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**Impact of entrepreneurship education on entrepreneurial intent at further
education and training (FET) colleges in South Africa**

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A research proposal submitted to the Gordon Institute of Business Science, University of Pretoria, in partial fulfilment of the requirements for the degree of Master of Business Administration.

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I. ABSTRACT

The purpose of this research was to investigate the impact of entrepreneurship education on entrepreneurial intent at FET colleges. The background to the study is guided by the action plans detailed in the national development plan to increase the capacity of the post college sector and the drive to improve early stage entrepreneurial training. The proposed research has contextual value and urgency for both business and academia given the level of youth unemployment, quality of education and South Africa's below average Total Entrepreneurial Activity (TEA) rate.

The literature review on entrepreneurship education learning and teaching framework, measurement of entrepreneurial intent and the impact of entrepreneurship suggest that entrepreneurship programs have a positive impact on entrepreneurial behaviour.

Three hypothesis were tested, the research hypothesis are H1: Learner satisfaction with the entrepreneurship curriculum has a positive effect on entrepreneurial intentions for FET College students. H2: Inclusion of experiential learning and practical exposure in the teaching and delivery methods has a positive effect on entrepreneurial intent. H3: Entrepreneurship education at FET College has a positive effect in promoting entrepreneurship as a career choice.

The research findings concluded that there is a positive relationship between entrepreneurship education and entrepreneurial intent at FET colleges. The literature that encourages a combination of learning the start-up process and entrepreneurial activity is well supported. In addition, the entrepreneurship education program seems to have a positive relationship in promoting entrepreneurial career. The level of experiential learning and practical exposure was highlighted as a concern.

Suggestions for future research were made to investigate level of experiential learning.

II. KEYWORDS

Entrepreneurial Intent, Entrepreneurial Education, FET College Entrepreneurship

III. DECLARATION

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the degree of Master of Business Administration at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorization and consent to carry out this research.

Muzikayise Musawakhe Malindi

Date

IV. ACKNOWLEDGEMENTS

This research has afforded me the opportunity to gain a deeper understanding of complexities surrounding education and entrepreneurship. If “Education is the greatest weapon with which we can change the world” then entrepreneurship education is certainly the one the weapons we ought to use to change the fate of the unemployed youth in South Africa. I am passionate about developing people and changing the destiny of those who are trapped in poverty and denied access to a better life.

Through this research I have been afforded the opportunity to interact with amazing people who share similar convictions and ideologies as I do, am blessed and grateful for sharing my thoughts and the guidance I have received in the process.

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To my two sons Ndalwenhle and Zenande-Lwandle, I love you boys, after this we can catch up on those Sunday picnics.

To my late father Ndaleni kaLusizi kaLumbu kaMthobi, lala ngoxolo Vumisa Mkhonto Mashukumbela, this one is for you, pity you couldn't see it through to the end.

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VI. LIST OF ABBREVIATIONS

DHET	Department of Higher Education and Training
FET	Further Education and Training
GEM	Global Entrepreneurship Monitor
NDP	National Development Plan
NCV	National Certificate: Vocational
NVC	New Venture Creation
TEA	Total Entrepreneurial Activity

1 INTRODUCTION TO RESEARCH PROBLEM

1.1 Research Title

Impact of entrepreneurship education on entrepreneurial intent at further education and training (FET) colleges in South Africa.

1.2 Research Problem

1.2.1 National Development Plan (NDP) On Education and Skills

The primary objective of national development plan (NDP) is to eliminate poverty and reduce inequality in South Africa by 2030. The diagnostic report indicates nine central challenges that must be addressed in order to reach the objectives of the NDP, which include unemployment and education. The final report explicitly states that the two are critical and interrelated; furthermore it is also acknowledged that while all nine central challenges are important and must be addressed in an integrated manner, increasing employment and improving the quality of education must be the highest priorities. Failure to address these two priorities will signify failure of the plan, resulting in economic decline, falling living standards, social instability and rise in populist politics.

Judging by the events leading to the 2014 general elections, symptoms of economic decline, social instability and rise in populist politics has already been witnessed. Job creation and reducing youth unemployment were common electioneering themes amongst most of the political parties in an effort to win votes from the general public. From the time when the NDP was published to first quarter of 2014 the GDP had shown no significant growth, incidents of social unrest were recorded and new populist political parties were formed as per prediction by the national planning commission. This leads one to conclude that the statements made remain true. The question is what does South Africa need to do well in order to address the problems associated with unemployment and poor education levels.

The national planning commission proposes increasing employment and growth through increasing the size and effectiveness of the innovation systems, functioning of the labour market, support for small businesses and improving the skills base through better education and vocational training. It is envisaged that by implementing these measures the higher education sector will be able to contribute towards rising incomes, higher productivity and a shift towards a more knowledge intensive economy by 2030. A synopsis of implementable actions for education and training linked to economic growth and employment include early stage entrepreneurship training and expansion of the Further Education and Training (FET) colleges sector.

The white paper on post schooling released by the Education Minister (DHET, 2014) talks about the need to establish a single coordinated post schooling education and training system that will be able to respond to the needs of the individual citizens and employers in both the public and the private sectors. The function of facilitating technical and vocational education and training falls under the post schooling education and training system which includes the regulatory bodies such as SAQA, SETAs, privately owned vocational training institutions, Universities and the Further Education and Training (FET) colleges. The post schooling sector although somewhat contradictory is defined to be inclusive of those who have completed basic schooling, those who have not completed their schooling and those who never attended school. Simply stated, it comprises of the potential workforce of the South African economy. The FET colleges sector therefore functions as a mechanism to accommodate the learners who have not successfully completed the minimum requirements for basic education or have never attended school.

The FET colleges offer technical vocational education and training in order to facilitate the vocations that ought to be relevant to industry and the uplift of the economy. As such the college sector ought to play a vital role in the supply of foundational learning and training to cover the skills base required by the economy to function well. However there are concerns over the ability of the colleges to deliver on this mandate.

Major criticism of the college sector is the low participation rate, poor output quality and questions on relevance of courses. Currently the participation rate in colleges is less than 9% with 3,4 million youth aged between 15-24 years reported to be not in employment, education or training (Department of Higher Education , 2014). Given the criticism laid on the college sector, the question arises on whether the expansion of the public college sector will have a significant impact in preparing the learners for the workplace and the active economic participation of the unemployed youth. More specifically if early stage entrepreneurship training is to have a significant influence on growth, what impact does the entrepreneurship education have on the entrepreneurial intent on the learners at FET colleges?

1.2.2 Comparing Entrepreneurial Activity with Education and Training

The Global Entrepreneurship Monitor (GEM) 2012 report by Turton & Herrington (2013) emphasised the need to support and strengthen Further Education and Training (FET) colleges plus other organisations in enterprise development. According to Turton & Herrington (2013) the entrepreneurial framework condition most likely to have an impact on perceptions of capabilities is education. Education was given the lowest mean score by the national experts indicating that the education systems was not developing individuals with the necessary skills and confidence required to consider entrepreneurship as a valid career choice. Turton & Herrington (2013) concluded that the education system was having a negative impact on the size of the country's pool of intentional entrepreneurs. As a result recommendations were made to all stakeholders to support and strengthen the further education and training colleges plus other organisations engaged in enterprise development.

Kelley, Singer & Herrington (2012) called for the review of the curricula and structure of FET colleges to ensure that learning becomes practical in addressing the needs of the learners. The recommendation followed a summarised view of the national experts who scored education as one of the top three factors constraining entrepreneurship in South Africa.

Herrington & Kew (2014) concede that entrepreneurship education when offered is unlikely to remove the deficit left by poor basic education, however a positive correlation between opportunity driven entrepreneurship and levels of education have been observed in the GEM 2013 study. Herrington & Kew (2014) further reported that the highest percentage of early stage entrepreneurs in South Africa possess at least some form of secondary education or a secondary degree, which shows the importance of education and the positive influence it could have on the level of business start-up. Deductive interpretation from the Herrington & Kew (2014) study implies that the quality of entrepreneurship education and training ought to have a significant impact on entrepreneurial activities. The question to be asked is what must be addressed to improve the quality of entrepreneurship education at FET colleges

1.2.3 Business Imperative

The first annual conference on the “state of entrepreneurship in South Africa” held in 2009 pointed out that entrepreneurship is the key driver of economic growth and job creation. The discussion points by a delegation comprising of academia, industry champions, media, venture capitalists, state organs and entrepreneurs concluded that the South Africa highlighted that small and medium sized businesses tend to be the greatest creators of jobs and wealth in emerging economies, in addition these entities need to be nurtured as a matter of urgency. It was also pointed out that South Africa severely lacks entrepreneurial skills both in formal education which comprises of primary to tertiary education, and informal education which comprises of home and social networks.

One of the recommendations and insight from the conference was that entrepreneurship is critical for South Africa’s future. In the short term the regulatory environment can be relaxed to allow entrepreneurial growth however in the longer term only broader educational reforms at all levels will change South Africa’s entrepreneurial activity.

1.2.4 FET Colleges at a Glance

According to Isaacs, Visser, Friedrich & Brijlal (2007) entrepreneurship education at FET colleges must fulfil a primary role in preparing the youth for their future. The study examined the introduction of entrepreneurship education at school levels and how that intervention impacts the discipline of entrepreneurship at tertiary level. It was found that academic departments do not offer entrepreneurship training, instead entrepreneurship education and training was packaged with other learning programmes. Isaacs, Visser, Friedrich & Brijlal (2007) concluded that curriculum development, together with entrepreneurship education and training delivery can improve the quality of teaching entrepreneurship at FET level.

Cosser, Kraak & Winnaar (2011) conducted a nationwide audit on the state of FET colleges. Although the audit was mandated to conduct readiness of the college system to be absorbed into the newly formed Department of Higher Education and Training, it provided data on the college programmes, facilities, lecturing staff, governance and management which were previously not available from a single database. As a first of its kind the audit provided much needed insight on the efficiency rates of the colleges and review of the qualification programs available from the 50 public colleges. The data gathered from the Cosser, Kraak & Winnaar (2011) audit further confirmed the absence of a dedicated entrepreneurship education and training programme. The data collected however provided a baseline platform for the evaluation of college programs and learner participation which informed the subsequent strategies for the white paper on post schooling.

The college sector was initially formed to accommodate technical education and training for the engineering and mining sector referred to as NATED programs, however as a source of vocational education and training new learning programs were introduced, namely National Certificate Vocational (NCV) which was aimed at addressing non-engineering related vocational qualifications. The data gathered from the audit shed light into the size and effectiveness of the

college programs in addressing the skills requirements of the country. Formal entrepreneurship education and training is only offered under the faculty of business studies but not across all programs.

Education and Training receives the highest allocation from the state budget however the shortage of skills, poor workplace productivity and unsatisfactory entrepreneurial activity still remains far below expectations. The question arises on whether further investment in education and training specifically in the college sector will bear fruits in poverty alleviation and encouragement of entrepreneurship as a career of choice. If entrepreneurship is the responsible for job creation and growth, what role does entrepreneurship education play in imparting the entrepreneurship skills required to improve entrepreneurial activity? If the college sector prepares the pipeline for skills required in the economy to what extent does the college sector assist in promoting entrepreneurship as a career of choice?

Based on the information presented, if South Africa has an imperative to reduce inequality and eliminate poverty by 2030, then the country has an imperative to increase entrepreneurial activity amongst the poorly educated unemployed youth? If the state intends to improve the quality of early stage entrepreneurship training, then there is an imperative to improve the entrepreneurial intent amongst the youth in FET colleges.

The proposed research has contextual value and urgency for both business and academia given the level of youth unemployment, quality of education and South Africa's below average Total Entrepreneurial Activity (TEA) rate.

1.3 Research Purpose

The purpose of the research is to gain a better understanding of the relationship between the entrepreneurial intent and entrepreneurship education and training offered at FET colleges.

1.4 Research Objectives

The intention of this study is not to enter the debate on why entrepreneurship can or cannot be taught, instead it builds on the posit that entrepreneurship education influences perception and motivation to be entrepreneurial as researched by Packham, Jones, Miller, Pickernell, & Thomas (2010).

This study sets out to examine the quality of entrepreneurship education and training at FET colleges . The research objectives are:

- i. Evaluating the curriculum structure of entrepreneurship education programmes at colleges in meeting the requirements of the learners enrolling in entrepreneurship programmes
- ii. Exploring the delivery methods of entrepreneurship programs
- iii. Measuring the effect of the education programs when compared to entrepreneurial intent of the learners

2 LITERATURE REVIEW

2.1 Entrepreneurship Education Framework

2.1.1 Influence of Entrepreneurial Motivations

Carsrud & Brännback (2011) state that entrepreneurial motivations are important in driving entrepreneurial behaviour, although entrepreneurs have the same motivation as everyone else to fulfil their needs and wants in this world, they create ventures instead of just working in them. A distinction is made between intrinsic and extrinsic motivation, intrinsic being driven more by self-interest and extrinsic being externally orientated. Carsrud & Brännback (2011) conclude that entrepreneurial motivation is often implied or assumed on entrepreneurial intentions and cognitive maps; however the subject remains under-researched despite the importance in predicting and explaining entrepreneurial behaviours. Although there is extensive discussions on motivation overall, there is very little discussion on entrepreneurial motivation in a low skills environment, Carsrud & Brännback (2011) have called for further investigation on how do lack of social support, insufficient skills and cognitive dissonance affect entrepreneurial opportunity recognition, intentions and subsequent behaviour.

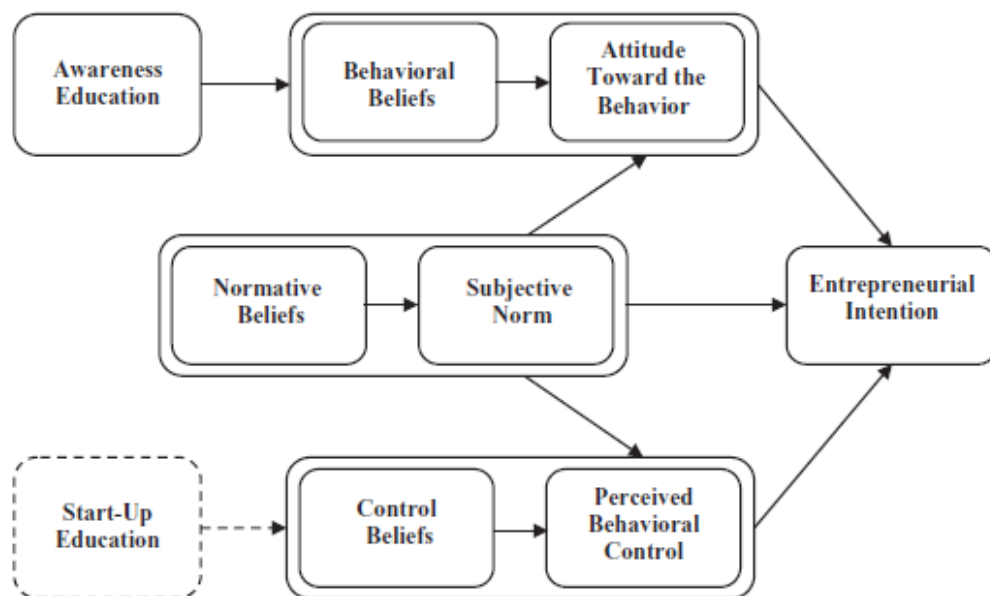
2.1.2 Entrepreneurial Awareness

Fretschener & Weber (2013) set out to investigate the impact of entrepreneurial awareness education on motivational antecedents determining the students intended entrepreneurial activity. Linan (2004) cited in Fretschener & Weber (2013) stated that entrepreneurship pursues one overarching goal to develop an individual's intention to act entrepreneurially. The study looked at the fundamental entrepreneurship education and the Theory of Planned Behaviour (TPB), concluded by devising an Entrepreneurship Education Model (EEM).

The Entrepreneurship Education Model (EEM) developed by Fretschener & Weber (2013) combines elements of previous work by Linan & Chan (2009) and Ajzen (2005) cited in Fretschener & Weber (2013) to introduce two pronged

education model. Firstly the focus is awareness education linked to behavioural beliefs; secondly start up education linked to control beliefs. The study concludes that a configuration of motivational antecedents and corresponding beliefs can be altered by educational interventions. In addition, they concluded that the course induced process of updating the learners beliefs is crucial to allow the student to make a decision on whether an entrepreneurial career is suitable for them or not.

Figure 2.1: Entrepreneurship Education Model by Fretschener & Weber (2013)



Fretschener & Weber (2013) offer rough guidelines on which they believe may be useful in creating a learning environment where students explore what the job of an entrepreneur entails. These guidelines are based on five core elements namely (i) shaping the students entrepreneurial attitude (ii) introduction of concepts such as opportunity recognition, entrepreneurial alertness, entrepreneurial tasks and major challenges. (iii) presenting the benefits and drawback of entrepreneurship (iv) invitation of real entrepreneurs to convey a realistic view on being an entrepreneur (v) emphasising the value of entrepreneurial acting.

The Fretschener & Weber (2013) study provides good ground for basic awareness however it does not go deeper in terms of having a structured curriculum applicable to a larger population and considerations of other background factors such as personality, nationality, individual learning styles and academic performance. The study was based a small and random sample of German business students, there are concerns over replication of the study in an emerging economy. Rusterberg (2013) looked at the applicability of TPB on entrepreneurial intentions in the South African context and concluded that although TBP is a significant predictor of entrepreneurial intentions within the emerging economy context, it was not sufficient in capturing all the variations specifically demographic variation.

2.1.3 Experiential Learning

There are various criticisms about the traditional teaching methods on entrepreneurship education, those who are critical of the education programs do not argue against teaching entrepreneurship rather about teaching methods. Lugar-Brettin (2013) follows by stating that a framework on entrepreneurial learning requires three considerations (i) urgency for creating a process based learning in the classroom as a foundation (ii) importance of entrepreneurship and risk taking in the market driven process of innovation (iii) translation of best practises associated with firm levels into the course learning objectives.

A conceptual framework for entrepreneurial learning process by Politis (2005) encourages a process of experiential learning and identified three main components (i) career experience (ii) the transformation process and (iii) entrepreneurial knowledge in terms of effectiveness in recognising and acting on entrepreneurial opportunities. Although the framework was developed from an organisational point of view and highlighted experience as essential in recognising entrepreneurial opportunities, there are also implications for entrepreneurship education programs.

In addressing the entrepreneurship education requirements Politis (2005) acknowledges that entrepreneurship is primarily learned by experience and discovery, however entrepreneurial learning should be conceived as a lifelong process. Attempts to stimulate entrepreneurship knowledge through formal education and learning are not likely to have a strong and direct impact on entrepreneurial learning. Formal education should rather focus efforts on developing creativity, critical thinking and reflection among individuals; this may in turn have a profound influence on motivation and ability to develop entrepreneurial knowledge.

Politis (2005) further adds that experience relevant for entrepreneurial knowledge not only involves actual start-up of a new venture but also entails understanding of preparatory activities that enable the venture to be started; therefore policies aimed at stimulating entrepreneurship activities should focus on making entrepreneurship more attractive as a career.

2.1.4 Teaching of Soft Skills

Lautenschläger & Haase (2011) claim that education systems do not promote creativity, opportunity recognition and problem solving skills. It is argued that entrepreneurial education programmes are not effective in raising entrepreneurial awareness due to focus on starting a business rather than teaching entrepreneurial soft skills. It is known that entrepreneurship education is not a precondition for starting a new firm therefore focus of entrepreneurship education should not be on the start-up processes rather should be focused on the soft skills required on start and manage a new venture successfully.

Lautenschläger & Haase (2011) present seven arguments against the traditional entrepreneurship education programmes which are based predominantly at business schools and facilitated by business schools education models. The seven arguments are (i) lack of uniformity in objectives and content (ii) teaching of the entrepreneur traits approach (iii) the dilemma on teachability of entrepreneurship (iv) measurement of overall impact (v) negative relationship between training and entrepreneurial activity (vi) emphasis of

entrepreneurship education at higher education level (vii) describing the entrepreneur as an all-rounder.

Although the arguments presented by Lautenschläger & Haase (2011) might suggest that training on start-up process alone adds no value, the approach to incorporate soft skills in the education programmes seems to enhance the overall learning process.

2.2 Conditions for Optimised Learning

Entrepreneurship is a multifaceted phenomenon that varies depending on context, level of innovation and impact on society Griffiths, Kickul, Bacq & Terjesen (2012). Context is important in understanding when, how and why entrepreneurship happens and who gets involved. Welter (2011) argues that contextual view of entrepreneurship enhances our understanding of the phenomena. It is further argued that understanding contexts aids in explaining why some entrepreneurs might recognize opportunities while others do not and why entrepreneurial activity varies across countries, regions and other contexts.

The entrepreneurship context has to take into consideration business, spatial, institutional and social context. Welter (2011) continues to emphasise that context provides individuals with entrepreneurial opportunities but also sets boundaries for their actions. Entrepreneurial activity takes place in the confines of which its context exists. Context provides an understanding of how high level requirements can be translated into low level actions and opportunities.

The implication of the above seems to suggest that entrepreneurship activity and perhaps entrepreneurship learning also needs to take place in the context of the legal, spatial and social context. In the South African environment there have been a number of legal, political and social changes which had a direct impact on business and indeed entrepreneurial activity. The interpretation of Welter (2011) implies that understanding the context and environment in which entrepreneurship takes place is of significant importance.

The environment for entrepreneurship is changing, while entrepreneurship education is not changing. Neck & Greene (2011) argue that teaching entrepreneurship as a process is dated; it ought to be taught as a method. The motivation for teaching entrepreneurship as a method is to give real work experience, simulation of the operating environment and as a design based learning. The method as described is inclined to experiential learning. There are many advocates of experiential learning approach for example Ojastu, Chiu, & Olsen (2011) suggested experiential learning, networking approaches and increased self learning attitude as techniques for effective learning.

2.3 Measuring Entrepreneurial Intent

Covin & Wales (2012) went about describing the manner in which an orientation towards entrepreneurial activities has been described in previous research. They further conclude that entrepreneurial orientation can be measured in whichever way that suits the researcher's purpose. Sanches (2013) looked at self-efficacy, pro-activeness and risk as contributors to intentions towards self-employment. The study looked at the key role played by entrepreneurship education programs in order to confirm whether entrepreneurship programs played a role in the intentions to start a business.

The literature available on entrepreneurship education learning and teaching framework, measurement of entrepreneurial intent and the impact of entrepreneurship seem to suggest that entrepreneurship programs have a positive impact on entrepreneurial behaviour. In the South African context given the number of various entrepreneurship awareness program and formal education programs, the available literature suggest that entrepreneurial activity should be higher than what it is but it is not. The study by Walter, Parboteeah & Walter (2013) looked at the institutions offering entrepreneurship education and found that entrepreneurship education and industry ties with those institutions had a positive impact on entrepreneurial intent.

Thompson (2009) developed a metric IEIS and clarified entrepreneurial intent as "self-acknowledged conviction by a person that they will set up a new

business venture and consciously plan to do so at some point in the future”. Although the scale was validated with well-educated and high affluent individual, it was not tested on less internationally oriented persons.

2.4 Linking Entrepreneurship Education with Entrepreneurial Intent

Lorz (2011) conducted a longitudinal study to measure the impact of entrepreneurship education on entrepreneurial intent. One of the findings of the study was that the impact of the entrepreneurial education was insignificant with the control group with who measured low intentions before the start of the education program. In addition entrepreneurial intentions declined significantly even after completing the entrepreneurial education program. On the other hand though Lorz (2011) discovered that the participants who scored high on entrepreneurial intentions before the start of the program scored even higher at the completion of the course and went even further to actually start up process. Lorz (2011) concluded that the significance of entrepreneurial education on entrepreneurial intent is to serve as a motivational trigger that positively influences the intentions to peruse entrepreneurial behaviour.

A limitation of the Lorz (2011) study is that it was based on business students from Germany & Switzerland, which are developed economies. Although the study provides insight in that he argued that entrepreneurial education program should be two-tiered. The first tier ought to be compulsory entrepreneurship awareness education focused on motivation and entrepreneurial behaviour. The second tier ought to be optional electives focused on entrepreneurship process and in-depth training on start up. Lorz (2011) further argues that content of the entrepreneurship education should also be customised to suit the context of the participants and the learning environment in which the education programs are delivered.

2.5 Entrepreneurship Education at FET Colleges

2.5.1 Alignment of Objectives, Target Group and Measurements

Mwasalwiba (2010) argues that the impact of entrepreneurship education should be measured against the essence and objectives of the entrepreneurship program. Mwasalwiba (2010) study on entrepreneurship education programs further adds that the narrowing down the objectives gives meaning to the structure and content of the programs if clear distinctions must be made on whether the programs is aimed at educating for, about, in or through entrepreneurship.

In elaborating the objectives, educating for entrepreneurship creates entrepreneurs, educating about is aimed at gaining a better understanding of the entrepreneurship phenomena, educating in entrepreneurship makes individuals more entrepreneurial. Narrowing the objectives gives direction on the program contents, target groups and teaching methods. Three main themes emerge from the education programs, either the programs are for giving orientation and awareness in entrepreneurship or to develop competencies for new enterprise formation, self employment or economic sufficiency. Lastly the programs could also be aimed on small business survival and growth.

Mwasalwiba (2010) concluded that the predominant aim of entrepreneurship education is to promote entrepreneurship by influencing attitudes, values and general community culture. This aim is the driving force behind all other objectives be it start-up, self employment, job creation, knowledge advancement and skills development.

In the South African contexts job creation is a top priority. Entrepreneurship, specifically entrepreneurship education has received a lot of attention from the state, education institutions and community overall, however the total entrepreneurship activity does not reflect that if used as an overall measure.

2.5.2 The Role of FET colleges in preparation for Self Employment

Gamble (2003) wrote on the curriculum responses at FET colleges prior to the implementation of the curriculum 2005. The aim of the study was to give guidelines on the curriculum requirements and responses to the outcomes based education prior to implementation. The study drew parallels between the knowledge and skills required for successful self-employment and how the colleges ought to respond to the challenges. Gamble (2003) argued that FET institutions have traditionally contributed to the SME development in the trade skills area; as a result FET institutions have shifted their focus of their provision to enterprise and entrepreneurial education in addition to technical skills.

FET colleges were traditionally created in the pre-democratic era as technical colleges to provide theoretical knowledge for technical subjects in preparing the learners in the colleges to embark in apprenticeship with the identified companies. The colleges functioned mainly in the technical and engineering domain. However with the introduction of the new curriculum 2005 the colleges transformed to provide theoretical knowledge in the non-technical domain. This shift in focus provided an avenue to introduce business studies and other vocational subjects to pave way for new calibre of learners. In addition to national senior certificate a new qualification programme was introduced namely New Certificate Vocational, with its new business management subjects played in important role to cater for non technical students.

The National Certificate Vocational introduced additional subjects which included entrepreneurship and new venture creation as learning subjects offered as part of the curriculum. The New Venture creation subject was introduced at NQF levels two, three and four. According to SAQA “the purpose of the NQF level 2 New Venture Creation qualifications is to provide a qualification that can form the basis for structured programmes for potential and existing entrepreneurs to capitalise on opportunities to start and grow sustainable businesses that form part of the mainstream economy”

In addition, SAQA further elaborates that this qualification is designed for learners who intend to set up or have already set up own ventures. Assessment of the competencies and knowledge in the qualification needs to be done in the context of the learner's own new venture. In the context of this study, it appears that this qualification has been specifically designed for learners who already have intentions to start their own business or are involved in some form of entrepreneurial activity. The research guiding the development of this qualification follows from the guidelines by South African academia.

The future of South Africa's economy does not just lie in the formal sector, but within the informal SMME sector too. This is a growing part of South Africa's economy and requires substantial focus from a developmental perspective. Following the successful implementation of the National Certificate: New Venture Creation (NVC) at Level 4 and upon doing further research, it has been established that there is a great demand to equip entrepreneurial learners with knowledge and skills at NQF level 2 so that they can become part of the mainstream economy as they set up and manage new ventures. Whilst the complexity of learning will be simpler at this level.

Thus the design and establishment of an entrepreneurship qualification aims to:

Develop appropriate skills and knowledge for the establishment and development of an enterprise. Address the economic/administrative and behavioural barriers that contribute to failures in starting and sustaining an enterprise. Create long-term solutions for job creation and SMME development via the building blocks and structure of a qualification that practically addresses the learning requirements of budding entrepreneurs.

2.6 Concluding Remarks leading to Research Questions

Based on the literature found to date it does not appear that there is a universal theoretical framework for entrepreneurial education and training. The theory which appears more prevalently in the literature found to date is based in part

on the work done by Ajzen (2005) on the theory of planned behaviour. There are various hybrids of the TPB which have been adapted to suite each researcher's area of interest. In the absence of a universal theoretical framework for entrepreneurship education, there are recurring themes that make up an effective framework which include motivation, entrepreneurship awareness, experiential learning and provision of soft skills. The applicability of these concepts varies and has their own limitations but they are requirements for establishing the core elements of entrepreneurship education and training at vocational level.

Measurements of entrepreneurial intent and effectiveness of entrepreneurship education have their own limitations. It does not appear that there is a universally accepted tool for measuring entrepreneurship intent. However the metric suggested by Thompson (2009) offers options which might be beneficial for this study.

3 RESEARCH QUESTIONS

3.1 Problem statement

Combinations of the theoretical best practices presented in the literature survey and entrepreneurial intent measurement scale by Thompson (2009) suggest that impact of entrepreneurship education programs on entrepreneurial intent can be measured.

Establishing the relationship between entrepreneurial education programs and entrepreneurial intent is of importance to the state, academic institutions, business, households and potential entrepreneurs.

3.2 Research Questions

3.2.1 Research Question 1

How is the entrepreneurship education curriculum structure at FET Colleges aligned with the best practices for entrepreneurship development?

3.2.2 Research Question 2

How effective are the teaching and delivery methods in promoting entrepreneurship as a career choice? Does incorporation of experiential learning and practical exposure have an influence on entrepreneurial intentions?

3.2.3 Research Question 3

What is the attitude of the college learners towards entrepreneurship as a career choice after being exposed to the entrepreneurship education programs at the FET Colleges?

3.3 Research Hypothesis

3.3.1 Research Hypothesis 1

H0 Learner satisfaction with the entrepreneurship curriculum has no effect on entrepreneurial intent

H1 Learner satisfaction with the entrepreneurship curriculum has a positive effect on entrepreneurial intentions for FET College Students

3.3.2 Research Hypothesis 2

H0 Practical exposure and experiential learning has no effect on entrepreneurial intent

H1 Inclusion of experiential learning and practical exposure in the teaching and delivery methods has a positive effect on entrepreneurial intent.

3.3.3 Research Hypothesis 3

H0: Positive attitude towards entrepreneurship and self-employment has no effect on entrepreneurial intentions of FET college learners.

H1: Entrepreneurship education at FET College has a positive effect in promoting entrepreneurship as a career choice.

4 RESEARCH METHODOLOGY

4.1 Research Design and Approach

Using the research onion metaphor by Saunders & Lewis (2012) the research philosophy of this study will be based on interpretivism. Saunders & Lewis (2012, p. 106) define interpretivism as “a research philosophy which advocates the necessity to understand differences between humans in their role as social actors”. This research seeks to understand the value of entrepreneurship education and training from a learners perspective, therefore understanding the social world of our research subject from their point of view is critical, based on this understanding the interpretivism philosophy has been chosen.

A deductive research approach has been used. A deductive approach involves the testing of a theoretical proposition by using a research strategy specifically designed for the purpose of its testing. This research is intended to examine the missing link between the education programmes and the measured entrepreneurial activity. The reason inductive reasoning has not been chosen in this research is not intended in developing a new theory from the data gathered, rather to describe the perceptions of the FET college learners regarding ineffectiveness of the entrepreneurship education programmes.

This research takes the form a quantitative descriptive study. A descriptive study according to Saunders & Lewis (2012, p. 111) is “research designed to produce accurate representation of persons, events or situation”. The data collection tools to be used will include a combination of self-reporting questionnaires from the selected samples, structured observation of pass rates and dropout rates plus a combination of structured interviews for the purposes of completing data triangulation. In order to establish credibility of the findings additional sources of data will be used, namely collection of learners who have successfully passed the courses related to new venture creation in level 4 to level 6 issued by the department of higher education and training. In addition data from the state enterprise development agencies will be collected as an additional source to trace enterprise development assistance offered to graduates from FET colleges.

The research is to be completed in a period less than six months, the amount of time available is not sufficient to conduct a longitudinal study, thus a cross sectional study will be conducted.

4.2 Universe and Population

The universe of the study consists of all learners and staff from the 50 public FET colleges. Based on the data gathered by Cosser, Kraak & Winnaar (2011) the universe can be quantified to be made up of 5,201 Educators and 326,898 Learners where the majority are in Gauteng, KwaZulu-Natal and Western Cape.

The population is all the learners who have registered or have been previously registered for National Diploma in Business Studies. From the data gathered by Cosser, Kraak & Winnaar (2011) the population in 2010 was measured be 74,981 learners.

Saunders and Lewis (2012, p. 132) define a population as “the complete set of group members”. The population for this current study includes learners who have enrolled for the National Diploma in Business Management who are currently registered for the 2014 academic year.

4.3 Sampling

The definition of sample according to Saunders and Lewis (2012, p. 132) is “a subgroup of the whole population. The subgroup need not necessarily be a subset of people or employees: it can for example be a subset of organisations, places or some of the tracks listed for a music CD”

Non probability sampling has been used, in particular judgment sample in order to include all the groups. Non-probability sampling is defined as “A variety of sampling techniques for selecting a sample when you do not have a complete list of the population. Because you do not have a complete list of the population, you cannot select your sample from this population at random. This also means

you do not know the chance or probability of each member of your population being selected” Saunders and Lewis (2012, p. 134).

4.4 Survey Design

The survey questionnaire is a modified version of the Individual Entrepreneurship Intent Scale developed by Thompson (2009)

4.5 Data Gathering Procedure

The data collection method will be conducted through survey questionnaires. It is intended that the students currently enrolled will be available on the selected campuses with prior arrangements from the campus principals. The survey forms will be handed out each learner and they will be asked to complete the forms.

Email and online forms will be completed by the previous students who are no longer available on campus but whose contact details are available from the selected campuses.

Sample questionnaire has been attached under appendices. The online survey form has been drafted using surveymonkey.com platform and shall be made available on a dedicated website address.

4.6 Construct Descriptions

4.6.1 Construct: Entrepreneurial Intent (EI)

According to Thompson (2009) entrepreneurial intent is a self acknowledged conviction by a person to start a new business venture and a conscious plan to do so in the near future

4.6.2 Construct: Learner Satisfaction (LS)

Learner satisfaction is described as the perception by the students with the structure and content of the entrepreneurship curriculum offered at FET colleges.

4.6.3 Construct: Soft Skills Development (SSD)

Soft skills development is the inclusion of experiential learning and practical exposure to entrepreneurial activities.

4.6.4 Construct: Attitude towards Entrepreneurial Career (AEC)

Attitude towards entrepreneurial career is the perception held by the college students in pursuing further entrepreneurial activities.

4.7 Data Analysis Process

The survey responses were distributed on a single A4 sheet and later entered into a Microsoft Excel worksheet. The purpose of this exercise was to check for any possible errors in completing the survey forms and for preliminary checking of any errors in capturing the data. The compiled data set was later imported into SPSS version 22 for detailed analysis.

The very first step in analysing the data was to conduct descriptive statistics. In the data gathering process, participants were requested to indicate their age and gender, although this has no significance on the objectives of the research, the data was collected purely for understating of basic demographic information of the participants and making summaries about the sample.

4.7.1 Variable Naming and Coding

Table 4 – 1: SPSS Variable Naming and Coding

Variable	SPSS Variable Name	Coding Instructions	Survey Questionnaire Number
Respondent	ID	Number Assigned	

Identification		to respondent	
Age	Age	Age in Years	
Gender	Gender	1 = Male 2 = Female	
ENTREPRENERIAL INTENT VARIABLES			
Variable	SPSS Variable Name	Coding Instructions	Survey Questionnaire Number
Intention to Start A Business	E11	1 = Within 1 year 2= Within 2 years 3 = Within 3 years 4 = After 5 years 5= Never	Q1: When do you intend to set up your own business, having completed/on completion of your FET College 'entrepreneurship' curriculum?
	E12	1 = Strongly Disagree 2 = Disagree 3 = Neither Agree / Disagree 4 = Agree 5= Strongly Disagree	Q16: I have no plans to start my own business
ENTREPRENEURHSIP CURRICULUM VARIABLES			
Stand Alone Curriculum	SACurriculum	Q3: The FET College 'entrepreneurship' curriculum should be focused on entrepreneurial activity and should therefore be a stand- alone programme	
Start Up Education	StartUpKnowledge1	Q4: The FET College 'entrepreneurship' curriculum has given me the knowledge to start up my own business	
	StartUpKnowledge2	Q20: The FET College 'entrepreneurship' curriculum has little to no content on business	

		start-up process
Entrepreneurial Career Promotion	EntrpCareer	Q7: The FET College 'entrepreneurship' curriculum assists me to pursue entrepreneurial activity rather than job seeking
Curriculum Enhancement	CurriculumSatisfaction	Q8: The FET College 'entrepreneurship' curriculum needs to be enhanced to assist me to pursue entrepreneurial activity
SOFT SKILLS DEVELOPMENT VARIABLES		
Integrated Curriculum	IntgrtCurriculum	Q2: The FET College 'entrepreneurship' curriculum is integrated rather than a stand-alone programme
Practical Exposure	PracticalExposure	Q5: The FET College 'entrepreneurship' curriculum is designed to offer me practical exposure to starting up of business
Experiential Learning	Experiential	Q6: The FET College 'entrepreneurship' curriculum allows for experiential learning
Classroom Learning	ClassLearn	Q18: The FET College 'entrepreneurship' curriculum is focused only on classroom activity
Awareness Education	EntrpAwareness	Q19: The FET College 'entrepreneurship' curriculum is focused on basic entrepreneurship awareness
ATTITUDE AND SELF-INTEREST VARIABLES		
Entrepreneurial Alertness	EntrpAlertness	Q10: How frequently do you read news on entrepreneurship and self-employment?
Opportunity Search	OpportunitySearch (Reverse Coded)	Q11: I never search for business start-up opportunities
Entrepreneurial Motivation	SelfLearningHours1	Q17: I spend time learning about starting my own business
	SelfLearningHours2 Reverse Coded	Q14: I DO NOT read books on how to set up a company
	PersonalFinance	Q15: I plan my finances carefully
	PersonalSaving	Q13: I am saving to start a small business
	FinancialPlanning	Q12: How frequently to read financial planning books?
	EntrpAspirations	Q9: How often do you do planning for your future as an Entrepreneur?

4.8 Limitations

The study will be limited to participants in the Gauteng province only. Gauteng was chosen because of it is has the highest enrolment of learners, largest number of educators and largest concentration of FET colleges.

In addition to geographical limitations, there will no control group to test entrepreneurial intent prior to the learner enrolment. As a result the data collected will be based on the participants who are already enrolled in the entrepreneurial programs.

5 RESULTS

5.1 Introduction

The research methodology was detailed in the previous chapter. The purpose of this chapter is to present the outcomes of the data analysis, discussion of results and research implications will be discussed in chapters six and seven of this research document. The structure of this section is organised to give descriptive statistics, initial screening of the data and presentation of the results from the hypothesis.

The data is presented to follow the logic of the research questions and hypothesis instead of following the logic of the questionnaires. This has been done to follow for consistency.

5.2 Data Screening

The purpose of this exercise is to check the data file for any errors which may affect the overall analysis. This serves to check for any errors in data capturing and ensuring that all the correct information for analysis will not be affected.

Table 5-1: Data Screening for Categorical Statistics

Categorical Statistics			
		Age	Gender
N	Valid	47	47
	Missing	0	0
Range		12	
Minimum		18	
Maximum		30	

The sample consists of 47 respondents, as seen from the table 5-1, the information on the respondents has been captured correctly and there is no missing data from the sample.

Table 5-2: Data Screening for Continuous Variables with original data

Case Processing Summary ^a						
	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Q1 Intentions to Start A Business	47	100.0%	0	0.0%	47	100.0%
Q2 Integrated Curriculum	45	95.7%	2	4.3%	47	100.0%
Q3 Curriculum Focus on Entrepreneurial Activity	47	100.0%	0	0.0%	47	100.0%
Q4 Curriculum Start up knowledge	47	100.0%	0	0.0%	47	100.0%
Q5 Curriculum Practical Exposure	46	97.9%	1	2.1%	47	100.0%
Q6 Experiential Learning in Curriculum	46	97.9%	1	2.1%	47	100.0%
Q7 Entrepreneurial Career Promotion	46	97.9%	1	2.1%	47	100.0%
Q8 Enhance Curriculum	46	97.9%	1	2.1%	47	100.0%
Q9 Future Entrepreneurial Planning	25	53.2%	22	46.8%	47	100.0%
Q10 Read Entrepreneurial News	47	100.0%	0	0.0%	47	100.0%
Q11 Never Search Opportunities	47	100.0%	0	0.0%	47	100.0%
Q12 Read Financial planning books	45	95.7%	2	4.3%	47	100.0%
Q13 Start up Saving	46	97.9%	1	2.1%	47	100.0%
Q14 Do not read setup planning books	47	100.0%	0	0.0%	47	100.0%
Q15 Plan finances Motivation	46	97.9%	1	2.1%	47	100.0%
Q16 No Plans to start	47	100.0%	0	0.0%	47	100.0%
Q17 Time Spent on Start Up	47	100.0%	0	0.0%	47	100.0%
Q18 Classroom Activity Exclusively	46	97.9%	1	2.1%	47	100.0%
Q19 Basic Awareness	47	100.0%	0	0.0%	47	100.0%
Q20 Start up content	47	100.0%	0	0.0%	47	100.0%
a. Limited to first 100 cases.						

From the original data file a case summary was done check for missing data or errors in the data files. It was noted there was a poor responses rate to Entrepreneurial Career variable. For the purposes of this study a decision was taken to completely remove this variable from the analysis to avoid reporting skewed results.

A new data file was created with the reverse worded questionnaires recoded for validity and corrected scale. Following this a new case summary has been presented as shown in Table 5-3. Although there are still cases with missing data, it was decided that most of these cases were less than 5% of the responses, so it was not necessary to remove them.

Table 5-3: Screening for Continuous Variables with Recoded Variables

Case Processing Summary ^a						
	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
Q1 Intentions to Start A Business	47	100.0%	0	0.0%	47	100.0%
Q2 Integrated Curriculum	45	95.7%	2	4.3%	47	100.0%
Q3 Curriculum Focus on Entrepreneurial Activity	47	100.0%	0	0.0%	47	100.0%
Q4 Curriculum Start up knowledge	47	100.0%	0	0.0%	47	100.0%
Q5 Curriculum Practical Exposure	46	97.9%	1	2.1%	47	100.0%
Q6 Experiential Learning in Curriculum	46	97.9%	1	2.1%	47	100.0%
Q7 Entrepreneurial Career Promotion	46	97.9%	1	2.1%	47	100.0%
Q8 Enhance Curriculum	46	97.9%	1	2.1%	47	100.0%
Q10 Read Entrepreneurial News	47	100.0%	0	0.0%	47	100.0%
Q12 Read Financial planning books	45	95.7%	2	4.3%	47	100.0%
Q13 Start up Saving	46	97.9%	1	2.1%	47	100.0%
Q15 Plan finances Motivation	46	97.9%	1	2.1%	47	100.0%
Q17 Time Spent on Start Up	47	100.0%	0	0.0%	47	100.0%
Q19 Basic Awareness	47	100.0%	0	0.0%	47	100.0%
RQ11 Opportunity Search	47	100.0%	0	0.0%	47	100.0%
RQ14 Do not read setup planning books	47	100.0%	0	0.0%	47	100.0%
RQ16 No Plans to start	47	100.0%	0	0.0%	47	100.0%
RQ20 Start up content	47	100.0%	0	0.0%	47	100.0%
RQ18 Classroom Activity Exclusively	46	97.9%	1	2.1%	47	100.0%

a. Limited to first 100 cases.

5.3 Descriptive Statistics

An unlimited number of survey questionnaires were sent out, 47 respondents met the criteria of having completed the N6 entrepreneurship course. The other participants did not meet the qualifying criteria and were therefore not included in the analysis. The survey was distributed to the public colleges in the Gauteng Province, all the colleges approached declined to participate except the Sedibeng FET College in Vanderbijlpark. The result presented in this report is based on the students at Sedibeng College, Business Studies Campus.

From the total sample of 47 respondents, 38 % were female and 62 % males. The participants were all full time students with 90% of the respondent between the age of 18 and 25 years. Although gender and age are not significant for this study, it was important to record the age groups as this age group makes up the significant youth unemployment band.

Figure 5-1: Sample Description Gender and Age

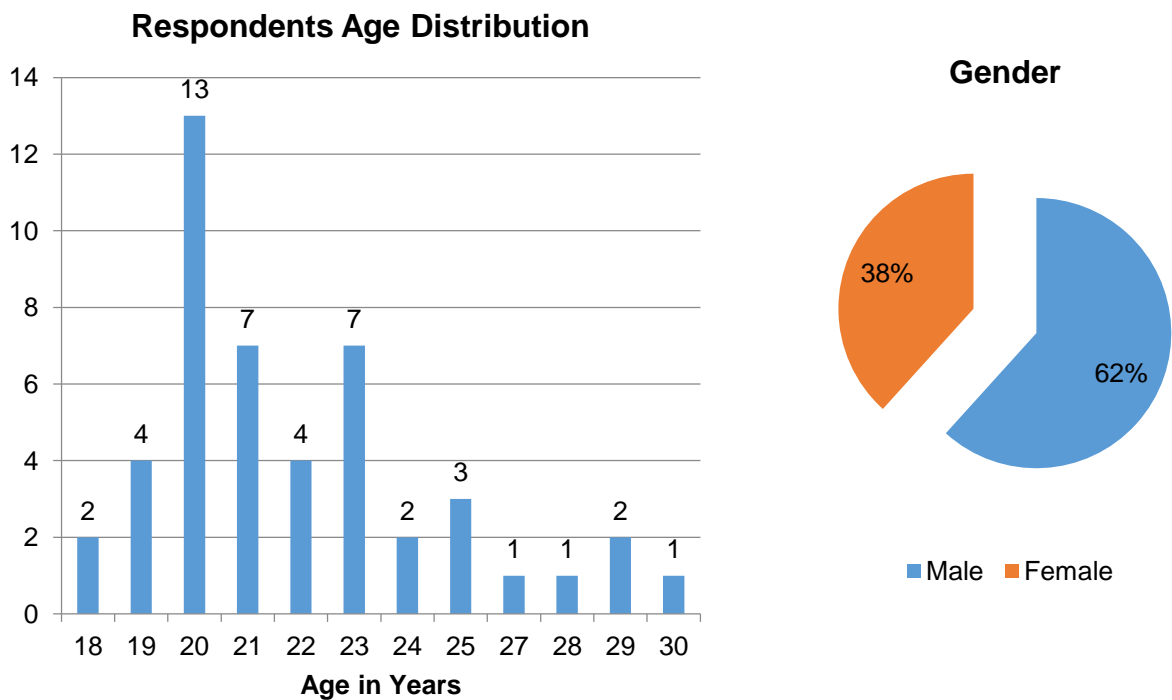


Table 5-4: Descriptive Statistics for Continuous Variables

Descriptive Statistics									
	N	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q1 Intentions to Start A Business	47	1	5	3.57	1.098	-.301	.347	-.409	.681
Q2 Integrated Curriculum	45	1	5	2.91	.925	.182	.354	-.142	.695
Q3 Curriculum Focus on Entrepreneurial Activity	47	1	5	2.94	1.258	-.012	.347	-1.081	.681
Q4 Curriculum Start up knowledge	47	1	5	3.17	1.388	-.064	.347	-1.314	.681
Q5 Curriculum Practical Exposure	46	1	5	3.22	1.365	-.412	.350	-1.240	.688
Q6 Experiential Learning in Curriculum	46	1	5	3.33	1.230	-.065	.350	-1.217	.688
Q7 Entrepreneurial Career Promotion	46	1	5	3.20	.980	.031	.350	-.625	.688
Q8 Enhance Curriculum	46	2	5	3.65	1.059	-.302	.350	-1.083	.688
Q10 Read Entrepreneurial News	47	1	5	3.09	1.380	-.262	.347	-1.252	.681
Q12 Read Financial planning books	46	1	5	3.02	1.437	.054	.350	-1.235	.688
Q13 Start up Saving	46	1	5	2.43	1.148	.812	.350	-.182	.688
Q15 Plan finances Motivation	47	1	5	3.77	1.088	-.780	.347	.149	.681
Q17 Time Spent on Start Up	47	1	5	2.96	1.367	.187	.347	-1.213	.681

Q19 Basic Awareness	47	1	5	3.21	1.122	-.344	.347	-.540	.681
RQ11 OpportunitySearch	47	1	5	3.40	1.210	-.535	.347	-.670	.681
RQ14 Do not read setup planning books	47	1	5	3.32	1.287	-.250	.347	-1.113	.681
RQ16 No Plans to start	47	1	5	3.47	1.158	-.665	.347	-.539	.681
RQ20 Start up content	47	1	5	3.30	1.061	.046	.347	-.843	.681
RQ18 Classroom Activity Exclusively	46	1	5	3.43	1.377	-.419	.350	-1.137	.688
Valid N (listwise)	40								

The information presented in this output indicates the distribution of scores on the continuous variables. The skewness indicates the symmetry of the distribution, while kurtosis provides information on the peakedness of the distribution. If the distribution is perfectly normal, a value of zero for both skewness and peakedness would be expected. However with the data collected indicates that the distribution is not perfectly normal.

5.4 Sampling Adequacy

The final sample used for analysis was lower than anticipated with a total of 47 respondents casting doubt on the adequacy for analysis. The lower than expected respondents necessitated a sample adequacy test which was conducted by employing the Keiser-Meyer-Oklin measure of sampling adequacy. According to Salkind (2010b) the minimum requirement for KMO measure to do component analysis is 0.6 . The individual measurements were entered into the individual component analysis and yielded a KMO measure of 0.613 which is sufficient. In addition the Bartlett's Test of Sphericity of 0.000 was recorded conforming that the component analysis was suitable Salkind (2010b). The results of the analysis are presented in table 5-5.

Table 5-5: KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.613
Bartlett's Test of Sphericity	Approx. Chi-Square	223.912
	df	120
	Sig.	.000

5.5 Components Testing

The scree plot presented in figure 5-2 indicates that five components can be present the most significant variance within the model. The scree plot is a graphical presentation of the Eigen values which is the amount of variance extracted by the components and serves as a means to identify the point at which an increase of the of Eigen values represented on the x-axis appears to level off. A Kaiser criterion of 1 was used where we were interested in Eigen values of 1 or more.

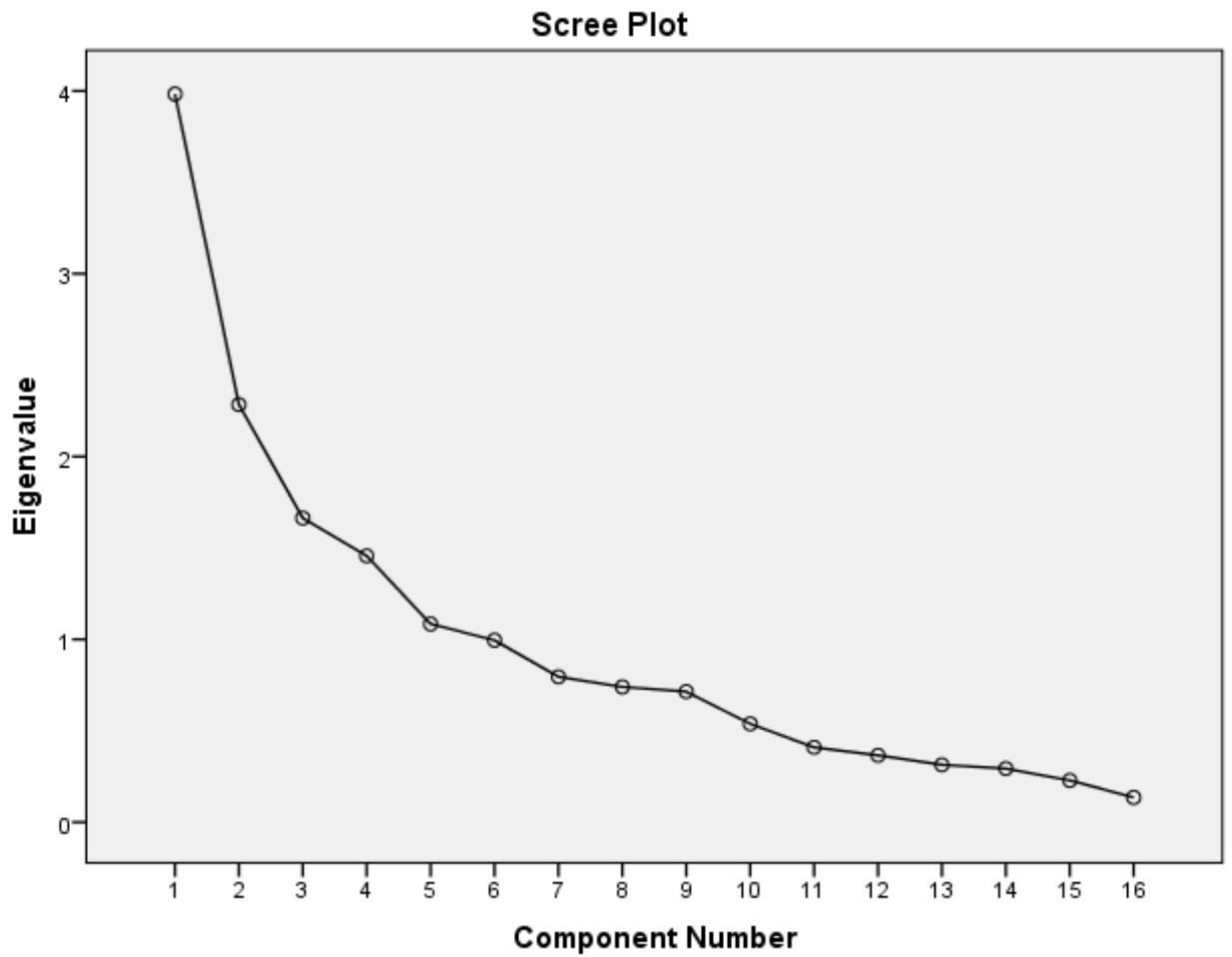


Figure 5-2 scree plot

The five extracted components are presented in table 5-6

Table 5-6 Component Extraction table

Component	Total Variance Explained						Rotation Sums of Squared Loadings ^a
	Initial Eigenvalues			Extraction Sums of Squared Loadings			
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	
1	3.983	24.894	24.894	3.983	24.894	24.894	3.099
2	2.284	14.275	39.169	2.284	14.275	39.169	2.723
3	1.664	10.397	49.566	1.664	10.397	49.566	2.478
4	1.457	9.105	58.672	1.457	9.105	58.672	1.579
5	1.084	6.776	65.448	1.084	6.776	65.448	1.496
6	.995	6.220	71.668				
7	.795	4.971	76.639				
8	.740	4.624	81.263				
9	.714	4.463	85.726				
10	.538	3.363	89.090				
11	.409	2.558	91.648				
12	.365	2.284	93.932				
13	.314	1.960	95.892				
14	.293	1.834	97.726				
15	.228	1.428	99.154				
16	.135	.846	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

The component analysis demonstrates that the individual measurement items were measuring the same underlying construct. The component 1 namely the intention to start a business accounted for 25% of the total variance. As the outcome variable it can be expected that this component will have significantly larger variance.

Component 3 and component 4 make up the measurement instrument for testing the effectiveness of the entrepreneurship curriculum on entrepreneurial intent, so it came as no surprise that the factors account for almost 20% of the variance. Component 2 and component 5 make up the measurement scale for

practical exposure and experiential learning, these two component make up another 20 % of the variance.

Although the other component associated with attitude towards entrepreneurship as career choice did not have a strong variance, it was decided not to discard these variables.

The initial component correlation matrix has presented in table, the actual relationship with intentions to start a business is the overall objective of this study. Further analysis results of the relationship are presented in this report and the implications of the individual components will be presented in the discussion of results section.

Table 5-7 Component Correlation Matrix

Component	1	2	3	4	5
1	1.000	.169	-.224	.029	.056
2	.169	1.000	-.058	-.033	-.142
3	-.224	-.058	1.000	-.049	.049
4	.029	-.033	-.049	1.000	.074
5	.056	-.142	.049	.074	1.000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

5.6 Reliability Scale

5.6.1 Construct Testing: Entrepreneurial Intent

Intention to start a business has been assigned as the outcome variable for this study. There are two explicit questions in the survey that address the intention to start a business. These variables have been paired to test the reliability of the scale for measuring entrepreneurial intent. Output of the scale reliability test has been presented in table

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.609	.609	2

According to George and Marley (2003) the Cronbach Alpha coefficients of between 0.6 and 0.7 are questionable. The results of the reliability scale testing for this case is 0.609 which falls within the questionable range. Although this scale is questionable it is still above the unacceptable level of below 0.5. The justification for use is that only two questions were posed to the respondents.

Other studies including the GEM report simply ask the participants if they have intentions to start a business in the near future. In this study the participants were asked if they had intentions to start within a certain time frame. Out of the 47 valid responses 25 % of the respondents indicated no intentions of ever starting their own business.

5.6.2 Construct Testing: Learner Satisfaction (LS)

Results of the reliability scale testing for learner satisfaction is presented in table 5-8. A Cronbach Alpha coefficient of 0.719 has been achieved from the combination of the variables, which makes the scale adequate for use.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.719	.724	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q3 Curriculum Focus on Entrepreneurial Activity	13.04	12.131	.431	.244	.691
Q4 Curriculum Start up knowledge	12.76	9.830	.657	.462	.588
Q7 Entrepreneurial Career Promotion	12.76	12.897	.519	.381	.664
Q8 Enhance Curriculum	12.30	13.239	.409	.270	.697
Q17 Time Spent on Start Up	12.96	11.865	.411	.295	.703

5.6.3 Construct Testing: Soft Skills Development (SSD)

Reliability test for soft skills development construct indicate a Cronbach Alpha coefficient of 0.516. Although the result is poor is it still acceptable for analysis. The justification for use of this result is that the variables employed and the questions asked may vary from person to person which may yield different results when re-tested with a different sample or under different conditions. Guidelines provided by George and Marley (2003) classifying the result as poor and may necessitate a revision of the variables making up the scale.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.516	.514	4

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q2 Integrated Curriculum	9.73	6.715	.289	.100	.465
Q5 Curriculum Practical Exposure	9.45	4.626	.419	.184	.325
Q6 Experiential Learning in Curriculum	9.25	5.959	.261	.073	.485
Q19 Basic Awareness	9.41	6.061	.273	.096	.473

5.6.4 Construct Testing: Attitude towards entrepreneurial career (AEC)

According to George and Marley (2003) the Cronbach Alpha coefficients of between 0.6 and 0.7 are questionable. The results of the reliability scale testing for this case is 0.625 which falls within the questionable range. Although this scale is questionable it is still above the unacceptable level of below 0.5.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.558	.562	5

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Q13 Start up Saving	13.73	10.382	.315	.131	.506
RQ11 OpportunitySearch	12.73	9.700	.360	.138	.479
RQ14 Do not read setup planning books	12.78	10.131	.261	.097	.538
RQ16 No Plans to start	12.62	10.013	.357	.131	.483
RQ18 Classroom Activity Exclusively	12.67	9.455	.312	.108	.509

5.7 Multiple Regression Analysis

A standard multiple regression model was conducted, the model summary results are presented in the table below. Interpretation of the results tell us how of the variance in the dependant variable (Entrepreneurial Intent) is explained by the model. According to the test performed 51.5% of the variables explain the variance in entrepreneurial intent.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.718 ^a	.515	.256	.948

a. Predictors: (Constant), RQ20 Start up content, Q3 Curriculum Focus on Entrepreneurial Activity, RQ11 OpportunitySearch, Q2 Integrated Curriculum, Q6 Experiential Learning in Curriculum, Q19 Basic Awareness, Q13 Start up Saving, Q8Enhance Curriculum, RQ18 Classroom Activity Exclusively, RQ14 Do not read setup planning books, Q17 Time Spent on Start Up, RQ16 No Plans to start, Q7 Entrepreneurial Career Promotion, Q4 Curriculum Start up knowledge, Q5 Curriculum Practical Exposure

b. Dependent Variable: Q1 Intentions to Start A Business

Regression model for the individual models for the individual measurement scales of leaner satisfaction with entrepreneurship curriculum (model1) and soft skills development (model 2) are presented in table 5-xxx followed by ANOVA scores for both models presented in table 5-xxx

Model Summary^c

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618 ^a	.381	.300	.919
2	.645 ^b	.416	.262	.944

a. Predictors: (Constant), Q17 Time Spent on Start Up, Q7 Entrepreneurial Career Promotion, Q3 Curriculum Focus on Entrepreneurial Activity, Q8Enhance Curriculum, Q4 Curriculum Start up knowledge

- b. Predictors: (Constant), Q17 Time Spent on Start Up, Q7 Entrepreneurial Career Promotion, Q3 Curriculum Focus on Entrepreneurial Activity, Q8 Enhance Curriculum, Q4 Curriculum Start up knowledge, Q2 Integrated Curriculum, Q6 Experiential Learning in Curriculum, Q19 Basic Awareness, Q5 Curriculum Practical Exposure
- c. Dependent Variable: Q1 Intentions to Start A Business

5.7.1 Multicollinearity Diagnosis

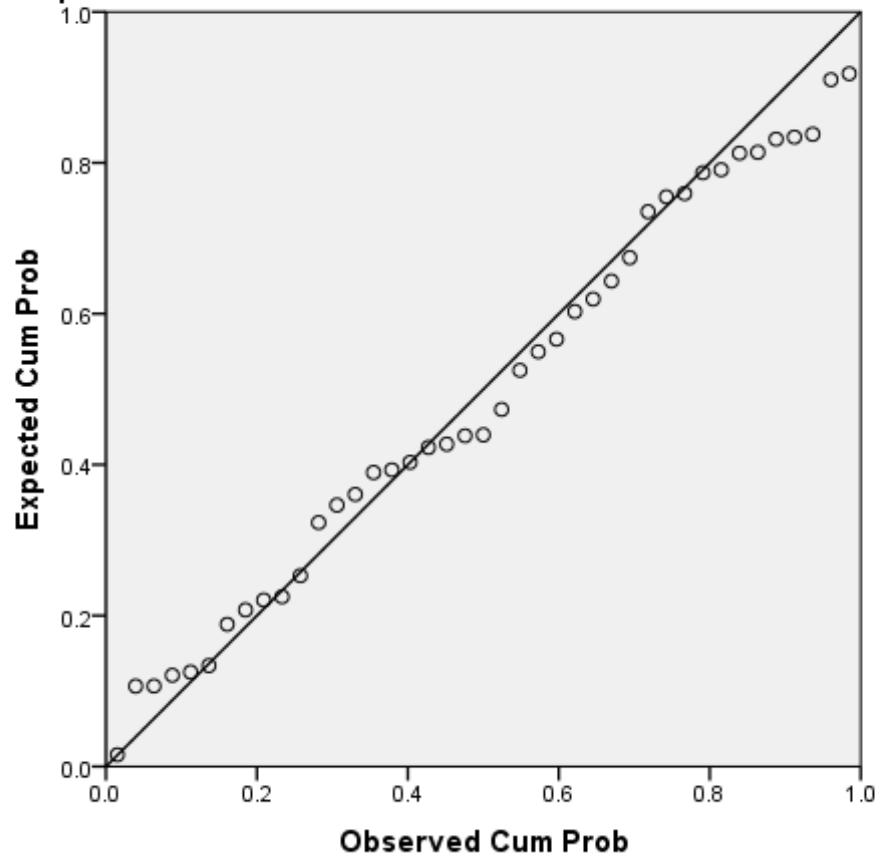
From the correlations table the data was inspected to checked to show some relationship between the independent variables and the dependent variable, variables with correlations of above 0.3 were observed and showed substantial correlation with the dependant variable namely Entrepreneurial intent. The data was also visually checked for correlations between independent variables that there were not too high, none of the correlations were above 0.7.

The SPSS software also performs collinearity diagnosis as part of the multiple regression procedure. This can pick up problems with multi-collinearity that may be evident in the correlation matrix, the results of this test has been presented the coefficients table as shown on appendix 9.4. The measures of multi-collinearity are represented by the Tolerance and Variance Inflation Factor (VIF) , no values of less 0.10 have identified for Tolerance and no values above 10 for VIF therefore indicating that there is no multi-collinearity in the variables. It can be concluded that the variables and the data presented can be used to show the relationship with the entrepreneurial intent and no other dependant variable has been picked up.

5.7.2 Normality Testing

From the normal probability plot it can be observed that the points lie reasonably along the diagonal thus suggesting no major deviations from normality.

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: Q1 Intentions to Start A Business



5.8 Results for Hypothesis 1

Entrepreneurial Intent (EI) was regressed against the learner satisfaction with entrepreneurship education curriculum (LS) scale. The model resulted in a R square value of 0.381 which can be interpreted as 38.1 % variation in entrepreneurial intent. The model output a F-statistic of 4.686 and a significance value of 0.002 as presented in table 5-xxx

Model Summary ^c				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.618 ^a	.381	.300	.919
a. Predictors: (Constant), Q17 Time Spent on Start Up, Q7 Entrepreneurial Career Promotion, Q3 Curriculum Focus on Entrepreneurial Activity, Q8Enhance Curriculum, Q4 Curriculum Start up knowledge				
c. Dependent Variable: Q1 Intentions to Start A Business				

The alpha value for this test was preset at 0.05 based on this result the p value of 0.002 is less than alpha of 0.05 therefore the null hypothesis is not supported.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.784	5	3.957	4.686	.002 ^b
	Residual	32.086	38	.844		
	Total	51.870	43			

a. Dependent Variable: Q1 Intentions to Start A Business

b. Predictors: (Constant), Q17 Time Spent on Start Up, Q7 Entrepreneurial Career Promotion, Q3 Curriculum Focus on Entrepreneurial Activity, Q8Enhance Curriculum, Q4 Curriculum Start up knowledge

Further analysis indicates a beta co-efficient of 5.833 with a significance of 0.00 for the regression analysis between entrepreneurial intent and curriculum. The results of this analysis supports the hypothesis that the curriculum has a positive effect on entrepreneurial effect. Although the hypothesis can be

supported the strength of the relationship is relatively low due to the lower F-statistic value.

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	5.833	.609		9.575	.000	4.600	7.066
Q3 Curriculum Focus on Entrepreneurial Activity	.214	.127	.246	1.690	.099	-.042	.471
Q4 Curriculum Start up knowledge	-.103	.138	-.130	-.744	.461	-.383	.177
Q7 Entrepreneurial Career Promotion	-.243	.182	-.217	-1.337	.189	-.612	.125
Q8 Enhance Curriculum	-.297	.155	-.286	-1.915	.063	-.610	.017
Q17 Time Spent on Start Up	-.237	.123	-.295	-1.923	.062	-.486	.013

5.9 Results for Hypothesis 2

Results from the regression analysis of soft skills development against entrepreneurial intent are presented in table 5-xxx . Interpretation of the model summary outputs a R square value of 0.508 which means only 5.8 % variation in entrepreneurial intent can be observed.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.242 ^a	.058	-.038	1.119

a. Predictors: (Constant), Q19 Basic Awareness, Q2 Integrated Curriculum, Q6 Experiential Learning in Curriculum, Q5 Curriculum Practical Exposure

b. Dependent Variable: Q1 Intentions to Start A Business

Output of the ANOVA results have generated a F- statistic of 0.605 with significance level of 0.662. The p-value for this analysis is significantly larger than the alpha setting of 0.05, therefore the null hypothesis can be supported.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3.028	4	.757	.605	.662 ^b
	Residual	48.842	39	1.252		
	Total	51.870	43			

a. Dependent Variable: Q1 Intentions to Start A Business

b. Predictors: (Constant), Q19 Basic Awareness, Q2 Integrated Curriculum, Q6 Experiential Learning in Curriculum, Q5 Curriculum Practical Exposure

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	4.714	.783		6.021	.000	3.130	6.297
Q2 Integrated Curriculum	-.151	.196	-.127	-.769	.446	-.547	.246
Q6 Experiential Learning in Curriculum	-.118	.144	-.133	-.821	.417	-.410	.173
Q5 Curriculum Practical Exposure	-.042	.139	-.053	-.304	.762	-.324	.240
Q19 Basic Awareness	-.053	.160	-.054	-.331	.743	-.376	.271

5.10 Results for Hypothesis 3

Results from the regression analysis of attitude towards entrepreneurial career against entrepreneurial intent are presented in table 5-xxx . Interpretation of the model summary outputs a R square value of 0.316 which means 31.6 % variation in entrepreneurial intent can be observed.

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.562 ^a	.316	.228	.965

a. Predictors: (Constant), RQ18 Classroom Activity Exclusively, RQ14 Do not read setup planning books, Q13 Start up Saving, RQ16 No Plans to start, RQ11 OpportunitySearch

b. Dependent Variable: Q1 Intentions to Start A Business

Output of the ANOVA results have generated a F- statistic of 3.602 with significance level of 0.009. The p-value for this analysis is significantly less than the alpha setting of 0.05, therefore the null hypothesis is not supported.

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.768	5	3.354	3.602	.009 ^b
	Residual	36.309	39	.931		
	Total	53.077	44			

a. Dependent Variable: Q1 Intentions to Start A Business

b. Predictors: (Constant), RQ18 Classroom Activity Exclusively, RQ14 Do not read setup planning books, Q13 Start up Saving, RQ16 No Plans to start, RQ11 OpportunitySearch

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
1 (Constant)	5.595	.653		8.568	.000	4.274	6.916
Q13 Start up Saving	-.290	.136	-.304	-2.140	.039	-.565	-.016
RQ11 OpportunitySearch	.103	.130	.113	.794	.432	-.159	.365
RQ14 Do not read setup planning books	-.204	.120	-.239	-1.707	.096	-.446	.038
RQ16 No Plans to start	-.346	.135	-.365	-2.570	.014	-.619	-.074
RQ18 Classroom Activity Exclusively	.062	.112	.078	.556	.581	-.165	.290

5.11 Summary of Results

The results can be summarised as follows:

Hypothesis 1	Learner satisfaction with the entrepreneurship curriculum has a positive effect on entrepreneurial intentions for FET College students.	Supported
Hypothesis 2	Inclusion of experiential learning and practical exposure in the teaching and delivery methods has a positive effect on entrepreneurial intent.	Not Supported
Hypothesis 3	Entrepreneurship education at FET College has a positive effect in promoting entrepreneurship as a career choice.	Supported

6 DISCUSSION OF RESULTS

6.1 Introduction

The purpose of this chapter is to discuss the implication of the results presented in chapter 5 by comparing the research findings against the literature survey. The chapter is concluded by a discussion of research implication of findings to the key stakeholders.

6.2 Discussion of Hypothesis 1

Hypothesis 1 was developed to test whether the learners were satisfied with the entrepreneurship curriculum presented to them at the colleges. The available literature suggests that entrepreneurship education can update the participant beliefs towards entrepreneurial behaviour.

Hypothesis 1 measurement instrument comprised five different variables, strong inter item correlation was observed and a good reliability scale was also measured. The data analysis indicated a 38 % variance within in predicting influence in entrepreneurial intent.

The data presented suggests some level of satisfaction exists with the entrepreneurship curriculum presented at the FET colleges. The variables included questions which they had to indicate they satisfaction on learning about the start up process and training on entrepreneurial activities.

The study by Fretschener & Weber (2013) stated that a configuration of motivational antecedents and corresponding beliefs can be altered by educational interventions. Fretschener & Weber (2013) recommend a two pronged education model that focused on entrepreneurial activities and start up process. In addition, they concluded that the course induced process of updating the learners beliefs is crucial to allow the student to make a decision on whether an entrepreneurial career is suitable for them or not.

The data presented in this study confirms that a combination of start-up knowledge and training on entrepreneurial activities in the entrepreneurship curriculum has a significant influence on entrepreneurial intent.

6.3 Discussion of Hypothesis 2

Hypothesis 2 was developed to test the influence of experiential learning and practical exposure on entrepreneurial intent.

Results of the analysis suggests that experiential learning and practical exposure has no effect on entrepreneurial intent for the sample tested. This result is surprising as the curriculum structure and teaching guidelines are inclined to a more outcomes based education. However the respondents in this study demonstrated that either the current experiential learning activities are not significant in enhancing their level of entrepreneurial education.

The literature however indicates that experiential learning is an important factor. Lugar-Brettin (2013) for example states that translation of best practises associated with firm levels ought to be incorporated into the course learning objectives. Politis (2005) encourages a process of experiential learning as it builds entrepreneurial knowledge in terms of effectiveness in recognising and acting on entrepreneurial opportunities. Politis (2005) acknowledges that entrepreneurship is primarily learned by experience and discovery. Politis (2005) further adds that experience relevant for entrepreneurial knowledge not only involves actual start-up of a new venture but also entails understanding of preparatory activities that enable the venture to be started; therefore policies aimed at stimulating entrepreneurship activities should focus on making entrepreneurship more attractive as a career.

Neck & Greene (2011) argue that teaching entrepreneurship as a process is dated; it ought to be taught as a method. The motivation for teaching entrepreneurship as a method is to give real work experience, simulation of the operating environment and as a design based learning.

Findings from the data analysis are not consistent with the literature reviewed. This may suggest that further investigation into experiential learning at colleges is required or the learners see no value in the current experiential learning programs.

6.4 Discussion of Hypothesis 3

The data from this study suggests that Entrepreneurship education at FET College has a positive effect in promoting entrepreneurship as a career choice. Given the total entrepreneurial activity scores, this result is surprising. However it is also acknowledged the purpose of this study was to understand the relationship with entrepreneurial intent and not entrepreneurial behaviour.

6.5 Concluding Remarks

The combined results of this study implies that there is a positive relationship between entrepreneurship education and entrepreneurial intent at FET colleges. The literature that encourages a combination of learning the start-up process and entrepreneurial activity is well supported. In addition, the entrepreneurship education program seems to have a positive relationship in promoting entrepreneurial career.

What remains a concern however is that the level of experiential learning and practical exposure was rated relatively lower than expected. There may be other factors that contribute to this result. Within this study the measure of reliability was not sufficient in making a significant conclusion.

7 RESEARCH CONCLUSIONS

7.1 Introduction

The purpose of this research was to investigate the impact of entrepreneurship education on entrepreneurial intent at FET colleges. The background to the study is guided by the action plans detailed in the national development plan to increase the capacity of the post college sector and the drive to improve early stage entrepreneurial training. South Africa fares poorly in total entrepreneurial activity. Education has been cited as one of constraints in improving the level of entrepreneurial activity. Herrington & Kew (2014) observed a positive correlation between opportunity driven entrepreneurship and levels of education in the GEM 2013 study.

The literature review on entrepreneurship education learning and teaching framework, measurement of entrepreneurial intent and the impact of entrepreneurship suggest that entrepreneurship programs have a positive impact on entrepreneurial behaviour. Although no specific entrepreneurship education frameworks were found by the researcher, the entrepreneurship education model by Fretschener & Weber (2013) was found to be the most appropriate for this study. Fretschener & Weber (2013) recommend a two pronged entrepreneurship education program that is focused on entrepreneurship awareness education and start-up education. Incorporation of experiential learning and development of entrepreneurial soft skills have been encouraged in improving the effectiveness of entrepreneurship education.

Conclusions drawn from the literature survey indicate that entrepreneurship education may have a positive effect in improving the entrepreneurial intent. This study was then initiated to gain a better understanding of the relationship between the entrepreneurial intent and entrepreneurship education and training offered at FET colleges. The study has contextual value and urgency for both business and academia given the level of youth unemployment, quality of

education and South Africa's below average Total Entrepreneurial Activity (TEA) rate.

The preceding chapter of this report detail the specific research questions and hypothesis for the study, the research methodology, presentation and discussion of results from the study. The purpose of this chapter is to revisit the research objectives, provide a summary of the key findings, implications of the research findings and recommendations to key stakeholders. The chapter is concluded by a discussion the research limitations and recommendations for future research.

7.2 Research Objectives

The intention of this study was not to enter the debate on why entrepreneurship can or cannot be taught, instead to build on the posit that entrepreneurship education influences perception and motivation to be entrepreneurial. The study examined the quality of entrepreneurship education and training at FET colleges with the specific objectives listed as follows:

- i. Evaluating the curriculum structure of entrepreneurship education programmes at colleges in meeting the requirements of the learners enrolling in entrepreneurship programmes
- ii. Exploring the delivery methods of entrepreneurship programs
- iii. Measuring the effect of the education programs when compared to entrepreneurial intent of the learners

The three research questions addressed by the study are:

Research Question 1: How is the entrepreneurship education curriculum structure at FET Colleges aligned with the best practices for entrepreneurship development?

Research Question 2: How effective are the teaching and delivery methods in promoting entrepreneurship as a career choice? Does incorporation of

experiential learning and practical exposure have an influence on entrepreneurial intentions?

Research Question 3: What is the attitude of the college learners towards entrepreneurship as a career choice after being exposed to the entrepreneurship education programs at the FET Colleges?

Research Hypothesis based on the research questions were developed and presented as follows:

Hypothesis 1: Learner satisfaction with the entrepreneurship curriculum has a positive effect on entrepreneurial intentions for FET College students.

Hypothesis 2: Inclusion of experiential learning and practical exposure in the teaching and delivery methods has a positive effect on entrepreneurial intent.

Hypothesis 3: Entrepreneurship education at FET College has a positive effect in promoting entrepreneurship as a career choice.

7.3 Summary of Key Findings

A quantitative analysis study was done using self reporting questionnaires as data collection instrument. Non probability sampling was employed in particular judgment sample made up of FET college learners enrolled for national diploma in business studies and have completed the entrepreneurship course. A total of 47 respondents were received and data was analysed using SPSS version 22.

A summary of the hypothesis testing results are presented in table 7-1

Hypothesis 1	Learner satisfaction with the entrepreneurship curriculum has a positive effect on entrepreneurial intentions for FET College students.	Supported
Hypothesis 2	Inclusion of experiential	Not Supported

	learning and practical exposure in the teaching and delivery methods has a positive effect on entrepreneurial intent.	
Hypothesis 3	Entrepreneurship education at FET College has a positive effect in promoting entrepreneurship as a career choice.	Supported

7.4 Implications of Research Findings

The combined results of this study implies that there is a positive relationship between entrepreneurship education and entrepreneurial intent at FET colleges. The literature that encourages a combination of learning the start-up process and entrepreneurial activity is well supported. In addition, the entrepreneurship education program seems to have a positive relationship in promoting entrepreneurial career.

What remains a concern however is that the level of experiential learning and practical exposure was rated relatively lower than expected. There may be other factors that contribute to this result. Within this study the measure of reliability was not sufficient in making a significant conclusion.

7.5 Research Limitations

The study was limited to Gauteng and did not get full responses. A much larger sample would have aided the analysis.

7.6 Suggestions for Future Research

Investigation into experiential learning at FET colleges

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9 APPENDICES

9.1 Appendix 2: Survey Questionnaire

Number	Question					
1	When do you intend to set up your own business, having completed/on completion of your FET College 'entrepreneurship' curriculum?	Within 6 – 12 months	Within 1 – 2 years	Within 3 – 5 years	After 5 years	Never
2	The FET College 'entrepreneurship' curriculum is integrated rather than a stand- alone programme	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
3	The FET College 'entrepreneurship' curriculum should be focused on entrepreneurial activity and should therefore be a stand- alone programme	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
4	The FET College 'entrepreneurship' curriculum has given me the knowledge to start up my own business	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
5	The FET College 'entrepreneurship' curriculum is designed to offer me practical exposure to starting up of business	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
6	The FET College 'entrepreneurship' curriculum allows for experiential learning	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
7	The FET College 'entrepreneurship' curriculum assists me to pursue entrepreneurial activity rather than job seeking	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
8	The FET College 'entrepreneurship' curriculum needs to be enhanced to assist me to pursue entrepreneurial activity	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
9	How often do you do planning for your future as an Entrepreneur?					
10	How frequently do you read news	Daily	Weekly	Monthly	Not	Never

	on entrepreneurship and self-employment?				often	
11	I never search for business start-up opportunities	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
12	How frequently to read financial planning books?	Daily	Weekly	Monthly	Not often	Never
13	I am saving to start a small business	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
14	I DO NOT read books on how to set up a company	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
15	I plan my finances carefully	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
16	I have no plans to start my own business	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
17	I spend time learning about starting my own business	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
18	The FET College 'entrepreneurship' curriculum is focused only on classroom activity	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
19	The FET College 'entrepreneurship' curriculum is focused on basic entrepreneurship awareness	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree
20	The FET College 'entrepreneurship' curriculum has little to no content on business start-up process	Strongly Disagree	Disagree	Neither Agree / Disagree	Agree	Strongly Agree

Thank you for your participation, please indicate the following:

Gender..... Age.....

9.2 Correlation coefficients

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q13	Q17	Q19	RQ11	RQ14	RQ16	RQ20	RQ18	
Correlation	Q1	1.000	-.174	-.004	-.379	-.141	-.176	-.370	-.454	-.318	-.418	-.101	-.080	-.317	-.438	-.019	-.092
	Q2	-.174	1.000	.119	.194	.318	.185	-.035	.093	-.069	.089	.103	-.134	.001	-.131	-.156	-.359
	Q3	-.004	.119	1.000	.417	.585	.255	.391	.193	.132	.188	.287	-.026	-.309	.066	.031	.125
	Q4	-.379	.194	.417	1.000	.523	.138	.444	.334	.435	.542	.186	.217	.151	.342	.127	.115
	Q5	-.141	.318	.585	.523	1.000	.239	.449	.244	.231	.326	.299	.004	-.036	-.091	-.031	.154
	Q6	-.176	.185	.255	.138	.239	1.000	.258	.300	.009	.058	.139	-.083	-.258	.167	.058	.142
	Q7	-.370	-.035	.391	.444	.449	.258	1.000	.495	.356	.168	.199	.190	-.020	.328	.116	.088
	Q8	-.454	.093	.193	.334	.244	.300	.495	1.000	.012	.218	.053	.139	.270	.580	.226	.115
	Q13	-.318	-.069	.132	.435	.231	.009	.356	.012	1.000	.432	.211	.281	.037	.156	-.164	.256
	Q17	-.418	.089	.188	.542	.326	.058	.168	.218	.432	1.000	.361	.379	.131	.288	.069	.022
	Q19	-.101	.103	.287	.186	.299	.139	.199	.053	.211	.361	1.000	.047	-.259	-.078	-.164	.018
	RQ11	-.080	-.134	-.026	.217	.004	-.083	.190	.139	.281	.379	.047	1.000	.209	.203	.057	.201
	RQ14	-.317	.001	-.309	.151	-.036	-.258	-.020	.270	.037	.131	-.259	.209	1.000	.277	.136	.139
	RQ16	-.438	-.131	.066	.342	-.091	.167	.328	.580	.156	.288	-.078	.203	.277	1.000	.379	.225
	RQ20	-.019	-.156	.031	.127	-.031	.058	.116	.226	-.164	.069	-.164	.057	.136	.379	1.000	-.069
	RQ18	-.092	-.359	.125	.115	.154	.142	.088	.115	.256	.022	.018	.201	.139	.225	-.069	1.000
Sig. (1-tailed)	Q1		.127	.488	.004	.175	.121	.006	.001	.016	.002	.249	.296	.015	.001	.448	.272
	Q2	.127		.219	.100	.017	.114	.411	.274	.329	.281	.249	.191	.497	.196	.153	.008
	Q3	.488	.219		.002	.000	.043	.004	.099	.191	.103	.025	.432	.017	.330	.419	.205
	Q4	.004	.100	.002		.000	.179	.001	.012	.001	.000	.106	.071	.155	.009	.197	.223
	Q5	.175	.017	.000	.000		.057	.001	.053	.063	.014	.022	.489	.406	.273	.419	.155
	Q6	.121	.114	.043	.179	.057		.044	.023	.477	.352	.178	.292	.042	.133	.351	.176
	Q7	.006	.411	.004	.001	.001	.044		.000	.008	.132	.092	.103	.448	.013	.222	.282
	Q8	.001	.274	.099	.012	.053	.023	.000		.468	.073	.363	.179	.035	.000	.065	.225
	Q13	.016	.329	.191	.001	.063	.477	.008	.468		.001	.079	.029	.404	.150	.138	.045
	Q17	.002	.281	.103	.000	.014	.352	.132	.073	.001		.006	.004	.189	.025	.323	.443
	Q19	.249	.249	.025	.106	.022	.178	.092	.363	.079	.006		.376	.039	.300	.135	.454
	RQ11	.296	.191	.432	.071	.489	.292	.103	.179	.029	.004	.376		.080	.085	.353	.090
	RQ14	.015	.497	.017	.155	.406	.042	.448	.035	.404	.189	.039	.080		.030	.181	.179
	RQ16	.001	.196	.330	.009	.273	.133	.013	.000	.150	.025	.300	.085	.030		.004	.067
	RQ20	.448	.153	.419	.197	.419	.351	.222	.065	.138	.323	.135	.353	.181	.004		.324
	RQ18	.272	.008	.205	.223	.155	.176	.282	.225	.045	.443	.454	.090	.179	.067	.324	

a.

Determinant

= .002

9.3 Appendix 4: Collinearity Diagnostics

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	6.848	1.243		5.508	.000	4.301	9.395					
Q2	-.266	.207	-.224	-	.209	-.690	.158	-.174	-.236	-	.570	1.754
Q3	.108	.163	.123	.662	.513	-.225	.441	-.004	.124	.087	.499	2.003
Q4	-.021	.160	-.026	-.129	.898	-.348	.307	-.379	-.024	-	.424	2.361
Q5	.179	.186	.222	.959	.346	-.203	.560	-.141	.178	.126	.323	3.092
Q6	-.060	.142	-.067	-.423	.675	-.350	.230	-.176	-.080	-	.688	1.454
Q7	-.377	.231	-.336	-	.114	-.850	.097	-.370	-.294	-	.407	2.460
Q8	-.158	.207	-.152	-.761	.453	-.582	.267	-.454	-.142	-	.434	2.306
RQ11	.211	.141	.232	1.491	.147	-.079	.500	-.080	.271	.196	.716	1.396
Q13	-.098	.172	-.102	-.568	.575	-.450	.254	-.318	-.107	-	.536	1.865
RQ14	-.177	.148	-.208	-	.242	-.481	.127	-.317	-.220	-	.573	1.746
RQ16	-.103	.203	-.108	-.506	.617	-.519	.313	-.438	-.095	-	.378	2.649
Q17	-.304	.163	-.378	-	.072	-.637	.029	-.418	-.333	-	.422	2.369
RQ18	-.092	.143	-.115	-.644	.525	-.384	.200	-.092	-.121	-	.542	1.846
Q19	.010	.154	.011	.068	.946	-.306	.327	-.101	.013	.009	.697	1.436
RQ20	.092	.161	.089	.570	.573	-.238	.422	-.019	.107	.075	.715	1.399

a. Dependent Variable: Q1 Intentions to Start A Business