) for the 2014-2015 period reflect an improvement in the percentage of the various types of crime in Ka-Nyamazane when compared to the crime statistical data for the 2014-2015 period (SAPS, 2015). The SAPS (2015) crime statistics reflects the following trends as displayed in Table 3:

**Table 3:** Abridged Crime Statistical Data in Ka-Nyamazane (SAPS, 2015).

KANYAMAZANE PART OF MPUMALANGA PROVINCE				
			Comparison 2013-2014 with 2014-2015	
CRIME CATEGORY	April 2013 to March 2014	April 2014 to March 2015	Case Difference	% Change
Total Contact Crimes (Crimes Against The Person)	425	412	-13	-3.1%
Total Contact-Related Crimes (Arson & Malicious Damage to Property)	91	87	-4	-4.4%
Total Property-Related Crimes	416	429	13	3.1%
Total Crime Detected As A Result Of Police Action	134	103	-31	-23.1%
Total Other Serious Crimes	309	234	-75	-24.3%

The crime statistical data displayed in Table 3 and Table 4 exhibitions a reduction in the number of crime incidences over the years 2004 to 2015. It is evident in Table 3 that the various types of crime have improved in 2015 when compared to 2014 though the total property related crime type has increased slightly. Yildiz et al. (2013) found that unemployment-criminality is incoherent by unregistered employment, joblessness welfares (such as government grants) and general support to unemployed people.

**Table 4: Crime Statistics Simplified (CrimeStatsSA, 2015)**



Is there a correlation between unemployment and crime? There are scholars such as Yildiz, et al. (2013) and Speziale (2014) who researched whether there is a correlation between unemployment and criminal activities. A study conducted during the year 2013 concluded that the more people earn income, the lesser the number of criminal activities (Yildiz, Ocal, & Yildirim, 2013). It is further argued by Yildiz et al. (2013) that unemployment-criminality is fragmented by unregistered employment, unemployment benefits (such as government grants) and general support to unemployed people. Another study which was conducted in Italy concluded that in Italy, unemployment does contribute to an increase in incidences of crime in the Italian provinces (Speziale, 2014). It has been acknowledged by Speziale (2014) that some inefficiencies in the Italian justice system also contribute to the increase in law-breaking.

The hypothesis observed is that, given the level of youth unemployment in Ka-Nyamazane, it can be assumed that a correlation can be drawn between the levels of crime and unemployment. This research paper assumes that skills are vital at a basic education level given that only approximately 17,9% of the population of Ka-Nyamazane has some tertiary qualification and therefore, most of the high school graduates are unable to continue to tertiary for different reasons. The questions are, can entrepreneurial intent improve the unemployment rates in the township of Ka-Nyamazane and whether entrepreneurs are born or can they be made. Would entrepreneurship education at basic schooling levels improve students' desire to venture into entrepreneurship?

The level of entrepreneurial activity in South Africa in its infancy has deteriorated by 34% in comparison to the levels achieved in 2013 and 2014. South Africa was at 10.6% in 2013 and 7.0% in 2014 (Herrington, Kew & Kew, 2015). According to Herrington, Kew & Kew (2015), South Africa has challenges with the quality of entrepreneurship education and training, however, the major challenge is with the dysfunctional schooling system at primary and secondary levels. The poverty levels impact mainly the youth population of South Africa (StatsSA, 2010), who are also not able to access tertiary education due to poverty and unaffordable fees at many tertiary institutions. The youth is therefore, compelled to be dependent on the poor skills acquired from a dysfunctional schooling system (Herrington & Kew, (2014).

Herrington & Kew (2014) acknowledge the fact that entrepreneurship education is very much unlikely to bridge the deficit left by the poor quality of basic education. Professor Boris Urban as quoted by Herrington & Kew (2014) states that in order to develop a bulk of entrepreneurs in South Africa, it is critical to invest in human capital as a long-term objective because such does not take a short time to accumulate. It is further amplified that good quality education is of vital importance in the development of higher levels of entrepreneurial activity (Herrington, Kew, & Kew, 2015).

The GEM 2014 report has made several recommendations for Policy and Practice (Herrington, et al., 2015). On education, the report suggests that South Africa should endeavour to improve the skill base and to nurture entrepreneurial attitudes through the education system. It further recommends that entrepreneurship education should be introduced at schools in order to encourage or to nurture problem-solving skills and self-confidence which will contribute positively to young citizens. Such competencies could be utilised in many aspects such as in the management of a family enterprise or in an employment environment.

In light of the poor quality of education in South Africa (GCR, 2014), the low level of entrepreneurial activity (Herrington & Kew, 2014) and the high number of business discontinuance (Herrington, Kew & Kew, 2015), this research paper evaluates the entrepreneurial intent among senior secondary school students in 5 secondary schools in Ka-Nyamazane township situated within the Mbombela Municipal District of the Mpumalanga Province in South Africa. The aim of this study is to determine if there is a relationship between entrepreneurial intent and a level of perseverance tenacity among senior secondary school students in 5 secondary schools located in Ka-Nyamazane. In addition, this study seeks to establish if entrepreneurship education can motivate learners and equip them with the correct attitude and competencies that are necessary for their personal survival and advancement in entrepreneurship opportunities given South Africa's poverty levels and the slow economic growth.

The principal hypothesis of this research paper is that perseverance has an impact of the path which is taken by an individual (Eisenberger & Leonard, 1980) and it is a necessary driving factor on a person whether he or she ventures into entrepreneurship or not as it acts as the edge with regard to a given objective (Harris, Gibson, & Mick, 2009). Entrepreneurs are faced by many challenges and their capacity to adapt to these ever-changing challenges is vital to their survival (Markman & Robert, 2003).

Entrepreneurial intent is said to be an indicator of entrepreneurial conduct. Entrepreneurial intentions are common among individuals who have an optimistic outlook towards risk-taking (Douglas & Shepherd, 2003).

It is against this background that the author undertakes to conduct a study in entrepreneurship education with a biased focus towards senior secondary school students.

### **1.3 Problem statement**

#### **1.3.1 Main problem**

The main problem is to determine if there is a relationship between entrepreneurial intent and a level of perseverance among senior secondary school students in Ka-Nyamazane, South Africa.

#### **1.3.2 Sub-problems**

Three sub problems have been identified.

The first sub-problem is to evaluate the level of entrepreneurial intent among senior secondary school students in Ka-Nyamazane, Mpumalanga Province, South Africa.

The second sub-problem is to evaluate the level of perseverance among senior secondary school students in in Ka-Nyamazane.

The third sub-problem is to establish whether there is a relationship between entrepreneurial intent and perseverance of high school students.

## **1.4 Research objectives**

The primary objective of this research paper is to provide a better understanding of the impact that entrepreneurship education could have in entrepreneurial competencies and intentions for secondary school learners. This study does not seek to enter into a contest on whether entrepreneurship can or cannot be taught but, as examined by Packham (2010), it is a building block to the hypothesis that entrepreneurship education could have an impact on perception and motivation to be an entrepreneur.

This research paper sets out to explore the relationship between entrepreneurship education with entrepreneurial competencies and intentions at secondary school level. The research objectives are:

- a) To measure the entrepreneurial intent of each learner; and
- b) To measure each learner's ability to persist and maintain interest with passion in the pursuit of long-term goal even when faced with adversity.

## **1.5 Significance of the study**

This study is critical as it seeks to establish whether entrepreneurship education and awareness could play a role in the provision of entrepreneurial skills and intention for learners. Given that South Africa has challenges with its economic growth, high rate of unemployment and crime as highlighted in the GEM (2014) report, the assumption which can be made is that entrepreneurship and new venture creation could play a role in the creation of employment, economic growth and the alleviation of poverty.

Some of the socio-economic conditions could be addressed by entrepreneurs in various ways, for example; some people would not engage in criminal activities if they were absorbed into the labour market and earning a living. It can be assumed that a select few of unemployed individuals engage in criminal activities out of desperation. The culture of entrepreneurship could be cultivated through entrepreneurship education at secondary school level as opposed to only providing such lessons at tertiary institutions, bearing in mind

that the majority of people in South Africa are unable to attend tertiary education due to the lack of funds.

There have been a number of research papers published in the field of entrepreneurship education by various scholars, however, the GEM 2014 report points out that South Africa still lags behind in total entrepreneurship activity when compared to other emerging markets. It is therefore important to research on this subject despite there being many studies which have been carried out on this subject. The assumption made by the author is that teaching entrepreneurship at an early stage could possibly influence the future entrepreneurial intent and career of learners, even to those that will not afford to carry on with their studies at tertiary institutions. It is against this background that the author seeks to conduct research in this field because of the gap that needs to be explored in entrepreneurship education.

## **1.6 Delimitations of the study**

The limitation of this research is that this study only focuses on the evaluation and analysis of the levels of entrepreneurial intent and perseverance among senior secondary school students in Ka-Nyamazane and may thus only be reflective of a community within Ka-Nyamazane and not any other geographical locations inside or outside of the Republic of South Africa.

## **1.7 Definition of terms**

The following terms have been assigned the following meanings:

- **Entrepreneurship**

According to the Austrian economist Schumpeter, entrepreneurship is an event that introduces a new product, a product method, new markets or new form of organisation (Nieman, Hough, & Nieuwenhuizen, 2003). This paper has adopted this meaning of 'entrepreneurship'.



- Entrepreneurial education

This research is adopting the following definition of entrepreneurship education. Entrepreneurship education is described as the progression and transformation that imparts intelligence, proficiencies and entrepreneurial intentions to learners in a holistic manner as part of their learning outcomes (Gedeon, 2014)

- Entrepreneurial Intent

Entrepreneurial intent is defined as a person's degree of his or her dedication to start a new enterprise within a short period of time from when the decision to start has been made (Krueger N. , 1993; Thompson, 2009).

- Senior secondary school students

For the purpose of this study, 'senior secondary school students' describes grade 12 learners.

## **1.8 Chapter layout**

This research report consists of six chapters.

Chapter one is where the researcher presents a summary of the study and explains the research problem. It contains a brief introduction of the research; mainly purpose of the study, context of the study, problem statement, research objectives, significance of study and the delimitations of study.

The earlier empirical research relating to the review of the subject matters, are discussed in chapter two of this research report. This chapter incorporates the review of the literature, study of relevant theoretical models, suggested theoretical framework, and the development of propositions.

The researcher shares the overview of the study's research methodology in chapter three of this research report. Included in this chapter, is the research design, data collection methods, sampling design, research instrument, and measurement construction, data processing, and data analysis.

In chapter four, the author presents the research results. Included in this chapter are the descriptive analysis, scale measurement, and inferential analyses.

The final discussions and conclusion of the study are outlines in chapter five. This chapter includes the summary of statistical analyses and discussions of major findings.

The conclusions and recommendations of this study are presented in chapter six. This chapter includes the implications of the study, limitations of the study, and recommendations for future research.

## **1.9 Conclusion**

Chapter one consists of the summary and essence of a brief abstract in the study. Accordingly, this chapter forms the purposes, vision and extent of the study in the following units of the paper. In order to develop an understanding concerning the principle of aspects influencing entrepreneurial intentions, an assessment of the literature and a review of existing theoretical frameworks is carried out, in which will be discussed in the subsequent chapters of this research paper.

## **CHAPTER 2. LITERATURE REVIEW**

### **2.1 Introduction**

This research seeks to establish if there is a relationship between entrepreneurial intent and perseverance among senior secondary school students in Ka-Nyamazane. This chapter is set out to review some of the available literature in the field of entrepreneurship and the state of entrepreneurial intention for senior secondary school students. In this chapter, the researcher discusses two constructs namely 'entrepreneurial intent' and 'perseverance' as well as develops the hypothesis based on the literature that is being reviewed.

South Africa has drawn a road map in the form of the National Development Plan 2030 ("NDP") which seeks to alleviate poverty and inequality by the year 2030 in the country. This road map was crafted by the National Planning Commission which was commissioned by the office of the President of the Republic of South Africa (National Planning Commission, 2011). The report identified nine key challenges which must be addressed by the year 2030 and one of them being education. According to the NDP, the quality of education in black schools has been identified as being very poor (National Planning Commission, 2011).

The primary objective of the NDP on education seeks to improve the quality of education in South Africa. The ultimate goal for improving education is to make a large segment of the population to be absorbable in good quality employment and earnings. The rippling effects of that will be a growing economy which might be expected to further provide more opportunities for all and generate the necessary means that are required in the improvement of good quality education (National Planning Commission, 2011).

There are many interpretations amongst scholars regarding what embraces 'entrepreneurship' as a field of study and what really constitutes

entrepreneurship curriculum in as far as the content and the method of delivering the content is concerned (Gartner, 1990). According to Venter & Urban (2015), entrepreneurship as a field of study is better comprehended through theory and practice. Entrepreneurship education is defined as the procedure of presenting to individuals the concepts and expertise which enables them to identify entrepreneurial opportunities that may not necessarily be identified by other individuals who may not have the knowledge to act where others were not eager to pursue a potential opportunity (Jones & English, 2004). Jones & English (2004) suggests that such expertise encompasses education in opportunity identification, being able to assemble the necessary resources, and the exploitation of a business opportunity in the face of risk. There are some scholars who have defined entrepreneurship education based on their various schools of thought. This research adopts a definition which places an exceptional value on the development of learners in the field of entrepreneurship. And such definition of entrepreneurship is best described by Gedeon (2014) and it also enables the learner to develop an entrepreneurial mindset which the learner could apply in future whether at their workplace, communities or their own enterprises and their lives. The literature review is best illustrated through the subject matter categories identified and set out below.

## **2.2 Influence of Entrepreneurial Intent**

There is a growing body of knowledge, which concentrates on childhood experiences, in terms of the preparedness or self-confidence to be an entrepreneur at the time of adolescence (Ishiguro, 2015). Another study found that in many cases where the parents are self-employed, they indirectly or directly become role models to their children in such a way that their children are motivated in acquiring entrepreneurial attitudes and behaviour (Dyer & Handler, 1994). There is also a developing question regarding entrepreneurship education in respect of whether it has any impact on the entrepreneurial behaviour in individuals (Rauch & Hulsink, 2015). There are scholars who are of the view that one's individual intentions to venture into entrepreneurship are conceived at least a year before they are eventually

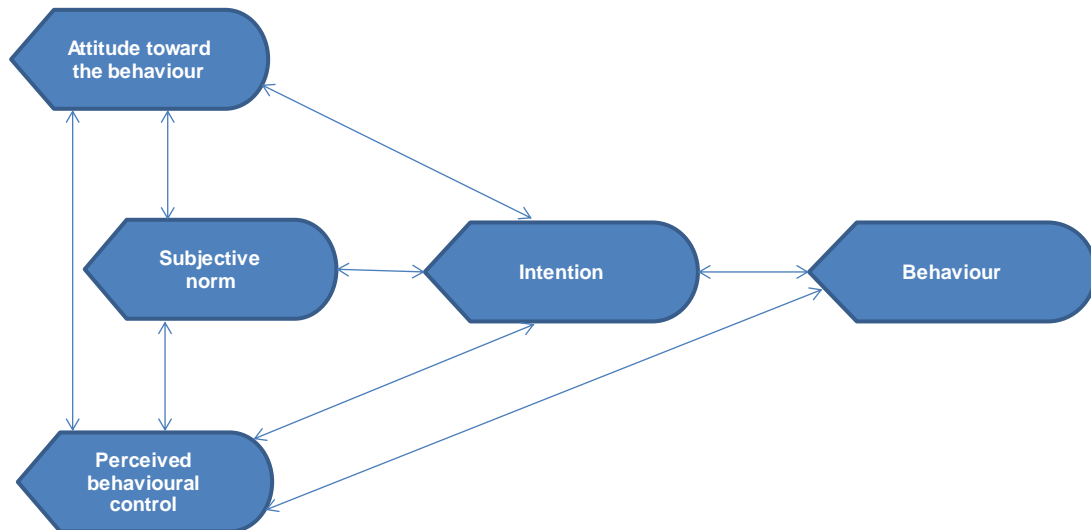
executed and that suggests that there is a link between entrepreneurship and entrepreneurial intentions (Henley, 2007).

The study conducted by Rauch & Hulsink (2015), suggests that entrepreneurship education does reflect an increase in attitudes and perceived behavioural domination to learners. Although this study was conducted at an institution of higher learning, it might still be a relevant subject, which should be explored, in a South African context for senior secondary school students. Rauch and Hulsink (2015) highlights that in the interpretation of research results, they had to take into account the fact that the participants were within a single context (i.e. business administration and management at Erasmus University) which was a limitation to their study (Rauch & Hulsink, 2015). This research explores this question in respect of senior secondary school students under the conditions, which are prevailing in the Ka-Nyamazane Township.

In order to understand entrepreneurial intentions, it is important first understand the underlying theories that support this concept. This research explores two such scholars who produced theories that form the foundation of planned behaviour as well as Shapero's model of entrepreneurial intent (Venter & Urban, 2015).

### **2.2.1 Ajzen's theory of planned behaviour**

The central factor in the theory of planned behaviour is one's intention to achieve a given behaviour (Ajzen, 1991). The theory of planned behaviour by Ajzen (1991) has identified three motivational aspects to this category of behaviour (see figure 1).



**Figure 1:** Ajzen's Theory of Planned Behaviour (Ajzen, 1991)

These motivational aspects include behavioural intention, attitude towards the behaviour, subjective norm and perceived behavioural control.

**a) Behavioural Intention**

This is a representation measure for behaviour. It denotes one's drive in the sense of an individual's intuition or resolve to execute certain behaviour (Conner & Armitage, 1998). As a general rule, when the intention is strong, there higher the probability of the behaviour being executed (Ajzen, 1991).

**b) Attitude toward Behaviour**

According to Ajzen (1991), this refers to the intensity of an individual's attitude in having either an optimistic or a pessimistic outlook in respect of the behaviour of interest. It demands a certain degree of consideration in respect of the outcomes of carrying out the behaviour (Ajzen, 1991).

**c) Subjective Norm**

This motivation is in reference of one's perception of whether he or she will receive the much-needed encouragement from other people as to whether one will be capable of performing the desired behaviour (Ajzen, 1991). Such could also be associated with one's opinion regarding the social environment close

to the behaviour or the social pressures that one is subjected to by the social environment (Erkko, Keeley, Magnus, Parker, & Hay, 2001).

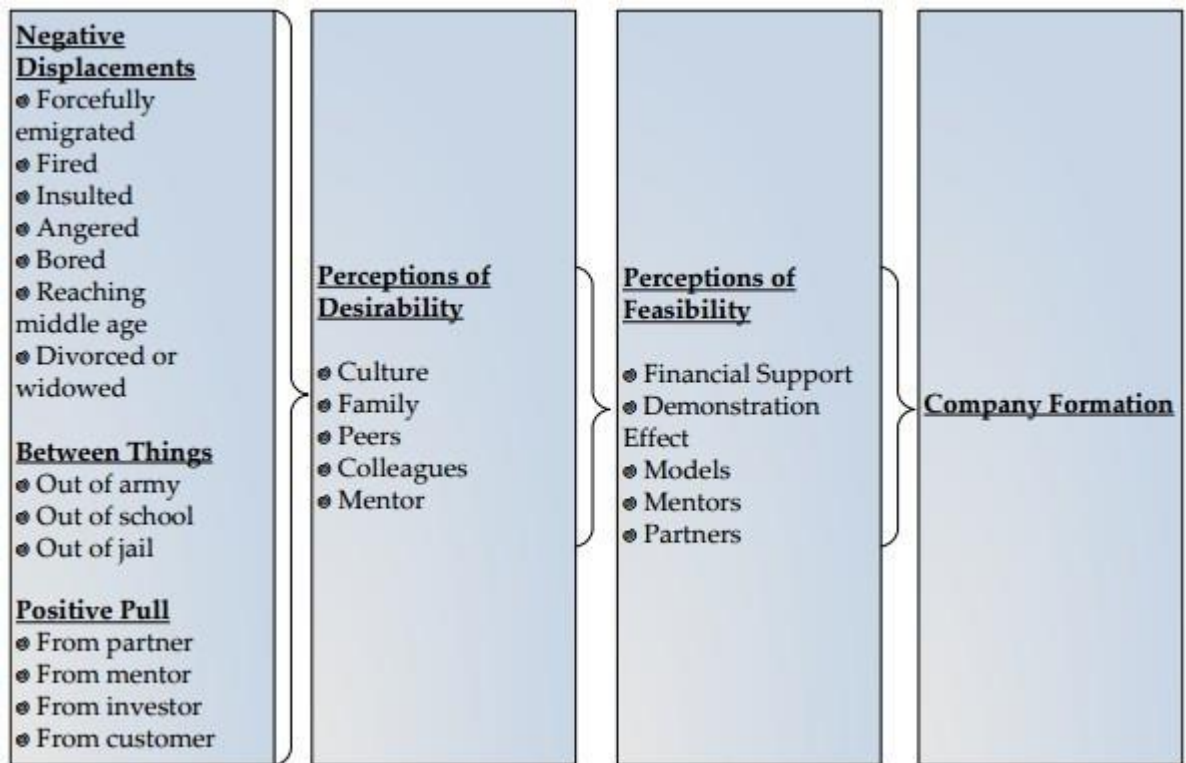
**d) Perceived Behavioural Control**

This talks about one's perception of the magnitude to which execution of the behaviour whether it is simple or complicated (Ajzen, 1991). When one's perception is that they have more resources and confidence, this behaviour increases as well (Hartwick & Barki, 1994; Lee & Kozar, 2005).

In summarising the theory of planned behaviour, a number of researches into intentions focused on what was nearer to the point of reference in behaviours, not the long-term objectives, however, this theory does seem to be very much applicable to entrepreneurship too (Krueger & Brazeal, 1994).

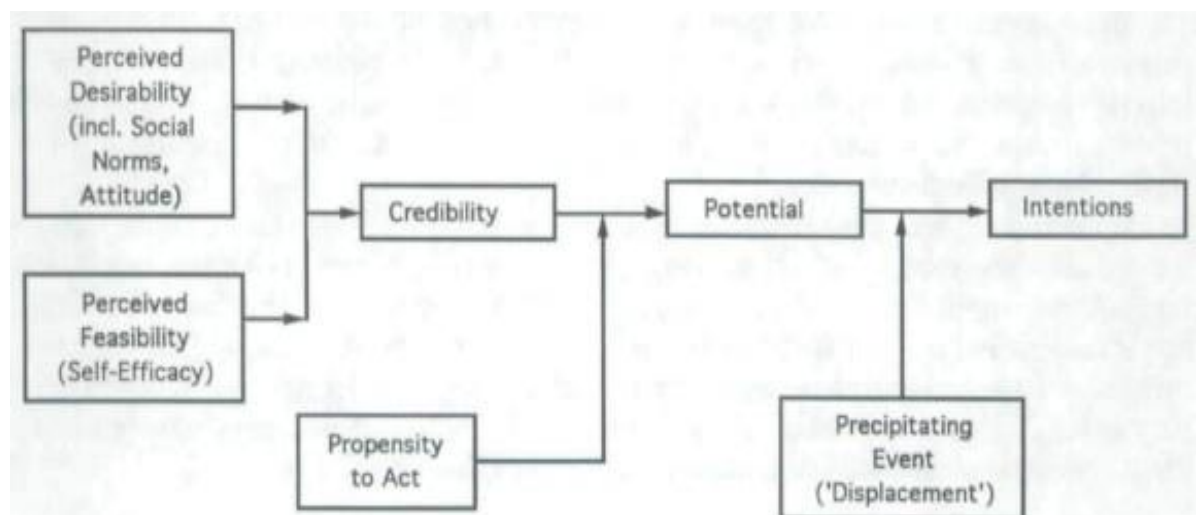
**2.2.2 Shapero's model of entrepreneurial intent**

According to Krueger & Brazeal (1994), Shapero's model of entrepreneurial intent presumes that apathy influences human behaviour until something interferes or dislodges that torpor. A shift from what a person is used to, triggers an adjustment in behaviour and the decision maker pursues the best accessible option from one's available set of alternatives (Katz, 1992). Figure 2 illustrates the triggers which could influence human behaviour.



**Figure 2:** Entrepreneurial Event Model (Shapero & Sokol, 1982)

Krueger & Brazeal (1994) adapted Shapero’s model of entrepreneurial intent in a simplified illustration (refer to figure 3).



**Figure 3:** Model of Entrepreneurial Potential (Krueger & Brazeal, 1994)

The perceived desirability and perceived feasibility constructs as illustrated in figure 3, incorporates the three antecedents which are the appealing factors of the theory of planned behaviour being the ‘attitude to act’, ‘social norms’ and ‘self-efficacy’ (Krueger & Brazeal, 1994). According to Krueger &



Brazeal (1994), the purpose of social norm is the apparent normative beliefs of the social environment which includes family, friends, and colleagues, who are considered by one's intention to conform to each normative belief. The difficulty in measuring social norms is recognising the correct reference group and for an entrepreneur or potential entrepreneur is not necessarily only family and friends, but may actually include colleagues and business partners (Carsrud, Krueger, Brännback, Kickul, & Elfving, 2007).

Self-efficacy is dominant than people's values in their effectiveness to oversee their own performance and to take charge of occurrences that have an impact in their lifecycles (Bandura, 1997). The theory of self-efficacy as described by Bandura (1982), informs us that people only attempt to do things which they believe they can achieve and they may not necessarily attempt to do things they perceive that they will not accomplish.

### **2.2.3 Entrepreneurial intent in the South African context**

An entrepreneurial intention among graduates is reported to be low in South Africa (Olufunso, 2010). An assumed narrative that could be drawn from the low level of entrepreneurial intention is that some South Africans may not necessarily have the desire or inner-drive which encourages a person's sequence of action to get involved in entrepreneurial activities. The GEM 2014 report has established that South Africa has on a regular basis achieved poor quality levels of entrepreneurial activity when compared to developing countries and other countries in the sub-Saharan Africa (Herrington, Kew, & Kew, 2015; Gird & Bagraim, 2008). The Total Entrepreneurial Activity rate of South Africa was at 10.6% in 2013 and 7.0% in 2014 which is a decline of approximately 34% (Herrington, Kew & Kew, 2015). Intriguingly enough, the South African landscape for conducting entrepreneurial activities in South Africa are said to be very conducive regardless of the decline in the percentage of Total Entrepreneurial Activity by 34% in 2014 when compared to 2013 (Herrington, Kew & Kew, 2015). Given this level of entrepreneurial activity, the research hypothesise that entrepreneurial intention among senior secondary school students is low.

**Hypothesis 1: Entrepreneurial intention among senior secondary school students is significantly low.**

#### **2.2.4 Difficulties to venture into entrepreneurship**

Despite the fact that South Africa has a high rate of unemployment, a career option in entrepreneurship for graduates reflects low levels of interest in becoming entrepreneurs (Shambare, 2013). According to Shambare (2013), the South African government has put in place a number of initiatives in order to support youth entrepreneurship, however, most of these initiatives do not achieve their objectives. Some of the difficulties in engaging in entrepreneurship by the youth, as cited by Shambare (2013), are the lack of mentorship, entrepreneurship education and social influence.

There has been considerable growth in universities offering entrepreneurship education, however, the majority of people are unable to further their studies beyond secondary schools in South Africa due to unaffordability. Offering entrepreneurship education from tertiary level only makes it more difficult for secondary school graduates to make a meaningful contribution to the growth of the South African economy and the alleviation of poverty. This research study explores whether entrepreneurship education at secondary school level could have any impact on learners to have an entrepreneurial mind-set. It is apparent that risk-taking is core to entrepreneurship (Zahra, 2005) and entrepreneurial intent plays a vital role given that without perseverance, one would not venture into entrepreneurship.

### **2.3 Perseverance**

Perseverance is usually considered as a consequence rather than a forward planner (Duckworth & Quinn, 2009). Such is evident in a number of studies carried by various scholars in the field of self-efficacy, goal orientation, optimistic attribution style, etcetera as cited in by Duckworth & Quinn (2009)

and it is commonly used as a dependant variable. Perseverance can be defined as a person's persistence to continue doing something despite the possibilities of difficulty, failure, or opposition that they may be faced with (Duckworth, Peterson, Matthews, & Kelly, 2007). It is also suggested by Duckworth et al. (2007) in the theory of grit that perseverance and passion are personality traits for long-term objectives which go beyond measures of talent and they are closely linked with grit.

### **2.3.1 The Correlation between Perseverance and Grit**

Grit is defined as an individual's competence and the determination to assert one's pursuit of a desire for a long-term ambition, even when faced with difficulty (Maddi, Matthews, Kelly, Villarreal, & White, 2012).

There is a growing body of knowledge which is constructed on the suppositions of positive psychology and in particularly within the character classification of self-control as the concept of grit (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Quinn, 2009). Perseverance illustrates the continual capability of prevailing over hindrances within one's life trail and such is time and again linked with the notion of being capable to engage in a particular task and succeed in it (Duckworth, Peterson, Matthews, & Kelly, 2007). The concept of grit is therefore derived from a number of variables such as tenacity, self-discipline, and more strikingly from being diligent (Duckworth, Peterson, Matthews, & Kelly, 2007; Duckworth & Quinn, 2009).

There are some scholars who argue that non-cognitive or particular personality traits may be more important than intelligence quotient ("IQ") (Terman, Oden, & Bayley, 1947; Tough, 2013). Duckworth et al (2007) suggest that non-cognitive elements such as grit, is a shared attribute to most prosperous individuals and these elements are more valuable than IQ. It is further argued by Duckworth et al (2007) that grit is a shared precursor to be successful amongst numerous spheres and this was based on their study of top performing professionals.

Based on their observations, the researchers described 'grit' as perseverance and passion for long-term goals.

### **2.3.2 The South African context**

Youth unemployment is sitting at approximately 37% in South Africa (StatsSa, 2015). For a developing economy, this rate is high and such requires a multi-dimensional approach in dealing with. The South African youth is exposed to excessive levels of unemployment and poverty when compared to other developing countries such as this one (Altman, Mokomane, & Wright, 2014). The GEM 2014 report established that South Africa's rate of entrepreneurial activity is low for an emerging economy when compared to other sub-Saharan African nations (Herrington, Kew, & Kew, 2015).

Entrepreneurial intent among graduates is described as one of the lowest in South Africa (Olufunso, 2010). Given the youth unemployment rates in South Africa, such does not assist in improving the situation (StatsSA, 2010; Olufunso, 2010). This insinuates that in general, the populace of South Africa lacks the enthusiasm which triggers a person's drive (perseverance) to engage in entrepreneurial activities and therefore, the following hypotheses were developed:

**Hypothesis 2: Perseverance among senior secondary school students is significantly low.**

**Hypothesis 3: There is a positive correlation between entrepreneurial intent and perseverance.**

## **2.4 Entrepreneurship Education as a Career Choice at Secondary School**

There is a school of thought which suggests that entrepreneurship education will harvest better equipped and educated entrepreneurs than entrepreneurs who were produced in the past (Ronstadt, 1987). In addition, there is a

growing belief that entrepreneurs are not necessarily born but they can be made or taught (Deshpande, 2013). From a learning viewpoint, being aware of the learners' educational and their preferred career path (for example, entrepreneurial intention) could assist teachers to adapt their syllabus designs to meet learners' exceptional educational requirements and impending career training (Liqiang, 2013).

In South Africa, entrepreneurship education is not taught at secondary school level. As previously stated, most learners are unable to further their studies beyond secondary school. A developed economy like that of Japan, sought to establish the educational benefits of teaching entrepreneurship education at secondary school level (Ishiguro, 2015). Such economies are different from that of South Africa in the sense that entrepreneurship nurturing occurs prior to individuals reach tertiary institutions. In her findings, Ishiguro (2015) established that one of the major influential factors to learners in developing an entrepreneurial mind-set is the ability in them to generate ideas and be able to put those ideas into action. Such learners according to Ishiguro (2015) usually develop the enthusiasm or self-assurance to be entrepreneurs. Ishiguro (2015) also suggested that entrepreneurship education should also provide practical training and exploratory exercises in the creation of opportunities as part of the curriculum in order to stimulate their entrepreneurial mind-set. It is with this in mind that the author explores whether entrepreneurship education can motivate secondary school learners to consider entrepreneurship as a career in future.

## **2.5 Educational System and its Impact on Entrepreneurship**

The configuration of education in each country differs although it is acknowledged that education is very important and it strengthens the future economic prospects of each country (Ilayaraja, 2015). The importance of education has been amplified by a number of scholars globally, and South Africa is trailing behind with a poor quality of basic education (GCR, 2014). People lack the necessary competencies to venture into entrepreneurship although it is suggested that entrepreneurship education has the ability of

developing, organizing and providing the necessary soft skills to manage an enterprise (Ilayaraja, 2015).

Some of the barriers of entry to the field of entrepreneurship as listed by Ilayaraja (2015) are factors such as lack of awareness, practical experience, family background and funding. Ilayaraja (2015) states that the nurturing of entrepreneurship could lead to the advancement of any economy and one of the best ways to do that is to offer entrepreneurship education curriculums for learners. The limitation in Ilayaraja's (2015) study was the fact that it was conducted in India and the context of it is mainly addressing the circumstances which are predominant in that country. This research paper examines similar factors within the South African context in order to establish whether similar approaches in as far as the nurturing of entrepreneurship is concerned, could add value to secondary school learners.

## **2.6 Entrepreneurial Wisdom**

Entrepreneurial wisdom can be described as the procedure in which individuals acquire expertise from technical competencies and from the observations of other entrepreneurs either from society or family members who are entrepreneurs and linking those elements to established constructs (Holcomb, et al., 2009). An assumption made by Holcomb, et al (2009) suggests that the consequences of solving a problem for which no formula exists can be significantly influenced by the situation in which the knowledge absorption arises such as whether the learning is through direct involvement or observations of others' behaviour. South Africa regularly presented substandard levels of entrepreneurial activity than developing countries, developed countries and other countries in the sub-Saharan Africa (Herrington, Kew, & Kew, 2015; Gird & Bagraim, 2008).

Holcomb, et al (2009) argues that entrepreneurship education can be influenced by the accumulation of learning under heuristic and indirect learning paths where certain decisions can either advance or constrain the value of risk-taking. Given that people differ in the manner in which they accumulate

wisdom, Holcomb et al (2009) states that such gives rise to many unanswered questions in the field of entrepreneurship education. For the purpose of this study, the author intends to contribute to the available body of knowledge an entrepreneurial wisdom in the context of entrepreneurship education for secondary school learners.

## **2.7 Definitions of Theories**

This research centres around two concepts namely: 'entrepreneurial intent' and 'grit'. For the purpose of this study, the research adopts the following definitions:

- Entrepreneurial intent is defined as a perceived personality belief by a person that he or she is determined to start a new enterprise and intentionally plan to do so in the future (Thompson, 2009)
- Grit is defined as an individual's competence and the determination to assert one's pursuit of a desire for a long-term ambition, even when faced with difficulty (Maddi, Matthews, Kelly, Villarreal, & White, 2012).

## **2.8 Conclusion of Literature Review**

South Africa is currently going through some grim socio-economic challenges as reported by the GEM 2014, GCR 2014 and the NDP reports. The unemployment rate among the youth in South Africa is high (StatsSA, 2010) and the low levels of entrepreneurial activity among the youth when compared to countries in the sub-Saharan Africa is worrying (Gird & Bagraim, 2008). The primary purpose of this research is to investigate the impact of entrepreneurship education on entrepreneurial competencies and intentions for senior secondary school learners in Nelspruit. This research study seeks to contribute towards the literature of entrepreneurship education for the benefit of the country specifically at learners who are closer to their completion of their secondary school levels.

An entrepreneurial intention among graduates is low in South Africa (Olufunso, 2010). This is a concern given the youth unemployment rates in South Africa (StatsSA, 2010; Olufunso, 2010).

All findings and the interpretations of this study are discussed in this research paper. It is the intention of this study to make recommendations and to highlight limitations of this study if any and to list areas, which may require further research.

Based on the literature review, the following hypotheses are proposed:

- H1. Entrepreneurial intentions among senior secondary school students are significantly low.
- H2. Perseverance among senior secondary school students is significantly low.
- H3. There is a positive correlation between entrepreneurial intent and perseverance.

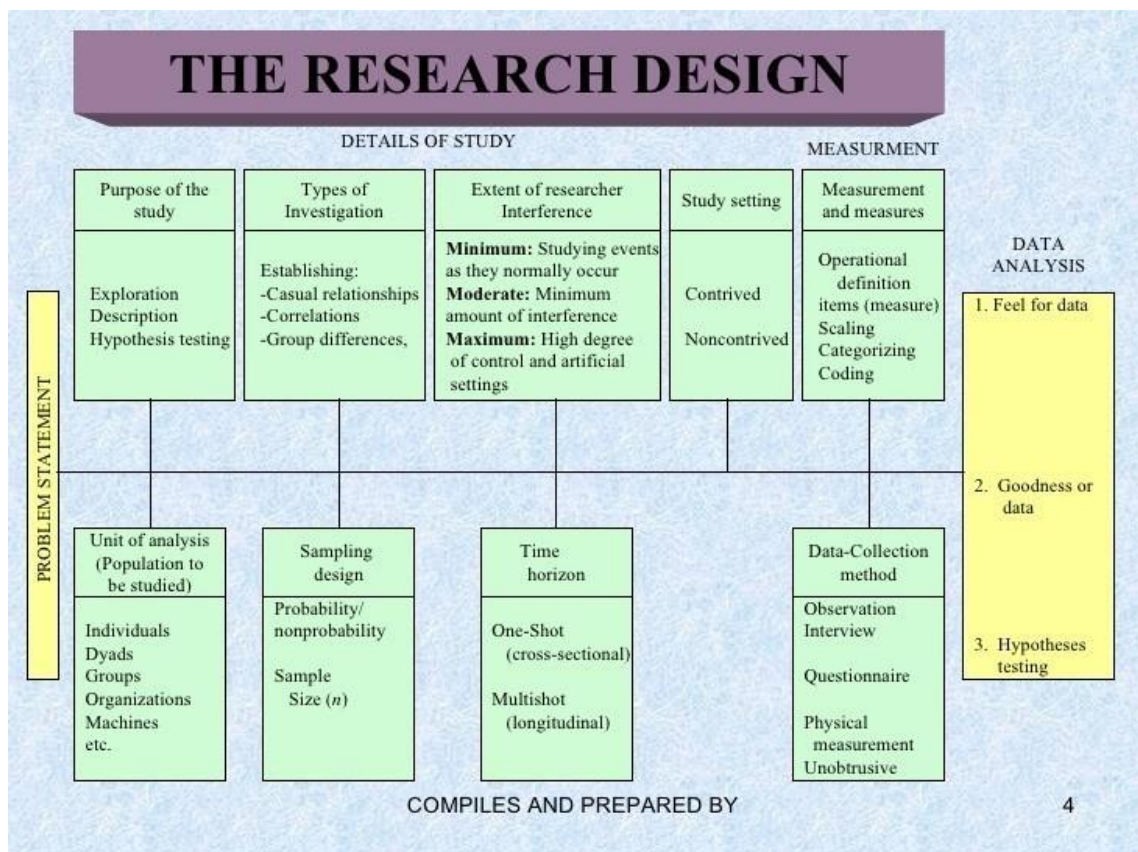


# CHAPTER 3. RESEARCH METHODOLOGY

## 3.1 Introduction

This chapter explains the research design, data collection methods, sampling design, constructs measurement, research instruments, data processing and data analysis.

Details of how the research carried, the research objective, details of the research, data collection and measurement and how the data will be analysed are set out in the diagram below (Sekaran & Bougie, 2013).



**Figure 4:** The Research Design - Adapted from (Sekaran & Bougie, 2013)

The theory of how the exploration of the study is performed involving the theoretical and philosophical hypotheses upon which the study is grounded on as well as the inferences of the approaches embraced are described (Saunders & Lewis, 2012) in this chapter.

### **3.2 Research Design**

A research design describes an exploratory study and it focuses on the examining factors and explores the research problem (Glatthorn & Joyner, 2005). The research design thus clarifies the type of study undertaken by the researcher (Athanasou, et al., 2012). A research methodology is a practical and rational approach with procedures in the form of steps used to come up with solutions to the problem identified by a study (Babbie, 2010, p. 33).

The researcher consequently focused on the investigating and examining factors affecting secondary school students' entrepreneurial intention, the level of perseverance towards an entrepreneurial livelihood.

### **3.3 Research paradigm**

A research archetype is a scholarly and hypothetical framework of a systematic school or field within which concepts, regulations, generality and the experimentations carried out in support of them are formulated (Merriam-weber, n.d.). Each academic discipline may have its own research paradigms. Positivism and anti-positivism are the two main archetypes to the substantiation of hypothetical propositions (Dr. Nirod K. Dash, 2005). The positivist archetype of studying social representativeness is based on the premise that true understanding is based on experience of perceptions and can be obtained by observation and experiment. The positivism archetype has to be apprehended within the context of the antecedents and suppositions of science (Cohen, Manion, & Morrison, 2000). These assumptions, as (Cohen, Manion, & Morrison, 2000) documented are determinism, empiricism, parsimony, and generalisation. With these hypotheses of learning, the ultimate objective of science is to incorporate and standardise conclusions into a profound pattern or theory which is considered as exploratory and not the ultimate fact. A theoretical study can be subjected to improvement or reform as fresh evidence is established. A positivistic prototype consequently regulates the knowledge creation course of action with the assistance of quantification, which is fundamentally to enhance

meticulousness in the description of limitations and the discrimination of the relationship among them.

Although positivistic paradigm regards human behaviour as unreceptive, measured and determined by external ecosystem. The research data obtained have not be altered and the researchers feeling did not bias the data collected (Cohen, Manion, & Morrison, 2000). This research paper thus seeks to comply with the positivist paradigm.

### **3.4 Research methodology**

Social science research is often positioned in two predominant paradigms namely qualitative and quantitative (Kuhn, 1962). Each paradigm makes different assumptions about the nature of reality and how best to understand it, which in turn affects what, it, considers valid evidence on which to base conclusions (Athanasou, et al., 2012). This research takes the form of a quantitative study. A quantitative study intends to yield a precise representation of persons, events or situation (Saunders & Lewis, 2012). Quantitative research is usually based on research designs such as experimental, quasi experimental, survey, causal comparative and collateral designs (Kirk, 1995). There are different ways of approaching the quantitative scientific process but it is basically a process of generating and testing hypotheses. Theory driven problems and questions are generated and these are turned into hypotheses thereafter these hypnosos are then tested through established procedures and conclusions are drawn (Athanasou, et al., 2012). This research has used primary data given that such a study falls within the quantitative research archetype. A quantitative research method is used to determine if there is a relationship between entrepreneurial intent and a level of perseverance tenacity among senior secondary school students in five secondary schools located in Ka-Nyamazane. A quantitative study has been selected as it allows for finding out the state of something (Cohen, Manion, & Morrison, 2000). Such study better achieves the objectives, as it evaluates objective data containing

numbers and focuses on the facts, thus reducing phenomena to the simplest elements (Easterby-Smith, Thorpe, & Jackson, 2011). The advantage of using the quantitative approach is that the research data centres on numbers and thus it is a lot easier to collate. The inherent challenge is that numerical data is continuously undated and thus the research may be relevant only for a select period in time.

### **3.5 Population and sample**

#### **3.5.1 Population**

The target population were grade 12 learners at the Ka-Nyamazane Township. There are five secondary schools in this location. Grade 12 learners in all five secondary schools formed part of the survey. The researcher could not establish the accurate total number of grade 12 learners at the targeted location because registers were not made available to the researcher. The grade 12 learners study in various fields such as science, commerce, general, etcetera, and all these learners were part of the sample population.

#### **3.5.2 Sample and sampling method**

The researcher has made use of a convenient sampling method due to its inexpensiveness and convenience. It is usually fast and simple and it saves a lot of time and resources to conduct a survey in this manner because all the respondents were available in a secondary school classroom format. The researcher has supervised all the surveys. All five schools are in one township and all of them were part of the sample.

The researcher made use of a questionnaire to collect data from the respondents. After the collation of the data set via the questionnaire, it was factor analysed, and thereafter an analysis of the variances and correlation analyses performed.

### **3.6 The research instrument**

Given that this is a quantitative research, it was important to ensure that measurements are both precise and consistent. It is common practice that when conducting a quantitative research, figures or values are assigned to the attributes of individuals, subject matters, events, views or concepts (CIRT, n.d.). The researcher considered this in conducting this research.

The researcher made use of the Individual Entrepreneurship Intent Scale developed by Thompson (2009) which has been adapted for the purpose of this research.

The common variables measured in a quantitative research are either on a nominal, ordinal, interval or ratio scale. Given that the author was examining behaviour in human beings in as far as entrepreneurial intent is concerned, a mixture of two measurement scales were used. These instruments were the ordinal and nominal scales of measurement. The nominal scale was used to obtain a label of the variables such as gender (i.e.: male or female) and whether the student is from Ka-Nyamazane or from another location outside of Ka-Nyamazane etcetera. The ordinal scale used in measuring the non-numeric concepts like satisfaction, intention, motivation contentment, uneasiness, etcetera. These were the scales used by the author for the purpose of this research paper.

A pilot study was conducted between the 25th and the 28th of July 2016. Interviews were conducted telephonically because it was not convenient for the researcher to travel to Mpumalanga Province where the study was supposed to be conducted. A total of 7 learners doing grade 12 were interviewed telephonically. The learners were from Sidlamafa High School in Mpumalanga Province. They provided verbal consent through the phone. All completed questionnaires were captured in MS Excel spreadsheet and analysed on the same package. All completed interviews were done in SiSwati.

The questionnaire was applied to 7 senior secondary school learners. The sample selected was that of an easily accessible sample and the method used

in the selection of the sample did not provide all the participants an equivalent likelihood of being chosen. All the students were interviewed telephonically. Each interview took approximately 20 minutes. The questionnaire consisted of 29 questions. Six of them spoke SiSwati and one spoke Zulu at home. The participants were between the ages of 17-19. Almost all learners indicated they will be going to tertiary school when they finish their high school except one learner who indicated she will be working.

Participants were able to answer most of the questions which shows the instrument will be able to meet the objectives. However, two questions sounded the same (“I am diligent” and “I am a hard worker”) so one of them will be excluded in the final instrument. There was another question on age of which asked learners to indicate in which age group they belong (“In what age group are you”). This question was changed to ask exactly the age of each learner in the final instrument. The researcher also noted that question 4 of the instrument omitted the languages taken as subjects at school. The instrument was amended to include languages taken at school. Based on the questions asked in the questionnaire, it appeared that learners were able to answer the hypotheses.

The research instrument was a self-answered questionnaire which consisted of 29 questions. The instrument encompasses the demographics section, the Individual Entrepreneurial Intent Scale (“IEIS”) section, the Grit-S section and future plans beyond grade 12. The IEIS measure of entrepreneurial intent and Thompson (2009) and other scholars have demonstrated its reliability. Duckworth & Quinn (2009) stated that the Grit-S is used in the measuring of perseverance because it is an instrument which is widely used and has proven to be reliable.

### **3.7 Procedure for data collection**

The researcher obtained ethical clearance from the University of Witwatersrand prior to embarking with the fieldwork. This study was administered in the grade 12 classrooms in four of the five local secondary schools in Ka-Nyamazane.

Prior to conducting the study, the necessary permission was obtained from the Mpumalanga Department of Education, the school principals, the parents or legal guardians of all learners below the age of eighteen and from all the learners who participated in this study. Sufficient copies of the self-survey questionnaire and writing pens were provided to the scholars. The researcher supervised and administered the study in each of the classrooms on the days and time that the researcher scheduled with the school principals. The researcher familiarised the students with the research prior to the commencement of responding to the questionnaire by the learners.

Teachers were present in the teaching space during the survey because of the Department of Basic Education's policy. In spite of this, the teachers did not participate in the student survey process. At least one teacher had to be present in each classroom as an observer and to ensure that the research is conducted in an ethical manner. Learners participated in this study out of their own accord. Learners who were below the age of 18 who did not get parents or legal guardians consent to participate, did not partake in the research. A sample of the questionnaire is attached under appendices.

### **3.8 Construct description**

#### **3.8.1 Construct: Entrepreneurial Intent**

A person with a self-acknowledgement conviction, who also has intentions to start a new business venture and takes a conscious outlook to do so in the near future, is a portrayal of an entrepreneurial intent. (Thompson, 2009).

#### **3.8.2 Construct: Perseverance**

Perseverance is described as an individual's persistence to continue doing something despite facing the possibility of complicatedness, failure, or opposition (Duckworth, Peterson, Matthews, & Kelly, 2007).

### **3.9 Data analysis and interpretation**

The survey questionnaires were distributed on a single A4 double sided sheet to the learners. The survey responses were later entered into a Microsoft Excel worksheet.

The purpose of entering the data on a Microsoft Excel worksheet was designed to organise and simplify the data so that the researcher could obtain usable and useful information. The researcher started by entering the data on a Microsoft Excel worksheet which assisted in checking for any possible errors in the completion of the questionnaire by the learners. It also assisted in checking for any errors in the capturing of the unrefined data set before exporting it into a data analysing software.

The data set was then exported into the STATA software version 12 for a detailed data cleaning and analysis. The same data set was also exported into the IBM SPSS software version 24 in order to conduct an inferential analysis. The purpose of utilising these analysis tools were to try and achieve the following results:

- to label and condense the data;
- to isolate relationships concerning variables;
- to assess variables;
- to identify the discrepancies between variables; and
- to predict results.

Frequency or relative frequency tables were generated from the cleaned data set. This was used in order to condense definite, nominal, and ordinal data. This assisted the researcher in counting the quantity of observations that are found in each mutually exclusive classification. The statistic accompanying each classification is called the frequency and the collection of frequencies over all classifications provides the frequency distribution of the analysed variable.

The results have been interpreted by using frequency distributions. The reason for using this method of analysing and interpreting the result is because it involves studying how a variable is spread out amongst individuals or objects. It



also involves the manner in which inferences about a population of individuals or objects on the basis of a sample are produced.

This assisted the researcher in defining the two universal aspects of statistics: descriptive statistics and inferential statistics. The descriptive statistics used in this paper such as means, percentages or counts, the tables of frequency distributions have placed the researcher in a beneficial point of view in understanding the population because it helped one to think about how a variable performs across its scale of potential values.

### **3.10 Limitations of the study**

The study was limited to grade 12 learners in the Ka-Nyamazane Township only. This township is chosen because the researcher is more familiar with the area and it was easier to know where to obtain all the necessary approvals to conduct a research in the high schools found in that location. Furthermore, the majority of the people residing in this location are from the historically disadvantage communities. This research explored the research questions in respect of senior secondary school students under the conditions, which are prevailing in the Ka-Nyamazane Township only. The conditions might be different in other locations for various reasons such as, better or worse employment opportunities, the availability of funds to further their education beyond grade 12 and other conditions which might influence the outcome differently than the prevailing conditions in Ka-Nyamazane Township.

### **3.11 Validity and reliability**

Validity can be described as the scale to which a test determines what it is supposed to measure (Sekaran & Bougie, 2013). There are three basic approaches to the validity of checks and measures as shown by (Mason & Bramble, 1989) namely content validity, construct validity, and criterion-related validity. In respect of content validity, the researcher must identify the overall content to be represented thus the researcher is duty-bound to obtain a group of items which is representative of the content of the trait or things to be

measured (Mason & Bramble, 1989). In order to ensure this, a group of specialists in the field to be studied will be used. The construct validity approach concerns the degree to which the assessment measures the construct it was designed to measure (Mason & Bramble, 1989).

The grade 12 learners that were being surveyed fit the theory which the research seeks to investigate in respect of relationship between entrepreneurial intent and a level of perseverance tenacity among senior secondary school students. The criterion-related validity concerns sensing the existence or lack of one or more measures well-thought-out to represent behaviors or paradigms of interest as such one of the effortless ways to test for criterion-related validity is to oversee the instrument to a group that is known to exhibit the trait to be measured (Mason & Bramble, 1989). In light, hereof, the research can be seen as valid.

External validity is the extent to which the results of a study can be generalized from a sample to a population. The sampling used in this research was not an accurate representation of a population thus generalisations cannot be made.

The researcher has selected the Individual Entrepreneurial Intent Scale (“IEIS”) measure of entrepreneurial intent because it is an instrument which is considered reliable (Thompson, 2009).

The Grit-S is selected as the desired measure of perseverance as it is widely reported to be reliable (Duckworth & Quinn, 2009). Validity is an important element to observe in a consistent instrument (Williams, 2003).

Reliability is concerned with the integrity of the results and whether they can be relied on (Welman, Kruger, & Mitchell, 2005). The reliability of the data was tested as it is directly related to the validity of the measure.

### **3.12 Ethics**

Given that a research is a procedure that involves interactions with people, it was therefore very important that such dealings are consistent with commonly established norms and standards (Mouton, 2006). Given such concerns, the

researcher ensured that sensible methods were applied in order to abide with all ethical considerations. In conducting the research, permission to conduct this study was obtained from the Head of Department in the Department of Basic Education in the Province of Mpumalanga. Permission was also obtained from each principal in each of the schools that were surveyed. However, only four principals granted their permission to the researcher to conduct the survey in their schools and one did not respond timeously. Hence only four out of the five schools participated in the survey. The consent of the parents or guardians of each learner was obtained in instances where the student was below the age of 18 years. In order to ensure a safe, free, fair and enjoyable experience for the learners, their informed consent was also obtained and there were no questions which were considered to be harmful to the participants.

## CHAPTER 4. PRESENTATION OF RESULTS

### 4.1 Introduction

The objective of this chapter is to present the results from the analysed data. The discussion of the results and research implications are deliberated on in chapter five. The structure of this chapter is organised to give the illustrative indicators, preliminary assessments of the data and presentation of the results from the hypothesis.

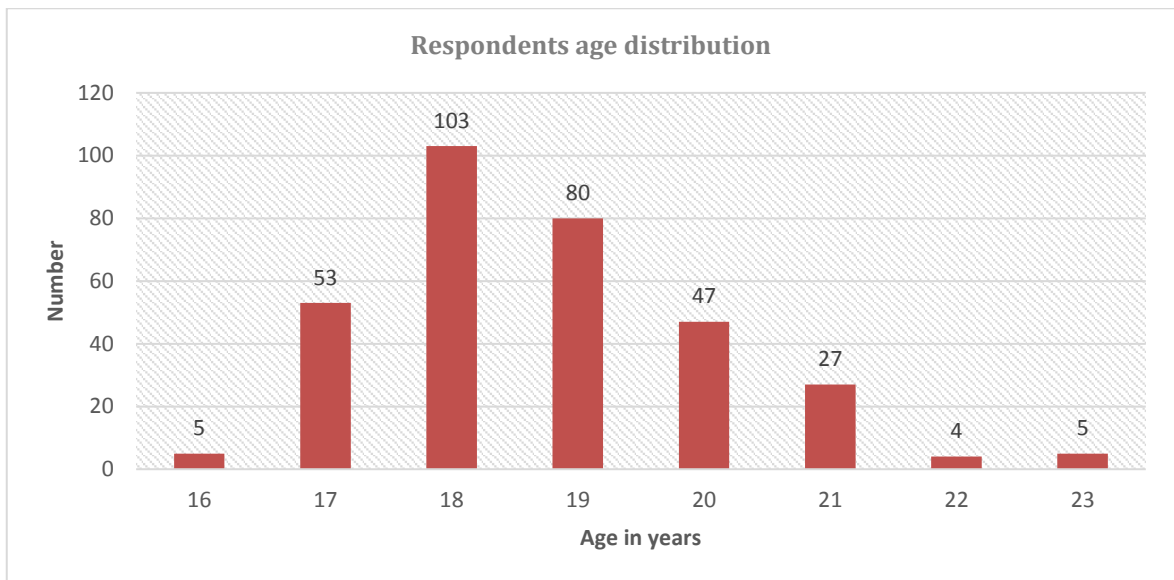
The sequence of the presentation of the results is presented in no sequential order of the three hypotheses projected from the literature review.

### 4.2 Results pertaining to the demographic profile of respondents

A total of 325 secondary school learners participated in the study. The total percentage of female learners was 54.8% and the total of male learners was 44.0% and 1.2% did not specify their gender. Refer to figure 5. The average age of the learners who participated in the study was 18 years of age extending from 16 to 23 years of age. Refer to table 5 and figure 5 for more details.

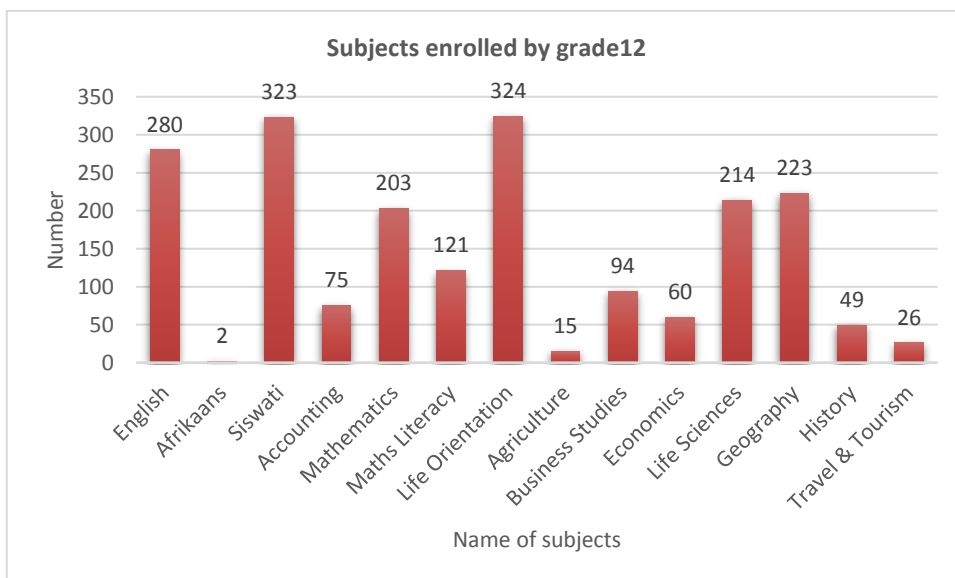
**Table 5:** Demographic profile of respondents

Characteristics	Count	Percentages
<b>All learners</b>	(N=325)	
<b>Gender</b>		
Female	178	54.8
Male	143	44.0
Missing	4	1.2
<b>Ages, years</b>	Mean: 18	
16-19	241	74.2
20-23	83	25.5
Missing	1	0.3



**Figure 5:** Age Distribution of Respondents

All the 325 grade 12 learners were enrolled in 14 different subjects. Each learner enrolled at least a minimum of 6 subjects. Life Orientation had the highest enrolment with 324 learners and Afrikaans had the lowest enrolment with 2 learners. figure 6 contains the number of learners per subjects.



**Figure 6:** Subjects enrolled by grade 12 learners

## 4.3 Results pertaining to the hypotheses

### 4.3.1 Learners intending to setup a company in future

Learners were asked whether they intend setting up a company in future. The majority (37.7%) of the learners indicated that it is 'true' that they intend setting up a company in future. The 37.7% is equivalent to 121 learners. This was respectively followed by those who indicated that it is 'very true' which is 31.5% (101 learners) and 15.3% (49 learners) indicated that it is 'slightly true'. Refer to table 6 for more information.

**Table 6:** Learners Intending to Set-up Companies in the Future

Learners Intending to Set-up Companies in the Future	Frequency	Percent
Slightly Untrue	12	3.7
Untrue	18	5.6
Very Untrue	20	6.2
Slightly True	49	15.3
Very True	101	31.5
True	121	37.7
<b>TOTAL</b>	<b>321</b>	<b>100.0</b>

### 4.3.2 Learners who read business newspapers

Learners were asked whether they read business newspapers. The majority (28.6%) of the learners indicated that it is 'slightly true' that they read business newspapers. The 28.6% is equivalent to 81 learners. This was respectively followed by those who indicated that it is 'untrue' which is 25.2% (81 learners) and 20.2% (65 learners) indicated that it is 'true'. Refer to Table 7 for more information.

**Table 7: Learners who read business newspapers**

<b>Read Business Newspapers</b>	<b>Frequency</b>	<b>Percent</b>
Very True	15	4.7
Very Untrue	34	10.6
Slightly Untrue	35	10.9
True	65	20.2
Untrue	81	25.2
Slightly True	92	28.6
<b>TOTAL</b>	<b>322</b>	<b>100.0</b>

#### 4.3.3 Learners who never search for business start-up opportunities

Learners were asked whether they never search for business start-up opportunities. The majority (32.1%) of the learners indicated that it is 'untrue' that they never search for business start-up opportunities. The 32.1% is equivalent to 102 learners. This was respectively followed by those who indicated that it is 'true' which is 21.4% (68 learners) and 17.3% (55 learners) indicated that it is 'slightly true'. Refer to Table 8 for more information.

**Table 8: Learners who never search for business start-up opportunities**

<b>Learners Who Never Search for Business Start-up Opportunities</b>	<b>Frequency</b>	<b>Percent</b>
Very True	16	5.0
Slightly Untrue	31	9.7
Very Untrue	46	14.5
Slightly True	55	17.3
True	68	21.4
Untrue	102	32.1
<b>TOTAL</b>	<b>318</b>	<b>100.0</b>

#### 4.3.4 Learners who save money to start a business

Learners were asked whether they save money to start a business. The majority (46.9%) of the learners indicated that it is 'untrue' that they save money to start a business. The 46.9% is equivalent to 151 learners. This was respectively followed by those who indicated that it is 'very untrue' which is 26.7% (86 learners) and 9.0% (29 learners) indicated that it is 'slightly true'. Refer to Table 9 for more information.

**Table 9:** Learners who save money to start a business

<b>Learners Who Save Money to Start a Business</b>	<b>Frequency</b>	<b>Percent</b>
Very True	15	4.7
Slightly Untrue	19	5.9
True	22	6.8
Slightly True	29	9.0
Very Untrue	86	26.7
Untrue	151	46.9
<b>TOTAL</b>	<b>322</b>	<b>100.0</b>

#### 4.3.5 Learners who have no plans to launch their own businesses

Learners were asked whether they have no plans to launch their own businesses. The majority (26.6%) of the learners indicated that it is 'untrue' that they have no plans to launch their own businesses. The 26.6% is equivalent to 86 learners. This was respectively followed by those who indicated that it is 'very untrue' which is 25.7% (83 learners) and 22% (29 learners) indicated that it is 'true'. Refer to Table 10 for more information.



**Table 10:** Learners who have no plans to launch their own businesses

<b>Learners Who have no plans to Launch their Own Businesses</b>	<b>Frequency</b>	<b>Percent</b>
Very True	21	6.5
Slightly Untrue	25	7.7
Slightly True	37	11.5
True	71	22.0
Very Untrue	83	25.7
Untrue	86	26.6
<b>TOTAL</b>	<b>323</b>	<b>100.0</b>

#### 4.3.6 Learners who spent time learning about starting a business

Learners were asked whether they do spend time learning about starting a company. The majority (36.3%) of the learners indicated that it is 'true' that they spend time learning about starting a business. The 36.3% is equivalent to 116 learners. This was respectively followed by those who indicated that it is 'slightly true' which is 19% (60 learners) and 15% (49 learners) indicated that it is 'very untrue'. Refer to Table 11 for more information.

**Table 11:** Learners who spent time learning about starting a business

<b>Learners Who Spent Time Learning about Starting a Business</b>	<b>Frequency</b>	<b>Percent</b>
Very True	17	5.3
Slightly Untrue	28	8.8
Very Untrue	49	15.3
True	50	15.6
Slightly True	60	18.8
Untrue	116	36.3
<b>TOTAL</b>	<b>320</b>	<b>100.0</b>

#### 4.3.7 New ideas and projects sometimes distract me from previous ones

Learners were asked whether they are distracted by new ideas and projects now and then from previous ones. The majority (28.0%) of the learners indicated 'not like me at all' that they are distracted by new ideas and projects now and then from previous ones. The 28.0% is equivalent to 88 learners. This was respectively followed by those who indicated 'not much like me' which is 24.2% (76 learners) and 19.7% (62 learners) indicated that it is 'most like me'. Refer to Table 12 for more information.

**Table 12:** New ideas and projects sometimes distract me from previous ones

<b>Project Sometimes Distract Me</b>	<b>Frequency</b>	<b>Percent</b>
Very Much Like Me	32	10.2
Somewhat Like Me	56	17.8
Most Like Me	62	19.7
Not Much Like Me	76	24.2
Not Like Me at All	88	28.0
<b>TOTAL</b>	<b>314</b>	<b>100.0</b>

#### 4.3.8 Learners who do not get discouraged by setbacks

Learners were asked whether they do not get discouraged by setbacks. The majority (25.0%) of the learners indicated 'not much like me' that they do not get discouraged by setbacks. The 25.0% is equivalent to 79 learners. This was respectively followed by those who indicated 'most like me' which is 22.8% (72 learners) and 21.8% (69 learners) indicated that it is 'not like me at all'. Refer to Table 13 for more information.

**Table 13:** Learners who do not get discouraged by setbacks

<b>Setback don't Discourage Me</b>	<b>Frequency</b>	<b>Percent</b>
Very Much Like Me	46	14.6
Somewhat Like Me	50	15.8
Not Like Me at All	69	21.8
Most Like Me	72	22.8
Not Much Like Me	79	25.0
<b>TOTAL</b>	<b>316</b>	<b>100.0</b>

#### 4.3.9 Learners who get obsessed with certain ideas or projects and later lose interest

Learners were asked whether they have been obsessed with a certain idea or project for a short time but later lost interest. The majority (30.7%) of the learners indicated 'not much like me' that they have been obsessed with a certain idea or project for a short time but later lost interest. The 30.7% is equivalent to 96 learners. This was respectively followed by those who indicated 'not like me at all' which is 26.2% (82 learners) and 20.1% (63 learners) indicated that it is 'somewhat like me'. Refer to Table 14 for more information.

**Table 14:** Obsessed with certain idea or project and later lose interest

<b>Obsessed with Certain Idea or Project</b>	<b>Frequency</b>	<b>Percent</b>
Very Much Like Me	12	3.8
Most Like Me	60	19.2
Somewhat Like Me	63	20.1
Not Like Me at All	82	26.2
Not Much Like Me	96	30.7
<b>TOTAL</b>	<b>313</b>	<b>100.0</b>

#### 4.3.10 Learners set goals but later choose to pursue something else

Learners were asked whether they often set goals but later choose to pursue something else. The majority (27.3%) of the learners indicated 'not like me at all' that they often set goals but later choose to pursue something else. The 27.3% is equivalent to 87 learners. This was respectively followed by those who indicated 'somewhat like me' which is 22.6% (72 learners) and 21.9% (70 learners) indicated that it is 'most like me'. Refer to Table 15 for more information.

**Table 15:** Learners set goals but later choose to pursue something else

<b>Set Goals but Pursued Something Else</b>	<b>Frequency</b>	<b>Percent</b>
Very Much Like Me	38	11.9
Not Much Like Me	52	16.3
Most Like Me	70	21.9
Somewhat Like Me	72	22.6
Not Like Me at All	87	27.3
<b>TOTAL</b>	<b>319</b>	<b>100.0</b>

#### 4.3.11 Difficulty in focusing on projects that take more time than a few months to complete

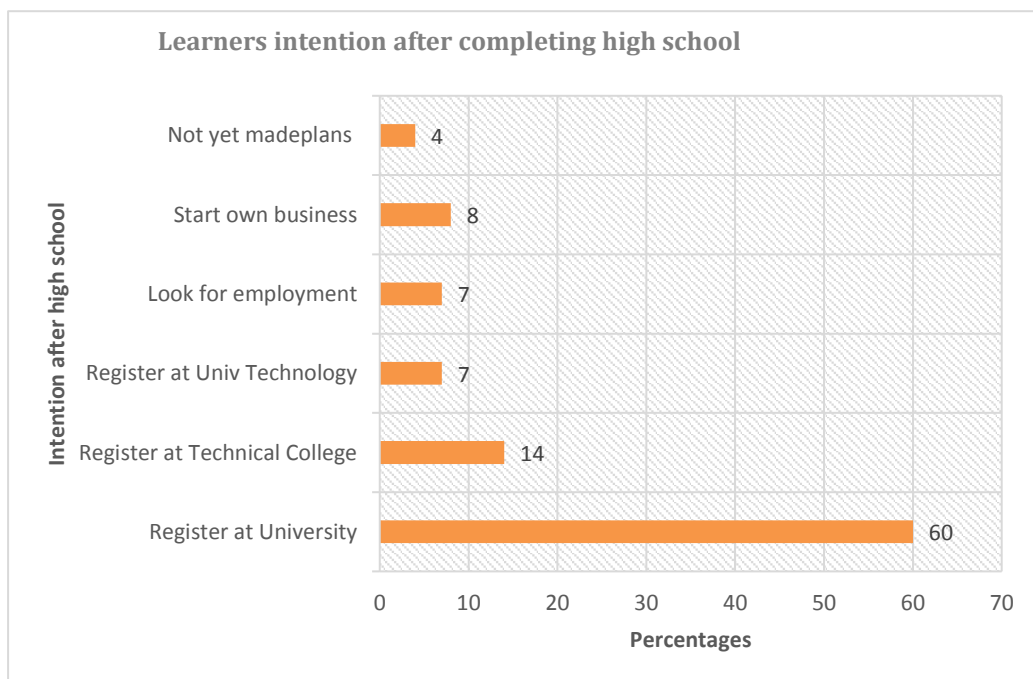
Learners were asked whether they have difficulty maintaining focus on projects that take more than a few months to complete. The majority (28.1%) of the learners indicated 'not like me at all' that they have difficulty maintaining focus on projects that take more than a few months to complete. The 28.1% is equivalent to 89 learners. This was respectively followed by those who indicated 'not much like me' which is 23.7% (75 learners) and 20.8% (66 learners) indicated that it is 'somewhat like me'. Refer to Table 16 for more information.

**Table 16:** Difficulty in focusing on projects that take more time than a few months to complete

Difficulty in focusing on Projects That Take More Time than a Few Months to Complete	Frequency	Percent
Very Much Like Me	27	8.5
Most Like Me	60	18.9
Somewhat Like Me	66	20.8
Not Much Like Me	75	23.7
Not Like Me at All	89	28.1
<b>TOTAL</b>	<b>317</b>	<b>100.0</b>

#### 4.3.12 What are your future plans after completing grade 12

Learners were asked about what they plan to do when they finish secondary school. The majority (60%) of the respondents indicated that they intend to register at university and only 8% had intentions of starting a business after they have completed grade 12.



**Figure 7:** Learners intentions after finishing grade 12

## 4.4 Inferential analysis

### 4.4.1 Logistic regression model

Inferential statistics was done using the logistic regression model in order to assess the learners who were likely to indicate they will start a business after high school. Learners were divided into two groups. One group doing commercial subjects and the other group general subjects. Commercial subjects included Accounting, Economics and Business Economics. While General subjects included Geography, History, Life Sciences and Tourism. The number of respondents (learners) was 304 and those who had some subjects missing were excluded in the logistic model. Four variables were assessed in the model i.e. age, commercial subjects, gender and start business. Our variable of interest was start a business. The model shows that age had an OR of 1.5 and  $p < .05$ . Table 17 represents the output of the logistic regression model. Males were 8.6,  $p < .05$ , commerce students were 6.1 and  $p < .04$ . Meaning, learners who took commercial subjects were 6.1 and  $p < .05$  likely to indicate they will start a business compared to non-commercial subject learners.

**Table 17:** Logistic regression model

Variables	Odd Ratio	P value	95% CI
Age	1.5	0.015	1.07 - 1.97
Gender	8.6	0	2.72 - 27.65
Commerce	6.1	0	2.38 - 15.89

The logistic regression shows that learners who took commercial subjects were likely to indicate that they will start a business after completing their final year at a secondary school level. This suggests that learners who took commercial subjects have an entrepreneurial mind. This could be the influence from the subjects they enrolled in at high school level.

#### **4.4.2 Relationship between scales**

The relationship between the two scales and the demographic variables in this study was investigated in three ways.

Where the demographic variable was continuous, such as in the case of age, a Pearson product moment correlation was used as both variables were continuous. For a demographic variable with only 2 groups, such as gender, as well as Question 5 and 6 of the research instrument, an independent samples t-test were used.

Results are reported below.

#### **4.4.3 Relationship between age and scales**

The Pearson product moment correlation between age and the 2 scales are reported below.

The relationship between age and Entrepreneurial intent ( $r=0.051$ ) is negligible and statistically non-significant ( $p>0.05$ ). It may thus be inferred that there is no relation between age and entrepreneurial intent. Age does show a statistically significant negative correlation with persistence though ( $r=-0.212$ ;  $p<0.05$ ). This would suggest that persistence decreases with age. In terms of Cohen's effect size though, it is a fairly small practical effect. It is nevertheless interesting to note the negative correlation.

**Table 18:** The Pearson correlation

		Correlations		
		Age	Persistence	Entrepreneurial intent
Age	Pearson Correlation	1	-.212**	.051
	Sig. (2-tailed)		.000	.363
	N	324	321	324
Persistence	Pearson Correlation	-.212**	1	.238**
	Sig. (2-tailed)	.000		.000
	N	321	322	322
Entrepreneurial intent	Pearson Correlation	.051	.238**	1
	Sig. (2-tailed)	.363	.000	
	N	324	322	325

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### 4.4.4 Relationship between gender and scales

This relationship was investigated by means of an independent samples t-test. Results are reported below.

**Table 19:** Relationship between gender and scales (Group Statistics)

Group Statistics					
	Gender	N	Mean	Std. Deviation	Std. Error Mean
Persistence	Female	177	3.6543	.59079	.04441
	Male	141	3.4747	.53728	.04525
Entrepreneurial intent	Female	178	3.4684	.57979	.04346
	Male	143	3.6453	.70429	.05890

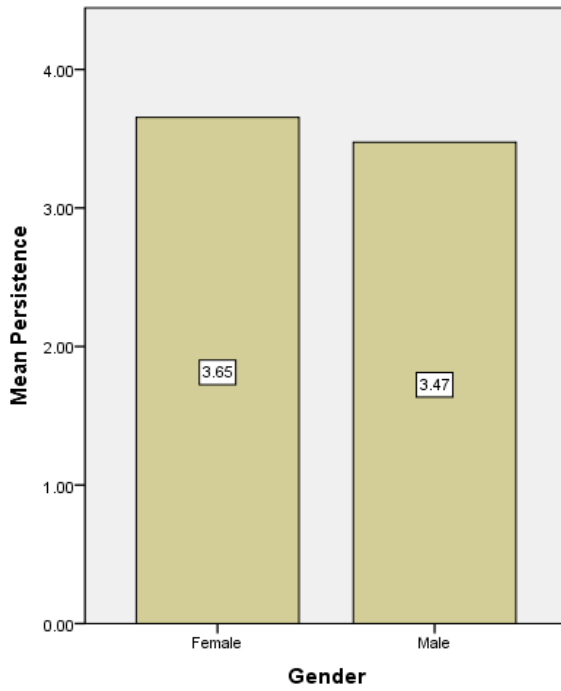


**Table 20:** Relationship between gender and scales (Independent Sample Test)

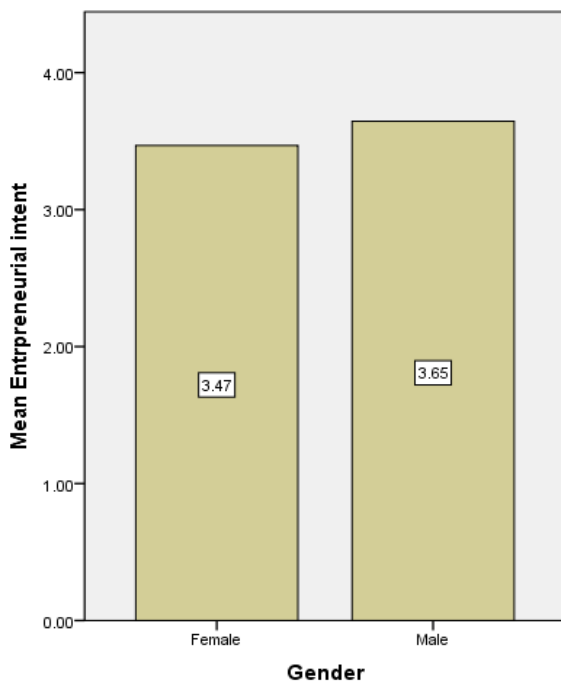
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Persistence	Equal variances assumed	.212	.646	2.802	316	.005
	Equal variances not assumed			2.832	310.464	.005
Entrepreneurial intent	Equal variances assumed	4.498	.035	-2.468	319	.014
	Equal variances not assumed			-2.417	273.639	.016

As can be seen from table 19 & 20 and figure 8 & 9, there was a significant difference between male and female respondents with regard to both scales ( $p < 0.05$ ). Looking at the mean scores on persistence, it would appear that females ( $M = 3.6543$ ,  $SD = .59079$ ) have a higher mean score than males ( $M = 3.4747$ ,  $SD = .53728$ ). It can therefore be inferred that females in this sample showed a higher level of persistence than males  $t(316) = 2.802$ ;  $p < 0.05$ ). In the case of Entrepreneurial intent, males ( $M = 3.6453$ ,  $SD = .70429$ ) had significantly higher scores than females ( $M = 3.4684$ ,  $SD = .57979$ ). It can therefore be inferred that males in this sample showed a higher level of entrepreneurial intent than females  $t(273.639) = 2.417$ ;  $p < 0.05$ ).

(In the case of persistence, the variances of the groups could be assumed to be equal ( $F = 0.212$ ;  $p > 0.05$ ) while it was not equal in the case of entrepreneurial intent ( $F = 4.498$ ;  $p < 0.05$ ). The appropriate t-tests were used in each case).



**Figure 8:** Relationship between gender and scales (persistence)



**Figure 9:** Relationship between gender and scales (entrepreneurial intent)

#### 4.4.5 Relationship between question 5 and scale scores

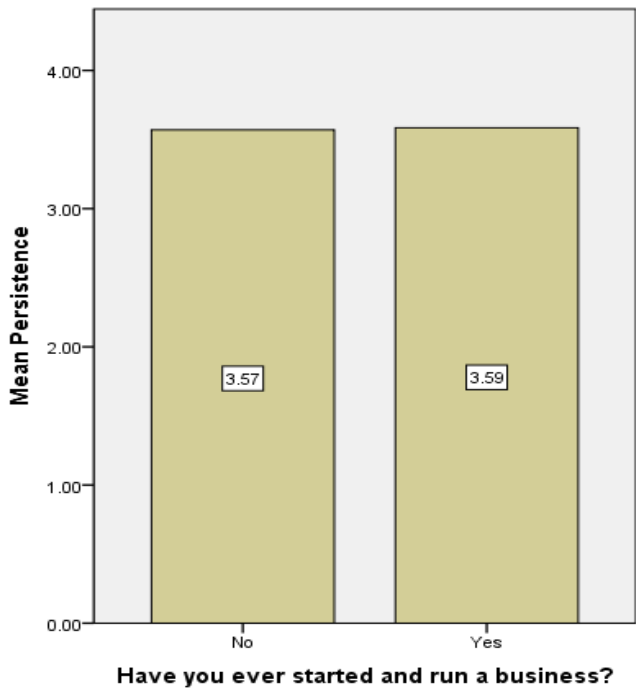
Question 5 asked of respondents to indicate whether they have ever run a business before. This relationship with the scale scores was investigated by means of an independent samples t-test. Results are reported below.

**Table 21:** Relationship between question 5 and scale scores (Group Statistics)

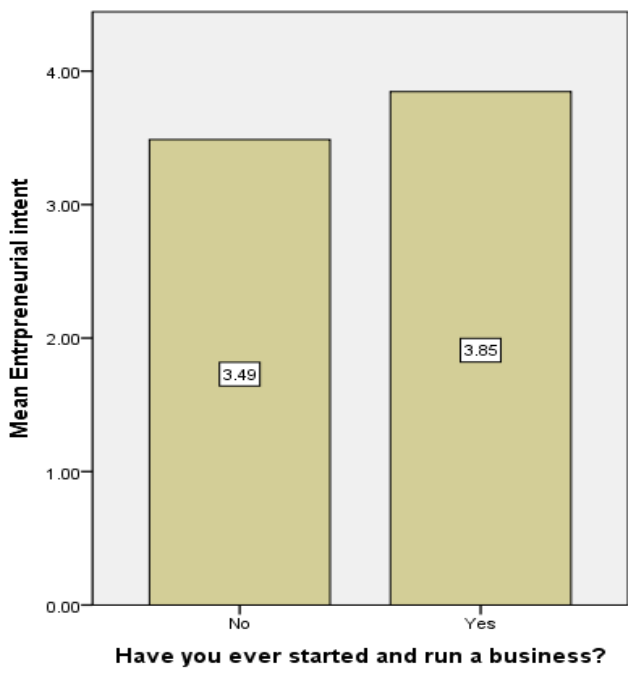
Group Statistics					
	Have you ever started and run a business?	N	Mean	Std. Deviation	Std. Error Mean
Persistence	No	259	3.5696	.57295	.03560
	Yes	56	3.5858	.58783	.07855
Entrepreneurial intent	No	261	3.4873	.63640	.03939
	Yes	57	3.8458	.60988	.08078

**Table 22:** Relationship between question 5 and scale scores (Independent Samples Test)

Independent Samples Test						
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Persistence	Equal variances assumed	.016	.900	-.191	313	.849
	Equal variances not assumed			-.188	79.203	.852
Entrepreneurial intent	Equal variances assumed	.960	.328	-3.881	316	.000
	Equal variances not assumed			-3.989	84.768	.000



**Figure 10:** Relationship between question 5 and scale scores (persistence)



**Figure 11:** Relationship between question 5 and scale scores (entrepreneurial intent)

As can be seen from table 21 & 22 and figure 10 & 11, there was no significant difference between respondents who have started a business before and those who have not regard to persistence  $t(79.203)=-0.191;p>0.05)$   $p<0.05)$ . The groups differed significantly with regard to entrepreneurial intent  $t(316)=-3.881;p<0.05)$ . Looking at the mean scores on this scales it would appear that those who have started and run a business before, have a higher mean score (M=3.8458, SD=.60988) than those who have not (M=3.4873, SD=.63640).

#### 4.4.6 Relationship between question 6 and scale scores

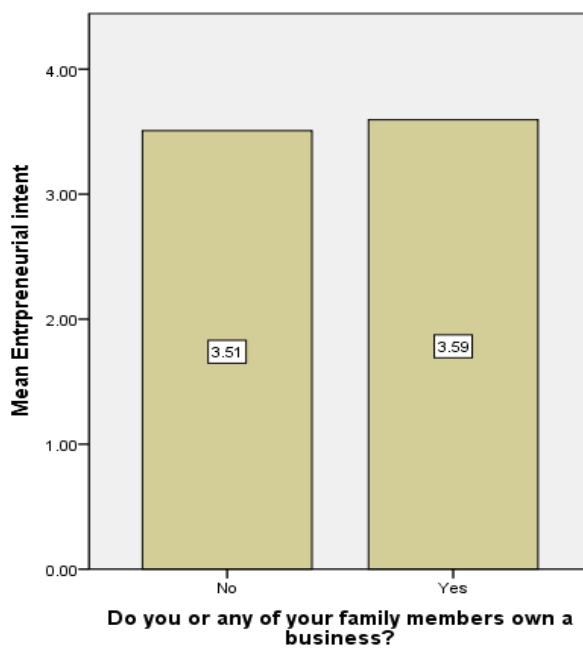
In question 6, respondents had to indicate whether any of their family member own a business. This relationship with the scale scores was investigated my means of an independent samples t-test. Results are reported below.

**Table 23:** Relationship between question 6 and scale scores (Group Statistics)

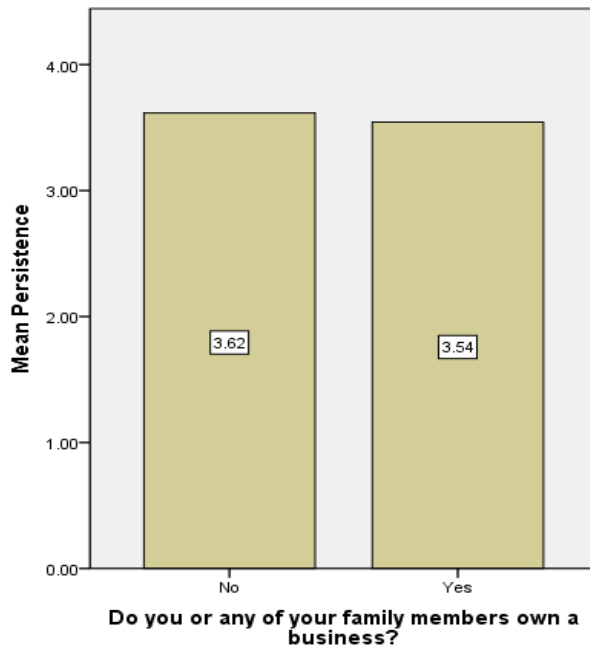
Group Statistics					
	Do you or any of your family members own a business?	N	Mean	Std. Deviation	Std. Error Mean
Persistence	No	146	3.6162	.59004	.04883
	Yes	166	3.5441	.54231	.04209
Entrepreneurial intent	No	147	3.5077	.67983	.05607
	Yes	168	3.5945	.61578	.04751

**Table 24:** Relationship between question 6 and scale scores (Independent Sample Test)

		Independent Samples Test				
		Levene's Test for Equality of Variances		t-test for Equality of Means		
		F	Sig.	t	df	Sig. (2-tailed)
Persistence	Equal variances assumed	2.179	.141	1.123	310	.262
	Equal variances not assumed			1.117	296.615	.265
Entrepreneurial intent	Equal variances assumed	1.550	.214	-1.189	313	.235
	Equal variances not assumed			-1.182	297.034	.238



**Figure 12:** Relationship between question 6 and scale scores (entrepreneurial intent)



**Figure 13:** Relationship between question 6 and scale scores (persistence)

As can be seen from table 23 & 24 and figure 12 & 13, there was no significant difference between respondents whose families have started a business and those who have not, with regard to both persistence  $t(310)=1.123;p>0.05$ ) and entrepreneurial intent  $t(313)=-1.189;p>0.05$ ).

#### 4.4.7 One-sample statistics

Two of the research hypotheses were that both entrepreneurial intent and persistence are significantly low in this particular sample. In order to assess this, the mean score of the sample was compared against the scale midpoint (3.5 in the case of Entrepreneurial intent and 3 in the case of Persistence). A one directional one sample t-test was conducted to compare the mean scores of the group against these values, as the hypothesis was that the mean scores will be lower than the scale midpoint. Results are reported below.

**Table 25:** One-Sample Statistics (persistence – hypothesis 2)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Persistence	322	3.5768	.57115	.03183

**Table 26:** One-Sample Test (persistence – hypothesis 2)

One-Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Persistence	18.122	321	.000	.57682	.5142	.6394

As can be seen from table 25 & 26, the mean score of the group on persistence was 3.577, which is well above the midpoint of 3. In fact, the one sample t-test would suggest that the mean score is significantly higher than the midpoint of the scale ( $p < 0.05$ ). It would therefore make no sense to perform a one-directional test to investigate if the score is lower than the midpoint. This hypothesis is thus not supported and it cannot be said that the persistence of the group is significantly low.

In the case of Entrepreneurial intent, the mean score of the group was 3.55, which is almost equal to the midpoint of the scale, which is 3.5

It is therefore to be expected that the test shows no significant difference between the mean score of the group and the scale midpoint (3.5) ( $p > 0.05$ ). The second hypothesis is thus also not supported and it cannot be said that the entrepreneurial intent of the group is significantly low.

**Table 27:** One-Sample Statistics (entrepreneurial intent – hypothesis 1)

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Entrepreneurial intent	325	3.5528	.64503	.03578



**Table 28:** One-Sample Test (entrepreneurial intent – hypothesis 1)

One-Sample Test						
	Test Value = 3.5					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Entrepreneurial intent	1.475	324	.141	.05279	-.0176	.1232

#### 4.4.8 Correlation between scales

One of the main aims of the study was to investigate the relationship between entrepreneurial intent and persistence. In order to calculate a total score for these constructs, an average score was calculated for each scale. However, negatively formulated items had to be reversed before doing so, in order for a high and a low score to have the same meaning throughout. The mean score for the persistence scales could this vary from 1 to 5 with a higher score indicating a higher level of persistence and a low score the inverse. Similarly, the scale measuring entrepreneurial intent could range from 1 to 6 with a high score indicating a high level of entrepreneurial intent.

The Pearson product moment correlation was subsequently calculated between these two variables and is reported below. Correlation values can range from -1 to +1. Apart from statistical significance, Cohen (1988) suggests that one also needs to look at the effect size of correlation, since this value is not influenced by sample size. Cohen suggested that a correlation value of 0.5 is large, 0.3 is moderate, and 0.1 is small (Cohen J. , 1988).

The correlation value between the scales is 0.238, which is a positive correlation and statistically significant ( $p < 0.05$ ), yet it is practically small. One may thus infer that there is a tendency for these two variables to vary together, but it is practically small.

**Table 29:** Correlation between scales

		<b>Correlation between scales</b>	
		Persistence	Entrepreneurial intent
Persistence	Pearson Correlation	1	.238**
	Sig. (2-tailed)		.000
	N	322	322
Entrepreneurial intent	Pearson Correlation	.238**	1
	Sig. (2-tailed)	.000	
	N	322	325

\*\* . Correlation is significant at the 0.01 level (2-tailed).

#### **4.5 Summary of the results**

Three hypotheses were proposed to answer the research problem that relates to entrepreneurial intention and perseverance of secondary school student in Mpumalanga province. These hypotheses that are projected in this research paper were made clear through the tables and figures presented in this chapter. The most important findings, implications of this research, confines and suggestion are discussed in detailed in chapter 5 and 6.

## **CHAPTER 5. DISCUSSION OF THE RESULTS**

### **5.1 Introduction**

In this section, the results presented in chapter 4 are discussed in greater detail and the findings of this study are described. This chapter is apportioned into the following parts. The findings which apply to the construct of entrepreneurial intent, followed by a discussion of the results which apply to perseverance are discussed in the second and third section of this chapter. The fourth section of this chapter looks at the relationship between entrepreneurship intent and perseverance. The last part concludes this chapter.

The main problem statement which the paper aimed to answer was, to determine if there was any relationship between entrepreneurial intent and level of perseverance tenacity among senior secondary school learners in Ka-Nyamazane Township. Three hypotheses were set up to help answer the main problem. Three hypotheses were set up to help answer the main problem and they are discussed in the following paragraphs.

### **5.2 Discussion pertaining to hypothesis 1**

Hypothesis 1 (“H1”) reads as follows: Entrepreneurial intention among senior secondary school students is significantly low.

The objective of H1 was to evaluate the level of entrepreneurial intent among senior secondary school learners in Ka-Nyamazane Township. There were six explicit questions in the research instrument which were designed to address the entrepreneurial intent of learners. These questions included “intent to set up a business in the future, read business newspapers, search for business start-up opportunities, save money to start a business, no plans to launch my own business and spend time learning about starting up a business.”

Out of 321 respondents, 84% (271) indicated that they intent to setup business in the future. This can be taken as learners that intend to engage in

entrepreneurial activities. Learners were also segregated according to gender to assess whether there were any differences between male and female learners in terms of intention to setup business in future. Amongst Males, 85% had intention of starting up business compared to 83% of female learners. This variance was not statistically significant,  $p=0.701$ .

Learners were asked whether they have ever run a business before. This correlation with the scale scores was considered by means of an independent samples t-test. The groups differed extensively with regard to entrepreneurial intent ( $t(316)=-3.881; p<0.05$ ). The mean scores on this scales suggests that those who have started and run a business before, tend to have a higher mean score ( $M=3.8458$ ,  $SD=.60988$ ) than those who have not ( $M=3.4873$ ,  $SD=.63640$ ). It is therefore deduced that respondents who have started and run a business before, have a significantly higher entrepreneurial intent than those who have not which is something which was expected.

Learners were asked whether they save money to start a business. Table 9 shows that, 47% indicated 'untrue' compared to 7% indicating 'true' that they save money to start a business. It is understandable that secondary school learners might not have money to save since they are still at school and depend on their parents or guardians for financial support and other needs.

Learners were asked whether they spend time learning about starting up a business which is a clear indication of entrepreneurial intention. Table 11 shows that, 36% do not spend time learning about starting a business compare to 6% who do spend time learning about starting a business. This clearly shows low level amongst school learners in terms of spending time learning about starting a business. Learners were asked whether they read business newspapers and 47% indicated that they do not read business newspapers compares to 53% who indicated that they do. Refer to table 7 for details. Business newspapers have many articles which are business related such as stock exchange news, mergers and acquisitions and other business and non-business related news. Based on the two results pertaining to learning about starting a business and reading business newspapers one could conclude that when learners read business newspapers, they do not necessarily read or learn about starting a

business but they read mainly the other news which relates to business in general and other non-business news. Holcomb, et al., (2009) suggested that entrepreneurial wisdom are the procedures in which individuals acquire expertise from technical competencies and from the observations of other entrepreneurs either from society or family members who are entrepreneurs and linking those elements to established constructs. Given that 36% of the respondents indicated that they do not learn about starting a business and 47% of the respondents indicate that they do not read business news is a cause for concern. It is quite critical to acquire the necessary competencies in order to carry out a successful entrepreneurial career.

Learners were also asked whether they never search for business start-up opportunities. The majority (56%) of the respondents indicated that they somewhat do search for start-up opportunities and 44% of respondents indicated that they do not search for start-up opportunities. Refer to table 8 for more details. When studying this result one could conclude that learners are not necessarily informed about venturing into the field of entrepreneurship. There seem to be a desire among 56% of the respondents to run their own businesses but educating learners about entrepreneurship could unlock the value proposition or intention to start a business.

The last question pertaining to this hypothesis asked learners whether they have no plans to launch their own business. The results from this question have been summarised in table 10. Only 40% of learners indicated that they have no plans to launch their own businesses when compared to the 60% of learners who indicated that this question is untrue about them. This suggests that 60% of the respondents do have plans to launch their own businesses.

A question which was asked but was not necessarily pertaining to any one specific hypothesis was what do the learners intend to do when they finish high school. The majority (60%) of the respondents indicated that they intend to register at university and only 8% had intention of starting a business when finishing high school. Refer to figure 6 for more information.

One of the test analysed from the data was to look at the relationship between age and scale. The relationship between age and entrepreneurial intent was statistically immaterial ( $p > 0.05$ ). It may thus be inferred that there is no relation between age and entrepreneurial intent.

Relationship between gender and scales was investigated by means of an independent samples t-test. The entrepreneurial intent for males ( $M = 3.6453$ ,  $SD = .70429$ ) devised considerably higher scores than that of females ( $M = 3.4684$ ,  $SD = .57979$ ). This suggested that males in the sample analysed displayed a higher level of entrepreneurial intent than females ( $t(273.639) = 2.417$ ;  $p < 0.05$ ).

The first hypothesis based on the literature review sought to establish whether entrepreneurial intention among senior secondary school students is low. Based on the results obtained from the six explicit questions which were designed to answer H1, the findings suggest that the entrepreneurial intention among senior secondary school students is not low as was anticipated. The researcher only managed to survey a total population of 325 learners and this population size is not big enough to conclude on the outcome of these results. Based on the results, the data gathered in this research experiment failed to prove the first hypothesis. More conclusions are outlined in chapter 6 which share more light on the limitations and recommendations.

### **5.3 Discussion pertaining to hypothesis 2**

Hypothesis 2 (“H2”) reads as follows: Perseverance among senior secondary school students is significantly low.

The objective of H2 was to evaluate the level of perseverance among senior secondary school learners in Ka-Nyamazane Township. There were five explicit questions in the research instrument which were designed to address the level of perseverance of learners. These questions included “new ideas and projects sometimes distract me from previous ones, setbacks don’t discourage me, I have been obsessed with a certain idea or project for a short time but later lost interest, I often set goals but later choose to pursue a different one, I have

difficulty maintaining my focus on projects that take more than a few months to complete.”

Learners were asked whether any setbacks discourage them. Learners had to range their answers from ‘most like me’ to ‘not much like me’. A total of 15% indicated it was ‘very much like them’ that setbacks discourage them compared to 25% who indicated ‘not much like them’. Refer to table 13 for more details. This shows that learners were likely to be discouraged by setback. Starting a business has its own challenges and setback and one might decide to stop pursuing a particular goal because of setbacks encountered. Zahra (2005) argues that risk-taking is core to the field of entrepreneurship and entrepreneurial intent plays a vital role given that without perseverance, one would not venture into entrepreneurship. It is therefore very important for one not to be discouraged by setbacks. Setbacks are part of the learning curve. The only challenge is that sometimes it is very difficult to recover from some setbacks like the unforgiving field of entrepreneurship especially after one has been declared insolvent. It could take years to recover from such. In total, over half (53%) of respondents indicated that they are discouraged by setbacks. Only 47% of respondents indicated that they are not discouraged by setbacks which suggest that this 47% of respondents persist until they get what they want.

Learners were asked whether they set goal but later pursue something else. The results show that 44% of respondents indicated that this is not like them and 56% of respondents indicated that it was like them. Refer to table 15 for more details. Ishiguro (2015) submitted that one of the major influential factors to learners in developing an entrepreneurial mind-set is the ability in them to generate ideas and be able to put those ideas into action. Such learners according to Ishiguro (2015) usually develop the enthusiasm or self-assurance to be entrepreneurs. The majority of respondents indicated that once they set goals they see them to the end. That is driven by the level of enthusiasm or self-assurance of an individual’s ambition. It is one of the key elements of perseverance.

According to Shambare (2013), South Africa has a high rate of unemployment and a career option in entrepreneurship for graduates reflects low levels of interest in becoming entrepreneurs. Learners were asked if they get obsessed with certain idea or project and later lose interest. The result shows, 43% of respondents indicated that this is like them and 57% of respondents indicated that it was not like them. Refer to table 14 for more details. Shambare (2013) argues that some of the difficulties in engaging in entrepreneurship by the youth are the lack of mentorship, entrepreneurship education and social influence. It is remarkable that the majority of the respondents indicated that once they get obsessed with certain idea or project, they do not lose interest at a later stage.

Learners were also asked whether they are distracted by new ideas and projects now and then from previous ones. The minority (48%) of the respondents indicated that this is 'like them'. They are somewhat distracted by new ideas and projects and tend to neglect previous ideas or projects that they may have had. The majority (52%) of respondents indicated that it is 'not like them'. The 52% of the respondents basically indicates that they do not get distracted from set goals. Refer to Table 12 for more information. Duckworth et al., (2007) argues that grit is a shared precursor to be successful amongst numerous spheres and this was based on their study of top performing professionals. Based on their observations, the researchers described 'grit' as perseverance and passion for long-term goals. It is therefore, important that individuals should not get distracted when new projects or ideas come their way. Old set goals should still be pursued in order to succeed in whatever they have set their goals.

Learners were asked whether they have ever run a business before. This correlation with the scale scores was considered by means of an independent samples t-test. There was no significant difference between respondents who have started a business before and those who have not with regard to persistence  $t(79.203)=-0.191; p>0.05$   $p<0.05$ ).

Learners were asked whether any of their family member own a business. This relationship with the scale scores was investigated by means of an independent samples t-test. There was no significant difference between



respondents whose families have started a business and those who have not, with regard to both persistence ( $t(310)=1.123;p>0.05$ ) and entrepreneurial intent ( $t(313)=-1.189;p>0.05$ ). It can therefore be inferred that respondents whose families own a business did not differ on any of the scales from those for whom this was not the case.

Duckworth, et al., (2007) describe perseverance as the continual capability of conquering over hindrances within one's life trail and such is time and again linked with the notion of being capable to engage in a particular task and succeed in it. The last question which was testing perseverance amongst learners and they were asked whether they have any difficulties in maintaining focus on project that take more than few months to complete. The answers to this statement range from 'somewhat like them' to 'not somewhat like them'. In this paper, 21% indicated such a statement 'was like them' and 8% indicated it was 'very much like them'. Some of the respondents disagreed with such a statement and indicated that it was 'not like them at all' (28%) and 24% indicated that it was 'not much like them'. Refer to table 16 for more information. It is further argued by Duckworth, et al., (2009) that grit is derived from a number of variables such as tenacity, self-discipline, and more strikingly from being diligent. The results show 52% of the respondents indicated that they do not lose focus on ideas or projects which take long and this suggests that they have a certain level of tenacity and self-discipline which is something required when executing certain tasks or engaging in certain aspirations.

One of the test analysed from the data was to look at the relationship between age and scale. The findings based on the data analysed suggests that age does show a statistically significant negative correlation with perseverance ( $r=-0.212$ ;  $p<0.05$ ). This finding suggests that perseverance diminishes with age.

Relationship between gender and scales was investigated by means of an independent samples t-test. The results suggested that there is a substantial variation between male and female respondents with regard to perseverance ( $p<0.05$ ). The mean scores on persistence, suggests that females ( $M=3.6543$ ,  $SD=.59079$ ) have a higher mean score than males ( $M= 3.4747$ ,  $SD=.53728$ ). It

can therefore be inferred that females in this sample showed a higher level of persistence than males  $t(316) = 2.802; p < 0.05$ ).

Entrepreneurs are faced by many challenges and their capacity to adapt to these ever-changing challenges is vital to their survival (Markman & Robert, 2003). The second hypothesis based on the literature review sought to establish whether perseverance among senior secondary school students is significantly low. Based on the results obtained from the five explicit questions which were designed to answer H2, the findings suggest that perseverance among senior secondary school students is not low as was predictable. However, perseverance without the necessary skills to venture into the field of entrepreneurship would not assist those who have ambitions to be entrepreneurs. The field of entrepreneurship is very challenging and requires individuals to be skilled in order to be successful and reach their potential when they venture into the field of entrepreneurship.

#### **5.4 Discussion pertaining to hypothesis 3**

Hypothesis 3 (“H3”) reads as follows: There is a positive correlation between entrepreneurial intent and perseverance.

The hypothetical supposition of this paper was that, when one perseveres, such influences one’s choices in what they intend to do (Eisenberger & Leonard, 1980). Harris, et al., (2009) suggested that this is one of the elements which form part of the encouraging dynamics that are needed in the field of entrepreneurship because they act as the central impulse towards a particular intent. The third hypothesis aimed to establish whether there is a relationship between entrepreneurial intent and perseverance among senior secondary school learners. In answering this hypothesis learners were asked whether they plan to run any business in the near future. Only 84% out of the 321 who answered this question indicated that they plan to run a business in the near future. In terms of gender, 26% of male compared to 10% of female respondents plan to run a business. The difference between the male and

female was statistically significant, p-value was  $p < 0.000$ . One can conclude that male learners seem to have a greater intention of starting up a business in the near future. The male respondents show intention of becoming entrepreneurs compared to female respondents.

Learners were also asked whether any setbacks discourage them. Learners had to range their answers from 'most like me' to 'not much like me'. A total of 15% indicated it was 'very much like them' that setbacks discourage them compared to 25% who indicated 'not much like them'. Refer to table 13 for more details. This shows that learners were likely to be discouraged by setback. Starting a business has its own challenges and setback and one might decide to stop pursuing a particular goal because of setbacks encountered.

The last question which was testing perseverance amongst learners asked learners whether they have any difficulties in maintaining focus on project that take more than a few months to complete. The answers to this statement range from 'somewhat like them' to 'not somewhat like them'. In this paper, 21% of respondents indicated that such a statement 'was like them' and 8% indicated it was 'very much like them'. There were those who disagree with such a statement saying it was 'not like them at all' 28% and 24% indicating 'not much like them'. Refer to table 16 for more information.

The theory of planned behaviour suggests that individuals are likely to convert their intention into action, as long as there is an acceptable level of definite influence over their activities (Ali, 2016). Accordingly, people engage in an interest (such as venturing into the field of entrepreneurship) as a thoughtful exploit which is manifested on their intent to this behaviour (Ajzen, 1991).

Based only on these outcomes, it is difficult to find a positive or a negative correlation between entrepreneurial intent and perseverance. The biggest limitation is the size of the population which has been sampled. Therefore, the researcher could not conclude on the third hypothesis. However, Markman & Robert (2003) concluded that in the person-entrepreneurship fit model it is suggested that individuals with low intensity of perseverance, are prone to disappoint in business.

## **5.5 Conclusion**

The learners surveyed were between the ages of 16 and 23. The mean age of learners was 18 years old. The majority of learners were not exposed to the field of entrepreneurship nor were their families engaged in this field.

There are two major findings in this study. Learners have a high level of entrepreneurial intent and learners have the tenacity to persevere. According to Olufunso, (2010), entrepreneurial intention among graduates is low in South Africa. This is a concern given the youth unemployment rates in South Africa (StatsSA, 2010; Olufunso, 2010). The Total Entrepreneurial Activity rate of South Africa was at 10.6% in 2013 and 7.0% in 2014 which is a decline of approximately 34% (Herrington, Kew & Kew, 2015).

Based on the level of Total Entrepreneurial Activity rate of South Africa in comparison to the two major findings of this study, it is evident that entrepreneurial education can play a major role in nurturing learners to be successful entrepreneurs.

## **CHAPTER 6. CONCLUSIONS & RECOMMENDATIONS**

### **6.1 Introduction**

This chapter is apportioned into four parts. The first section puts forward the conclusion of the study in reference to the philosophy. The second section summarises the implications and recommendations established from the research results. The third section presents some of the limitations of this research paper. The final section puts forward suggestions for further research.

### **6.2 Conclusions of the study**

The findings of this study are thought-provoking, enlightening and promising, and embrace numerous implications and raise awareness for policy-makers and stakeholders all together. Based on the findings of this study, one can conclude that the wide-ranging entrepreneurial intention among grade 12 learners in secondary schools within the Ka-Nyamazane Township is high and encouraging. The second finding suggests that the level of perseverance amongst grade 12 learners is also high. These are positive findings of this study in the sense that there is a drive or a desire among learners to venture into the field of entrepreneurship.

According to this research, the South African education authorities and all other stakeholders should step up hard work to incorporate entrepreneurship as a formal part of the syllabus at all levels of the educational system including at basic education level, and not only in tertiary institution syllabuses. For the high school learners, the aim ought to centre on the growth of enterprise and management capacity all the way through entrepreneurship guidance and schooling, tutoring and coaching. This is significantly essential particularly because a high percentage of grade 12 learners are to be expected to ultimately participate in entrepreneurial interest at some point in their lives if adequately skilled in entrepreneurship.

However, further studies can be done by considering variables like family income of respondents on entrepreneurial intention; how educators can motivate entrepreneurial intention to the learners.

### **6.3 Recommendations**

There is a great necessity to integrate entrepreneurship education into the educational curriculum of secondary schools. Learners need to be more educated on the theory of entrepreneurship and practices given that such would nurture a better entrepreneurial mind-set. Girls must be empowered in order to align them to the same level as their male counterparts. There is the need to foster mentorship, entrepreneurship education and social influence for the learners with the aim of closing the gap between theory and practice. The different stakeholders such as government, the Department of Basic Education, curriculum developers, private sector and others can assist in dealing with this challenge.

It is also crucial to craft an enterprising ecosystem in the economy together with the promotion of entrepreneurial attitudes among the youth. Government has programmes which encourage youth entrepreneurship. However, it would be more beneficial to learners if they (learners) have entrepreneurship education before they complete secondary school as in most cases they become unemployed once they have completed school and are unable to further their education at tertiary level.

### **6.4 Research limitations**

There are limitations which have been identified during the process of researching this study. Those shortcomings simply catered for proposals for potential future researches and therefore do not necessarily divert the importance of the outcomes of this research paper.

#### **6.4.1 Sampling location**

The sampling location of this study is only in Ka-Nyamazane. As a result, the research findings are unable to denote the sentiments of all grade 12 learners as there are many secondary schools situated in South Africa. More scholars should spread out the sampling location to include secondary schools throughout South Africa in order to obtain study conclusions with high accuracy.

#### **6.4.2 Target respondents**

Only grade 12 learners in five secondary schools in Ka-Nyamazane are valid candidates in this study and the sample size was limited only to those that were writing their final grade 12 exams at the end of the 2016 year. It is difficult to detect the reliability of a study if the sample size is too small as it does not necessarily represent the opinions of all secondary school learners including those that are still in lower classes than grade 12 learners.

Non-grade 12 learners should be included in the sample of learners being surveyed in order to get a better understanding of entrepreneurial intention among secondary school learners. Furthermore, this survey merely draw attention to the grade 12 learners, diverse age population of individual may perhaps have different opinions concerning entrepreneurship. Accordingly, views from learners of different age groups should be taken into account.

#### **6.4.3 Time limitations**

Entrepreneurial tenacity is the greatest predictor of entrepreneurial exploit. This study only focused on entrepreneurial intention but not the actual exploits as it seems to be unfeasible due to time constrains given that it requires a longer duration of time to examine real action. The researcher had limited time and could not conduct a longitudinal study.

## **6.5 Suggestions for further research**

The participants of this survey were grade 12 learners attending secondary schools in Ka-Nyamazane. To better understand the factors which impact an entrepreneurial career choice of learners, it is essential to perform a comparable survey in a broader area comprising both urban and rural areas.



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# APPENDIX A: Research Instrument

## Actual Research Instrument

<b>Part 1: Personal Information</b>		
<b>NO</b>	<b>Questions and Instructions</b>	<b>Options</b>
001	What is your gender?	1=Male  2=Female
002	What is your age?	1 =15  2 =16  3 =17  4 =18  5 =19  6 =20  7 =21  8 =22  9 =23  10 =24  11 =25  12 =26
003	Which two languages do you most often speak at home? (Circle at least 2)	1 =Afrikaans  2 =English

		<p>3 =IsiNdebele</p> <p>4 =IsiXhosa</p> <p>5 =Sepedi</p> <p>6 =Sesotho</p> <p>7 =Setswana</p> <p>8 =SiSwati</p> <p>9 =Tshivenda</p> <p>10 =Xitsonga</p> <p>11 =Other</p>
004	<p>What subjects are you currently taking at school? <b>(Circle all subjects enrolled by the learner)</b></p>	<p>1 =Mathematics</p> <p>2 =Mathematical Literacy</p> <p>3 =Physical Science</p> <p>4 =Biology</p> <p>5 =Life Science</p> <p>6 =Life Orientation</p> <p>7 =Business Studies</p> <p>8 =Business Economics</p> <p>9 =Accounting</p> <p>10 =Economics</p> <p>11 =History</p> <p>12 =Geography</p> <p>13 =Mercantile Law</p> <p>14 =Intro to Criminology</p> <p>15 =Travel and Tourism</p> <p>16 =1st Language(Specify)</p> <p>17 =2nd Language(Specify)</p>

		18 =Other Language(Specify)
005	Have you ever started and run a business?	1 =Yes 2 =No
006	Do any of your family members own a business?	1 =Yes 2 =No
<b>Part 2: Measuring Grit</b>		
	Below are a number of statements that may or may not apply to you. For the most accurate score, when responding, think of how you compare to most people - - not just the people you know well, but most people in the world. There are no right or wrong answers, so just answer honestly!	
007	New ideas and projects sometimes distract me from previous ones. <b>(Circle one option that describe you)</b>	1 =Not like me at all 2 =Not much like me 3 =Somewhat like me 4 =Most like me 5 =Very much like me

008	Setbacks don't discourage me	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
009	I have been obsessed with a certain idea or project for a short time but later lost interest	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
010	I am a hard worker	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
011	I often set a goal but later choose to pursue a different one	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
012	I have difficulty maintaining my focus on projects that	<p>1 =Not like me at all</p>

	take more than a few months to complete	<p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
013	I finish whatever I begin	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
014	I am diligent	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
015	Setbacks don't discourage me	<p>1 =Not like me at all</p> <p>2 =Not much like me</p> <p>3 =Somewhat like me</p> <p>4 =Most like me</p> <p>5 =Very much like me</p>
<b>Part 3: Measuring Entrepreneurial Intent</b>		
	Thinking of yourself, how true or untrue are the following	

	statements to you? <b>(Circle one appropriate option that describe you)</b>	
016	I intent to set up a company in the future	1 =Very untrue 2 =Untrue 3 =Slightly untrue 4 =Slightly true 5 =True 6 =Very true
017	I plan my future carefully	1 =Very untrue 2 =Untrue 3 =Slightly untrue 4 =Slightly true 5 =True 6 =Very true
018	I read business newspapers	1 =Very untrue 2 =Untrue 3 =Slightly untrue 4 =Slightly true 5 =True 6 =Very true
019	I never search for business start-up opportunities	1 =Very untrue

		<p>2 =Untrue</p> <p>3 =Slightly untrue</p> <p>4 =Slightly true</p> <p>5 =True</p> <p>6 =Very true</p>
020	I read financial planning books	<p>1 =Very untrue</p> <p>2 =Untrue</p> <p>3 =Slightly untrue</p> <p>4 =Slightly true</p> <p>5 =True</p> <p>6 =Very true</p>
021	I am saving money to start a business	<p>1 =Very untrue</p> <p>2 =Untrue</p> <p>3 =Slightly untrue</p> <p>4 =Slightly true</p> <p>5 =True</p> <p>6 =Very true</p>
022	I do not read books on how to set up a firm	<p>1 =Very untrue</p> <p>2 =Untrue</p> <p>3 =Slightly untrue</p> <p>4 =Slightly true</p> <p>5 =True</p>

		6 =Very true
023	I plan my finances carefully	1 =Very untrue 2 =Untrue 3 =Slightly untrue 4 =Slightly true 5 =True 6 =Very true
024	I have no plans to launch my own business	1 =Very untrue 2 =Untrue 3 =Slightly untrue 4 =Slightly true 5 =True 6 =Very true
025	I spend time learning about starting a firm	1 =Very untrue 2 =Untrue 3 =Slightly untrue 4 =Slightly true 5 =True 6 =Very true

**Part 4: Future plans after high school**



026	What do you plan to do when you finish your high school?	<p>1 =Register at University</p> <p>2 =Register at University of Technology</p> <p>3 =Register at College such as Technical Vocational College</p> <p>4 =Start my own business</p> <p>5 =Look for employment</p> <p>6 =Not yet made plans so far <b>(End of Interview)</b></p> <p><b>If answered 1 to 3 proceed to Q 027</b></p> <p><b>If answered 4 SKIP to Q 028</b></p> <p><b>If answered 5 SKIP to Q 029</b></p>
027	What course do you plan to register on when you finish high school? <b>(Write full name of course) End of Interview</b>	<p>.....</p> <p>.....</p>
028	If planning to Start your own business, what kind of business do you plan to start? <b>(Write full name of business planning to do by the learner) End of Interview</b>	<p>.....</p> <p>.....</p>
029	If planning to seek employment, what kind of employment you will look for? <b>(Write full name of</b>	<p>.....</p>



# APPENDIX B: Consistency Matrix

Consistency

Matrix

<b>CONSISTENCY MATRIX</b>					
<b>Determine if there is a relationship between entrepreneurial intent and an individual's level of perseverance.</b>					
<b>Sub-problem</b>	<b>Literature Review</b>	<b>Hypotheses or Propositions or Research questions</b>	<b>Source of data</b>	<b>Type of data</b>	<b>Analysis</b>
Sub-problem 1: Evaluate the level of entrepreneurial intent among final year senior secondary school students in 6 secondary schools located in KaiNyamazane.	<input type="checkbox"/> (Ajzen, 1991) <input type="checkbox"/> (Krueger & Brazeal, 1994) <input type="checkbox"/> (Olufunso, 2010) <input type="checkbox"/> (Shapero & Sokol, 1982)	Hypothesis 1: Entrepreneurial intentions among senior secondary school students are generally low.	Individual Entrepreneurial Intent Scale (IEIS)	Qualitative data	Data production. Data display. Conclusion. Drawing Verifications
Sub-problem 2: Evaluate the level of perseverance among final-year senior secondary school students in 6 secondary schools located in KaiNyamazane	<input type="checkbox"/> (Maddi, Matthews, Kelly, Villarreal, & White, 2012) <input type="checkbox"/> (Duckworth, Peterson, Matthews, & Kelly, 2007) <input type="checkbox"/> (Olufunso, 2010)	Hypothesis 2: Perseverance among senior secondary school students is generally low.	Short Grit Scale (Grit-S)	Qualitative data	Data production. Data display. Conclusion. Drawing Verifications
Sub-problem 3: Establish whether there is a relationship between entrepreneurial intent and perseverance.	<input type="checkbox"/> (Duckworth, Peterson, Matthews, & Kelly, 2007) <input type="checkbox"/> (Krueger & Brazeal, 1994)	Hypothesis 3: There is a positive correlation between entrepreneurial intent and perseverance.	Individual Entrepreneurial Intent Scale (IEIS) and Short Grit Scale (Grit-S)	Qualitative data	Data production. Data display. Conclusion. Drawing Verifications

## APPENDIX C: Department of Education Consent Form

The Graduate School of Business Administration

2 St David's Place, Parktown,  
Johannesburg, 2193,  
South Africa  
PO Box 98, WITS, 2050  
Website: [www.wbs.ac.za](http://www.wbs.ac.za)



5 September 2016

The Head of Department  
Department of Basic Education  
Private Bag X 11341  
NELSPRUIT  
1200

### **REQUEST FOR PERMISSION TO CONDUCT A RESEARCH IN THE 5 HIGH SCHOOLS WHICH ARE SITUATED IN K-ANYAMAZANE**

Dear Sir/Madam

My name is **Gregory Mkhathswa**, and I am a Master of Management in Entrepreneurship and New Venture Creation ("MMENVC") student at the University of Witwatersrand (Wits Business School) in Johannesburg. The research I wish to conduct for my Master's dissertation involves "Exploring Antecedents of Entrepreneurial Intention of senior secondary school students in township context of Mpumalanga Province". This project will be conducted under the supervision of Dr McEdward Murimbika (WBS, South Africa).

I am hereby seeking your consent to approach a number of secondary schools in the Ka-Nyamazane Township to provide participants for this research.

Attached is a copy of my research proposal which includes copies of the measure and consent and assent forms to be used in the research process.

Upon completion of the study, I undertake to provide the Department of Education with a summary research report. If you require any further information, please do not hesitate to

contact me on 08\* \*\*\* 1\*5\* or 011 2\*2 1\*\*9 or via email on [NNNNNN.MMMMMM@Wits.ac.za](mailto:NNNNNN.MMMMMM@Wits.ac.za).  
Thank you for your time and consideration in this matter.

Yours sincerely,

**GREGORY MKHATSHWA**  
University of Witwatersrand

**Who to contact if you have been harmed or have any concerns**

This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. [Mmabatho.leeuw@wits.ac.za](mailto:Mmabatho.leeuw@wits.ac.za).

If you have concerns or questions about the research you may call the Programme Manager of MMENVC, Ms Meisie Moya on (011)717-3629 or via email on: [Meisie.Moya@wits.ac.za](mailto:Meisie.Moya@wits.ac.za)

**CONSENT**

I hereby agree that you may conduct your research after you have sought permission from the school principal or the deputy principal if the principal is not available. I understand that these schools' will be participating freely and without being forced in any way to do so. I also understand that such participation can be stopped at any point should the school decide not to continue with this research and that such a decision will not in any way affect the school negatively.

I understand that this is a research project whose purpose is not necessarily to benefit the schools in the immediate or short term.

I also do understand that their participation will remain strictly confidential.

.....  
**HOD signature**

**Date:**.....

# APPENDIX D: School Principal Consent Form

*The Graduate School of Business Administration*

2 St David's Place, Parktown,  
Johannesburg, 2193,  
South Africa  
PO Box 98, WITS, 2050  
Website: [www.wbs.ac.za](http://www.wbs.ac.za)



05 October 2016

Mrs Blue (Principal)  
XYZ Secondary School  
Stand no. 2952336530214  
Ka-Nyamazane  
1214

## REQUEST FOR PERMISSION TO CONDUCT A RESEARCH IN YOUR SCHOOL

Dear Mrs Blue

My name is Gregory Mkhathswa, and I am a Master of Management in Entrepreneurship and New Venture Creation ("MMENVC") student at the University of Witwatersrand (Wits Business School) in Johannesburg. The research I wish to conduct for my Master's dissertation involves "**Exploring Antecedents of Entrepreneurial Intention of senior secondary school students in township context of Mpumalanga Province**". This project will be conducted under the supervision of Dr McEdward Murimbika (WBS, South Africa).

The Provincial Department of Education has given approval to approach your school for my research. A copy of their approval is contained with this letter. I invite you to consider taking part in this research. This study will meet the requirements of the Research Ethics Committee (Human) of the University of Witwatersrand.

### ***Aims of the Research***

The research aims to:

- Determine if there is a relationship between entrepreneurial intent and a level of perseverance among senior secondary school students in 6 secondary schools located in Ka-Nyamazane;
- Evaluate the level of entrepreneurial intent among final year senior secondary school students in 6 secondary schools located in Ka-Nyamazane;
- Evaluate the level of perseverance among final-year senior secondary school students in 6 secondary schools located in Ka-Nyamazane;
- Establish whether there is a relationship between entrepreneurial intent and perseverance.

### ***Significance of the Research Project***

The research is significant in three ways:

1. The proposed study aims to fill a gap in current knowledge of entrepreneurship education and training.
2. The proposed research aims to offer an insight into the level of entrepreneurial intent and perseverance among senior secondary school students in Ka-Nyamazane.
3. The proposed study will provide guidance to educators and organisations interested in and aimed at developing entrepreneurs on whether there is a need to develop programmes that aim to develop the potential entrepreneur's levels of entrepreneurial intent and/or perseverance in Ka-Nyamazane.

### ***Benefits of the Research to Schools***

1. Dissemination of results to the participating schools, District Department of Education, and the broader public.
2. The results may inform curriculum development in entrepreneurial education.

### ***Research Plan and Method***

A questionnaire will be the only tool which will be used in the collation of data. Permission will be sought from the learners and their parents prior to their participation in the research. Only those who consent and whose parents consent will participate. The researcher will supervise the survey. All information collected will be treated in strictest confidence and neither the school nor individual learners will be identifiable in any reports that are written. Participants may withdraw from the study at any time without penalty. The role of the school is voluntary and the School Principal may decide to withdraw the school's participation at any time without penalty. The character of the data to be collected is not of a sensitive in nature. If a learner requires support as a result of their participation in the survey steps can be taken to accommodate this.

#### School Involvement

Once I have received your consent to approach learners to participate in the study, I will

- arrange for informed consent to be obtained from participants' parents or legal guardians

- arrange a time with your school for data collection to take place
- obtain informed consent from participants

Attached for your information are copies of the Parent Information and Consent Form and also the Participant Information Statement and Consent Form.

**Invitation to Participate**

If you would like your school to participate in this research, please complete and return the attached form.

Thank you for taking the time to read this information.

**Mr Gregory Mkhathwa**

Researcher

**Wits University**



## APPENDIX E: Parent or Guardian Consent Form

The Graduate School of Business Administration

2 St David's Place, Parktown,  
Johannesburg, 2193,  
South Africa  
PO Box 98, WITS, 2050  
Website: [www.wbs.ac.za](http://www.wbs.ac.za)



10 October 2016

Dear Parent or Guardian,

My name is **Gregory Mkhathshwa**, and I am a Master of Management in Entrepreneurship and New Venture Creation ("MMENVC") student at the University of Witwatersrand (Wits Business School) in Johannesburg. I would like your child to take part in my research. During the month of October 2016, I will be surveying grade 12 students in schools situated in Ka-Nyamazane to learn about entrepreneurial intention among senior secondary school students. If you and your child agree that your child may participate in the study I will ask your child to complete questionnaires about the way they see themselves and others, and about their entrepreneurial intent and perseverance. Completion of these surveys is estimated to take no more than twenty to thirty minutes of class time.

All of the information I obtain from your child will be kept confidential. Your child's name will not be used on any of the forms they complete, and no information about your child will ever leave school premises with a name attached. The survey that your child completes will be marked with a number I select but no one who works in the school will ever know this number or the responses of your child.

The report will not contain any INDIVIDUAL information about children. It will describe what groups of students said. For example, I might describe what "12<sup>th</sup> graders said" but I will NOT report what an individual student disclosed. The primary objective of this research is to provide a better understanding of the impact that entrepreneurship education could have in entrepreneurial competencies and intentions for secondary school learners. Once again, I will never report individual information.

The District Department of Education and the School Principal or his or her Deputy have approved the survey. However, your child does not have to participate in the survey and participation or non-participation will not affect your child's grades. If your child does not want to

do the survey, or wants to quit after starting, other work will be given to do in the classroom. Teachers must be present in the classroom during the survey because of district policy. However, they will not be involved in the student survey process and will not be told who does and does not participate.

There are no direct benefits to you or your child for participating in this study. The information from the survey should help us learn more about the factors that contribute to the understanding of entrepreneurial intent among senior secondary school students. There are no known risks associated with participation in this study, and most students enjoy the opportunity to express their opinions. However, if your child becomes upset, he/she will be able to stop the survey and may choose to talk to one of the school staff.

The University of Witwatersrand appreciates the participation of people who help it carry out its function of developing knowledge through research.

**Who to contact if you have been harmed or have any concerns**

This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. [Mmabatho.leeuw@wits.ac.za](mailto:Mmabatho.leeuw@wits.ac.za).

If you have concerns or questions about the research you may call the Programme Manager of MMENVC, Ms Meisie Moya on (011)717-3629 or via email on: [Meisie.Moya@wits.ac.za](mailto:Meisie.Moya@wits.ac.za)

If you and your child agree that your child may take part in the research, please return a signed copy of this form to me in the enclosed envelope. You may keep the other copy for future reference.

You have read this permission form and agree to have your child take part in the research.

\_\_\_\_\_  
Name of Student

\_\_\_\_\_  
Printed Name of Parent

\_\_\_\_\_  
Signature of Parent

\_\_\_\_\_  
Date

# APPENDIX F: Survey Consent Form

The Graduate School of Business Administration

2 St David's Place, Parktown,  
Johannesburg, 2193,  
South Africa  
PO Box 98, WITS, 2050  
Website: [www.wbs.ac.za](http://www.wbs.ac.za)



10 October 2016

## SURVEY CONSENT FORM

**Exploring Antecedents of Entrepreneurial Intention of senior secondary school students in township context of Mpumalanga Province.**

My name is **Gregory Mkhathshwa**, and I am a Master of Management in Entrepreneurship and New Venture Creation ("MMENVC") student at the University of Witwatersrand (Wits Business School) in Johannesburg. You are being invited to participate in a research study about Entrepreneurial Intention among Senior Secondary School Students in Ka-Nyamazane.

There are no known risks if you decide to participate in this research study. There are no costs to you for participating in the study. The information you provide will be evaluated in order to measure Entrepreneurial Intention among Senior Secondary School Students in Ka-Nyamazane. The information collected may not benefit you directly, but the information learned in this study should provide benefits that are more general in nature. Completion of this survey is estimated to take no more than twenty to thirty minutes of class time.

Please understand that your participation is voluntary and you are not being forced to take part in this study. This survey is anonymous. Do not write your name on the survey. No one will be able to identify you or your answers, and no one will know whether or not you participated in the study. Should the data be published, no individual information will be disclosed.

Your participation in this study is voluntary. By completing and handing the completed questionnaire to Gregory Mkhathshwa, you are voluntarily agreeing to participate. You are free to decline to answer any particular question you do not wish to answer for any reason.

**Who to contact if you have been harmed or have any concerns**

This research has been approved by the Wits Business School. If you have any complaints about ethical aspects of the research or feel that you have been harmed in any way by participating in this study, please contact the Research Office Manager at the Wits Business School, Mmabatho Leeuw. [Mmabatho.leeuw@wits.ac.za](mailto:Mmabatho.leeuw@wits.ac.za).

If you have concerns or questions about the research you may call the Programme Manager of MMENVC, Ms Meisie Moya on (011)717-3629 or via email on: [Meisie.Moya@wits.ac.za](mailto:Meisie.Moya@wits.ac.za)

**CONSENT**

I hereby agree to participate in a research study about the effectiveness of internal organisational climate that influences innovative activities and behaviours. I understand that I am participating freely and without being forced in any way to do so. I also understand that I can stop participating at any point should I not want to continue and that this decision will not in any way affect me negatively.

I understand that this is a research project whose purpose is not necessarily to benefit me personally in the immediate or short term.

I understand that my participation will remain confidential.

.....

**Signature of participant**

**Date:.....**