The effectiveness of entrepreneurship education in the selected high schools, TVET colleges and public universities in Kwa-Zulu Natal Province

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DECLARATION

This work has not been previously accepted for any Doctoral Degree, and is not being concurrently submitted for any other Doctoral Degree.

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DATE: 2022/09/09

This submission is the results of my own independent work/investigation, except where otherwise stated. Other sources are acknowledged giving explicit references.

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DEDICATION

I dedicate this work to:

- God for granting me the mental and physical strength to carry out this study.

- My parents, Mr. NJ Ncube and my late Mother Mrs. F Ncube. You are the best! You taught me life and I will live by your instructions, Mzilankatha!

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I wish to heartily acknowledge God Almighty for his wisdom and direction all through this research project. Heavenly Father, you have walked me through some troublesome paths and guided me through trials and tribulations that I never thought I will see myself through. You truly blessed me. I Thank You Lord.

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It takes a village!!!

ABSTRACT

People around the world are increasingly seeing entrepreneurship is an avenue to create wealth, stimulate economies, and fulfil self-employment hopes. Entrepreneurship has also become a powerful tool for creating jobs and improving economic conditions in the labour market and economy as a whole. Moreover, with the advent of the Fourth Industrial Revolution, a variety of additional competencies involving creativity, innovation, and agility are required for young entrepreneurs. Many South African government educational institutions are currently considering embedding entrepreneurship education within their curricula. Considering the shifting entrepreneurial environment, teaching staff (educators, lecturers, and instructors) must constantly be adjusting the educational practices, procedures, and curricula to ensure the best outcomes for future entrepreneurs. Public institutions of learning (PILs) need to entice students through programmes that are relevant. As the entrepreneurial environment has changed, so have the expectations of educational programmes. This study therefore seeks to evaluate the current effectiveness of entrepreneurship education in PILs in KwaZulu-Natal – secondary education; technical, vocational and training (TVET) colleges and universities.

South Africa as a developing country has a high rate of unemployment, while the failure rate of start-up businesses is also high. These issues have triggered the South African government's efforts to help solve the unemployment crisis through the promotion of entrepreneurship. Critical questions remain, however, such as whether entrepreneurship education in PILs is effective enough to develop an entrepreneurship mind-set in students, and how effectively these institutions can influence students to value self-employment and create their own businesses rather than remain job seekers. In addition, interest and investment in entrepreneurship education are increasing in all PILs from secondary schools to graduate schools. This entrepreneurship education has become important in tandem with the demand of students seeking a business education that can provide the necessary competencies to succeed in an increasingly diverse and complex management environment. The current critical situation concerning entrepreneurship in the country motivated this study.

The study applies a mixed method inductive approached to capture the effectiveness of entrepreneurship education from the perspective of teaching staff and students in PILs. Separate questionnaires for teaching staff and for students, each contained quantitative and qualitative (interview-type) questions which respondents were asked to complete independently (self-administered). These were followed by interviews which the researcher conducted with each individual (both students and instructors) face-to-face. The data collection process would thus result in both qualitative and quantitative responses, and two qualified statisticians were employed to analyse the data - one being responsible for the quantitative analysis, and one for the qualitative analysis of the interview questions. The study involved identifying the factors in teaching and learning entrepreneurship including attitudes, level of awareness, barriers to inclusion and effectiveness. Non-probability purposive sampling techniques were used. The total population of the study was 758 and the sample size was 256 which was determined through Krejcie and Morgan (1970) Table (Sample size Table). The 256 participants who made up the units of analysis for this study; consist of 100 academics who teach entrepreneurial studies and 156 final year students in the Departments of Management and Entrepreneurship Studies or Business Studies from PILs in Kwa-Zulu Natal. A response rate of 85% was achieved. An inductive thematic analysis was used to analyse the data obtained from interview questions. The study was underpinned by different applicable entrepreneurship education theoretical frameworks, including principally the Theory of Planned Behaviour by Ajzen (1991) that guided the choice of instrument and the development and results of the study. The findings reveal that PILs lack an inclusive model that meets the quality standards required for successful teaching of entrepreneurship despite the dedication of many instructors. Resource constraints were identified by both staff and students as serious inhibiting factors including especially a lack of experienced and trained teachers of entrepreneurship.

The insights gained from the intensive interviewing of both educators and students ensured strong qualitative data findings from each university and representative TVET colleges and high schools in the province. It was established that the current curricula are not able to guarantee the acquisition of an entrepreneurial mind-set amongst students of entrepreneurship despite the dedication of many educators and students. The ‘theory of planned behaviour’ illuminated this investigation and this conclusion.

Without more resources and more, and better trained, educators, fully appraised of the requirements for developing an entrepreneurial mind-set, it cannot yet be claimed that PILs are able to make the contribution to economic growth and job creation which is the potential for this form of education. The theory was supported with a further dimension suggested.

This information will be valuable for educators and policy makers within government institutions at high school and higher education levels. While the findings of the study are not generalizable beyond the Province of Kwa-Zulu Natal (KZN), the identical syllabi for government high schools and TVET colleges and the similarity in context between KZN other provinces of South Africa will make them of interest to educators and to policy makers throughout the country.

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1.1 INTRODUCTION

While public institutions of learning (PILs) have realised the value of entrepreneurship in the creation of new jobs and the development of the economy, it is not clear whether the significant investment in entrepreneurship education is able really to improve entrepreneurial competencies. Entrepreneurship is understood to be a means of increasing employment and encouraging economic growth, especially in developing countries (Littlewood and Holt 2018; Ncube and Zondo 2018: 1; Waghid 2019; Kariv, Cisneros and Ibanescu 2019; Marsh 2019; Asghar *et al.* 2019). Educational institutions in South Africa have therefore taken significant steps to integrate entrepreneurship education into academic curricula, including the introduction of theoretical courses on entrepreneurship for both undergraduate and graduate students, and the introduction of activities promoting entrepreneurship in order to encourage students to see entrepreneurship as a viable career option. Most of the programmes have been established in business or commercial departments (Littlewood and Holt 2018; Marsh 2019) but there appears to be a need for more multi-disciplinary and practically oriented pedagogies (Solomon, Alabduljader and Ramani 2019).

The South African Technology Network (SATN) emphasises the need to embed graduate attributes, and especially “entrepreneurship education”, into the curricula of universities and TVET colleges to develop South Africans’ entrepreneurial and innovative capabilities. According to Belitski and Heron (2017) and Ustav and Venesaar (2018), entrepreneurship education is one of the major forces that can determine the development of an economy. However, “South Africa is not taking advantage of its entrepreneurial potential” according to Bauman and Lucy (2019: 1).

Entrepreneurship courses in PILs seek to provide emerging entrepreneurs with the tools to bring their ideas to fruition, and to provide students with the ability to gain an overview of their careers and opportunities as a whole (Mashau, Fields and Nyawo 2019). Some studies suggest the compulsory initiation of entrepreneurship education

integration early into the curricula of PILs (Ismail, Sawang and Zolin 2018) although this has not taken place. Moreover, many graduates complain that their degree courses are too theoretical, denying them the relevant practical skills to enable them to explore wider opportunities. Chimucheka (2014: 411) argues that there is a "strong need to invest in developing curricula as well as developing the capacity of facilitators to deliver, using entrepreneurship models in teaching".

South Africa's economy has shown some growth but this has been insufficient to reduce poverty and social economic imbalance, or to improve employment (Littlewood and Holt 2018: 532; Brière, Tremblay and Daou 2014; Marsh 2019). The South African government has adopted the idea of a knowledge economy where entrepreneurship education will help to produce the professionals required for the development of the country's economy (Chimucheka 2014: 411). Incorporating entrepreneurship education into the curricula of PILs has been seen as a way to expose graduates to the entrepreneurial mind-set and the range of competencies that are necessary in the global labour market (Edwards-Schachter *et al.* 2015; Iwu *et al.* 2019). However, such an approach requires a supportive policy context (Littlewood and Holt 2018).

Various educational institutions in South Africa and globally have already introduced entrepreneurship education into their programmes, but there is little research and no certainty regarding how these institutions should go about optimally incorporating entrepreneurship into the curricula and programmes already in place (Iwu *et al.* 2019; Waghid 2019) with the particuar goal of inculcating an 'entrepreneurial mind-set' which is open to taking risks and empowered to embark on starting a business venture. Ahmad and Buchanan (2015: 361) ask: "Should entrepreneurship in these institutions be integrated as a module, as a full subject, or an extra-curricular short course? Are there in fact some fields of study in which it is not necessary?" Chimucheka (2014) and Bauman and Lucy (2019: 2) respond to this question in the affirmative, stating that such education should involve all students regardless of their majors, in order to improve their competitive advantage and for the benefit of society as a whole. Unfortunately, entrepreneurship is often delivered through a normative theory-based approach. According to Rideout and Gray (2013); and Ustav and Venesaar (2018) a more appropriate approach is a programmatic approach which considers the context and is responsive to that, and which is therefore more experiential. Typically, students are only furnished with knowledge about entrepreneurship in order to enhance their

traditional business management knowledge and skills (Boi 2018: 54; Waghid 2019). Nowadays entrepreneurship education to be effective must consider a range of factors including enhanced teaching and learning facilities, appreciation of social and cultural influences, and curriculum renewal, according to Solomon, Alabduljader and Ramani (2019) and Waghid (2019).

1.2 BACKGROUND TO THE RESEARCH

“It might be expected that entrepreneurship education is already well established with a clear framework and specific theories. However, this has not happened so far, and the area needs further research” (Ramchander 2019: 3). Entrepreneurship programs in PILs are a recent innovation (Mustapha and Selvaraju 2015: 155; Bauman and Lucy 2019) and it has been suggested that more research is needed particularly in terms of types, objectives and outcome of these courses. Kuratko & Morris, (2018) and Ramchander (2019: 3) also suggest that more clarity is required on the ways we educate our entrepreneurs. Hence this research represents an attempt to clarify debates on whether entrepreneurship education may play a role in developing entrepreneurial mind-sets and may help to identify characteristics which positively influence entrepreneurial intention in South Africa where the problem of graduate unemployment has become a major issue (Chimucheka 2014; Fatoki 2018).

There has been an increase in the number of higher education institutions both public and private, and an increase in the number of students enrolled, resulting in a huge increase in the number of graduates, which means that a large number will inevitably be unsuccessful in their job searches (Mashau, Fields and Nyawo 2019). Development of entrepreneurial competencies can change this by producing “job providers and not just job seekers” (Ahmad and Buchanan 2015: 351). However, the majority of graduates currently lack the self-confidence needed to start up a business. (This is less the case with the minority of graduates who have been through private schools) (Oluwajodu *et al.* 2015). Harrington and Maysami (2015) believe that investing in entrepreneurship education is one of the best strategic approaches, which may capacitate and advance human resources in order to promote the socio-economic development of a country.

During the colonial era students were trained largely to fill gaps in the types of employment needed at the time, meaning that students were educated with a view to the available labour market rather than as entrepreneurs (Chimucheka 2014; Wilson and Alebeek 2017). This is still influencing education according to Littlewood and Holt (2018: 533). However, the inability of many young people in the country to access paid employment during and after they have graduated calls for the need for entrepreneurship education (Urban 2016).

A key contributor to the vulnerability of youth in SA and their job discouragement is the nature of the skills, knowledge and competences students acquire at school, which are generally inadequate to finding a job or employment (Marsh 2019). According to Fulgence (2015), this is due to lack of appropriate curriculum content. According to Baldry (2015), South Africa has the lowest number of entrepreneurship education programmes in Africa. Littlewood and Holt (2018) indicate this is underpinned by an understanding that entrepreneurship is not a respectable profession as only 40% of South Africans believe building a business to be a desirable goal.

Akinbami (2015: 39) points out that the “entrepreneurial visions of many students are obstructed by inadequate training, lack of business knowledge and risk aversion”. South African society is challenged by many harsh realities including poverty, unemployment, conflict and diseases (Littlewood and Holt 2018: 526). These challenges call for the type of education which will prepare individuals to function appropriately in such a society (Fayolle and Gailly 2015: 77).

Oluwajodu *et al.* (2015) state that including entrepreneurial education from the early years of school study can help reduce unemployment of university graduates. It is suggested that SA youth need a mind-set shift from an educational system that emphasises that young people must engage in salaried employment after finishing their education. More specifically, this research evaluates the curriculum and its modules in PILs in order to assess if it is appropriately designed to develop a genuinely entrepreneurial mind-set and entrepreneurial competencies in students.

1.3 AIMS OF THE RESEARCH

Weinberger *et al.* (2018) note that there is existing research that found either a negative or negligible relationship between entrepreneurship education and an

entrepreneurship effectiveness. This study will test these findings and also explore existing curricula in further detail from the point of view of both students and teaching staff in order to establish the reasons for this conclusion and whether it still pertains. This study sets out to evaluate the extent to which the characteristics of entrepreneurship education curricula i.e. business plan activities, case studies, introduction of entrepreneurial networks, support and feedback provided by mentors or instructors, may influence entrepreneurial mind-sets and competencies. This research advocates re-curriculation at PILs in South Africa so as to include the knowledge, competencies and aptitudes needed to start a business.

This study therefore explores the factors obstructing effective implementation of entrepreneurship education in PILs in the province of KwaZulu-Natal (KZN), as well as the challenges in promoting entrepreneurship education in South African PILs.

1.3.1 Primary objective of the research

The aim of this research is therefore to evaluate the effectiveness of entrepreneurship education curricula in public institutions of learning in the province of KwaZulu-Natal.

To achieve this aim, the following secondary objectives will be addressed:

1.3.2 Secondary objectives

To achieve the primary objective, the study explored the following:

- To evaluate the effectiveness of entrepreneurship education curricula in PILs.
- To ascertain the PILs students' perception of the entrepreneurship education curricula offered in public institutions of learning in promoting entrepreneurial competencies.
- To ascertain the perceptions of teaching staff regarding the benefits and effectiveness of entrepreneurship education in PILs.
- To assess the nature of the competencies that entrepreneurship education promotes in PILs.
- To explore and examine the extent to which public institutions of learning support and promote entrepreneurial activity on campuses.

1.4 RESEARCH QUESTIONS

Arising from this research problem, the critical questions that this research asks are:

- How effective is entrepreneurship education curricula in PILs?
- What is the perception of PILs students about entrepreneurship education curricula and modules offered in public institutions of learning in terms of promoting entrepreneurship competencies?
- What is the perception of teaching staff about the benefits and effectiveness of the content of entrepreneurship education in PILs?
- What competencies does entrepreneurship education in PILs promote?
- To what extent do public institutions of learning support and promote entrepreneurial activity on campuses?

1.4.1 Hypotheses for the study

In aiming to describe the impact in accordance with the primary and secondary aims of this research, the researcher developed the following hypotheses.

Ho1: There is no relationship between entrepreneurship education and entrepreneurship effectiveness.

Ha1: There is a relationship between entrepreneurship education and entrepreneurship effectiveness.

Ho2: There is no relationship between curriculum offered in PILs and business start-ups

Ha2: There is a relationship between curriculum offered in PILs and business start-ups

Ho3: There is no relationship between how instructors perceive entrepreneurship education and its effectiveness in society

Ha3: There is a relationship between how instructors perceive entrepreneurship education and its effectiveness in society

Ho4: There is no relationship between skills and entrepreneurship education

Ha4: There is a relationship between skills and entrepreneurship education

Ho5: There is no relationship between the extent to which public institutions of learning actively support entrepreneurship education and the promotion of entrepreneurial activity on campuses

Ha5: There is a relationship between the extent to which public institutions of learning actively support entrepreneurship education and the promotion of entrepreneurial activity on campuses

1.5 RATIONALE FOR THE STUDY

From a job creation point of view, development of entrepreneurship education has been identified by the South African government as a top priority (Brière, Tremblay and Daou 2014: 19). However, Fatoki (2014: 296) found that the frequency with which people engage in entrepreneurial activities is in fact gradually dwindling. One of the reasons adduced for the decline by Chimucheka (2014) is a lack of effective entrepreneurial education. One vital area of study regarding small and medium business owners is that of determining the motivations behind individuals setting up their businesses in the first place. This driver, or motivation, provides a direction for further inquiry on the possible factors that lead to the success of small and medium businesses and to the success of entrepreneurial education.

This study of entrepreneurship education is therefore significant because it contributes to the literature base for PILs available to policy makers such as governments, curricula designers at PILs (private and public) and would-be entrepreneurs. This study has examined relevant pedagogies and strategies from a development perspective and consolidated them conceptually. The consolidation of these ideas can be considered for practical application in teaching.

The study summarises existing research by academics nationally and internationally and makes it locally accessible and applicable. In so doing, this research has the potential to be used as a benchmark or a standard. It provides an in-depth understanding of entrepreneurship education, and the effectiveness and development of entrepreneurship curricula in KwaZulu-Natal PILs. The findings of this study will increase understanding about the extent to which the characteristics of

entrepreneurship education curricula i.e. business plan activities, introduction of role models, introduction of entrepreneurial networks and feedback provided by mentors or entrepreneurship experts, induce an entrepreneurial mind-set. This study seeks to advance theoretical discussion in the area of the relationship between entrepreneurship education in PILs and entrepreneurship effectiveness, and to identify a practical relevance for the findings. The results might assist public PIL teachers and lecturers to determine the best factors that cultivate entrepreneurial mind-sets in students, thus influencing curricula positively along with the learning experiences of students.

This study provides new insights into the state of entrepreneurship education at PILs in South Africa. It is one of the first studies of this nature investigating the effectiveness of entrepreneurship education curricula in its ability to directly support and focus on a willingness and ability amongst students to initiate start-up companies. Therefore, findings from this research study can be beneficial for policy-makers, academics, public educational institutions and the public in general.

Furthermore, this study could assist in the following situations:

- Help PILs to understand the weaknesses of entrepreneurship programmes currently in existence and promote the development of suitable entrepreneurship programmes to equip students for a career as entrepreneurs.
- Be a literature source on entrepreneurship education for curriculum developers in South Africa, thus encouraging curriculum developers to include content and pedagogies that encourage entrepreneurial competencies, skills, attitudes and mind-sets

The study adds its weight to the consensus that entrepreneurship education is relevant for the economic development of South Africa and Africa at large. Human capital is a key national asset in the contest for survival in the era of globalisation, especially in relation to the Fourth Industrial Revolution (4IR). Moreover, the findings of the study concur with the National Higher Education Strategic Plan 2020-2025 which seeks to transform higher education in order to produce human capital with an entrepreneurial mentality and high-level entrepreneurial competencies (Department of Higher Education and Training 2019).

1.6 THEORETICAL BACKGROUND ON ENTREPRENEURIAL EDUCATION

1.6.1 Entrepreneurship education defined

Entrepreneurship education has been defined by various authors including Mustapha and Selvaraju (2015) and Jabeen *et al.* (2017) as a process of developing entrepreneurial behaviours and values in an individual. This involves enhancing a culture of creativity and innovativeness in seeking, developing, exploring and making use of opportunities, imbibing managerial skills, and gaining management skills to effectively and efficiently run a business able to achieve profitability, business growth and sustainability. According to Kuckertz (2013), the process can be a formal course offered by colleges and universities or an informal training programme offered by other agencies whose aim is to promote entrepreneurship. Thus, entrepreneurial education is the process of enabling individuals to gain the capacity to spot business possibilities and then develop the skills, attitudes and knowledge to act on them (Lindner, 2018).

Research indicates that entrepreneurship is a combination of innate attributes (Rauch and Hulsink 2015), and learned knowledge and behaviours that can be advanced through education (Elmuti, Khoury and Omran 2012; Mustapha and Selvaraju 2015). Akinbami (2015) posits that the entrepreneurial mind-set can be taught to students in all disciples. According to Piperopoulos and Dimov (2015: 4), “learning to be entrepreneurial is like learning to do anything else. It is just a form of behaviour, and behaviour is learnt and practiced”.

Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals who are able to take moderate risks, manage results and learn from outcomes (Harrington and Maysami 2015). It also helps SMME owners and managers to learn how to avoid and solve business complications (Rahman and Day 2015; Rauch and Hulsink 2015) Entrepreneurship education can help develop leadership skills, boost self-confidence, and encourage a growth-orientated entrepreneurial and managerial mind-set, and lessen the fear of failure in business (Rauch and Hulsink 2015).

Rahman and Day (2015) state that entrepreneurship education is the deliberate effort to communicate entrepreneurial abilities and skills so as to empower those being taught to survive in the business world. More broadly, entrepreneurship education

seeks to prepare people to be responsible and adventurous individuals who are prepared to take reasonable risks, manage the results and learn from the outcomes (Harrington and Maysami 2015).

For the purpose of this study, the description of enterprise education used by Claudia (2013) is applicable i.e. entrepreneurship education is a form of structured communication of entrepreneurial competencies (concepts, attributes, skills and mind-sets) which can be used by individuals to start and develop "growth-oriented" business ventures. The term "growth-orientated" highlights the point that being an entrepreneur is not the same as self-employed, because an entrepreneur aims to employ others as well (Ojeifo 2013).

Rengiah (2013:51) asserts that "the body of knowledge on entrepreneurial education was traced from its essence and objectives. This involves, firstly, the objective to train an individual *for, about* and *in* entrepreneurship. Secondly, it aims to support local communities by means of courses, target groups and outreach projects. Thirdly, it introduces suitable teaching methods and community outreach activities. Lastly, it establishes indicators of success and methods of evaluation and impact measurement".

This process is shown in Figure 1.1

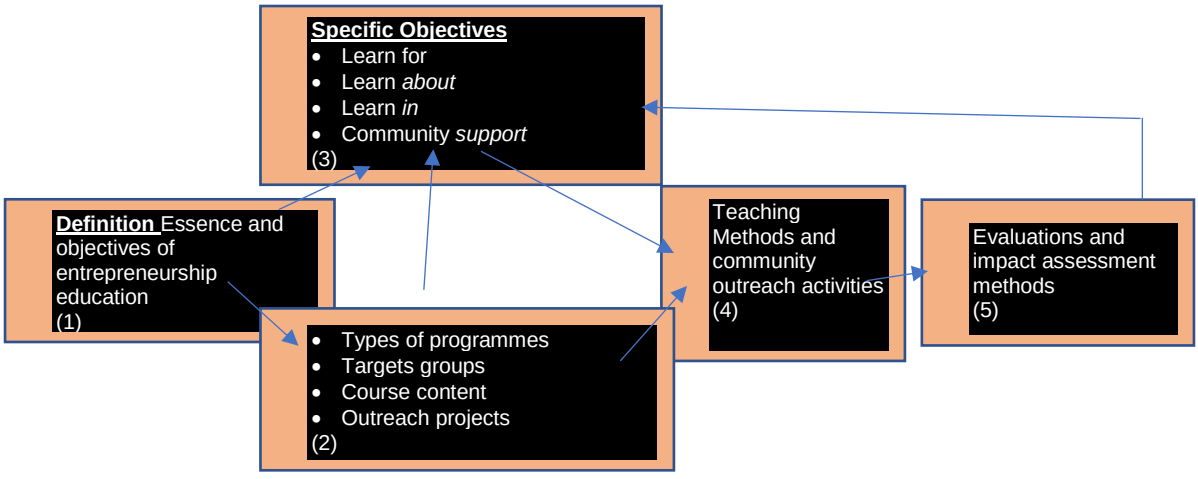


Figure 1.1: Entrepreneurship education: a review
Source: Adapted from Rengiah (2013)

Entrepreneurship is a global phenomenon that is seeking to improve economic growth by stimulating the emergence of innovative business start-ups (Akhuemonkhan, Raimi and Sofoluwe 2013; Robb and Valerio 2014; Waghid 2019). Entrepreneurship

education is understood as important for students to acquire the requisite competencies that can give them the confidence to operate in any environment.

Bagheri and Lope Pihie (2013), describe an entrepreneur is an innovative individual who has developed an enterprise where none existed previously. Elmuti, Khoury and Omran (2012: 84) quote Schumpeter (1951) as follows:

> An entrepreneur is a person or persons who holds the skill to identify and evaluate business opportunities, amasses the necessary resources to take advantage of them, and takes appropriate action to ensure success.

According to Voda and Florea (2019), entrepreneurs are people who seek out new markets and find out how to supply those markets efficiently in order to make a profit. They are individuals who manage change in ways that convert this into business opportunities (Mustapha and Selvaraju 2015; Rahn, Schakett and Tomczyk 2015). Early French, British and Austrian economists wrote of entrepreneurs as “the change agents of progressive economies” (Ojeifo 2013).

Schumpeter was an Austrian economist based at Harvard University who is known for his description of entrepreneurship as a “force of creative destruction” which destroyed the conventional way of doing things by creating new and better ways (Carsrud and Brännback 2011). Criaco *et al.* (2017) defined entrepreneurship similarly as a process seeing entrepreneurs as innovators who change the status quo through innovative combinations of resources and methods of commerce.

> The spirit of entrepreneurship lies in the perception and exploration of new opportunities in the realm of business. It has to do with bringing about a different use of national resources in that they are taken from their traditional means of employment and subjected to new combinations (Littlewood and Holt, 2018: 535).

In their study, Ncube and Lekhanya (2021: 3) cited Hisrich and Peters (1992) when they state “innovations that are successful and produce an increase in economic activity generally exhibit the following characteristics:

- Introduction of new goods;
- Introduction of a new method of production;

- The opening of a new market;
- The conquest of a new source of raw material; and
- The creation of a new type of industrial organisation."

There are also other broader definitions of entrepreneurship, which cover social, public and corporate forms of entrepreneurship (Valerio, Parton and Robb 2014; Harrington and Maysami 2015; Abella 2016). This indicates that entrepreneurship not only includes business enterprises, but also a person's approach to life.

There is disagreement regarding the precise definition of entrepreneurship education. The definitions that do exist are a reflection of the perception of the authors regarding entrepreneurship as a concept (Mustapha and Selvaraju 2015).

The likes of Herrington *et al.* (2010), Chimucheka (2014) and Robb, Valerio and Parton (2014) have noted that there are similarities between entrepreneurship and self-employment, although entrepreneurship is associated more with starting new firms (Cho and Honorati 2014).

Akhuemonkhan, Raimi and Sofoluwe (2013) and Otache (2019) describe the aim of entrepreneurship education as being the enhancement of creativity and the promotion of self-employment. In PILs, therefore, entrepreneurship education should include elements such as developing entrepreneurial perspectives, promoting self-employment as a career option, and providing information and skills on starting a business and running it.

1.7 RELEVANCE OF ENTREPRENEURSHIP EDUCATION TO ECONOMIC GROWTH

Entrepreneurship is seen as a solution to low economic growth at the same time as it can address unemployment and poverty. This ensures that entrepreneurship education is important (Harrington and Maysami 2015; Chuanyin and Jin 2014). Harrington and Maysami (2015) see entrepreneurship as essential for economic growth and development in modern open economies. "The phenomenal growth and advance of information and communication technology has opened up space for

entrepreneurship because it facilitates niche services and allows global reach" (Wu, Yuan and Pan 2018: 1).

According to Cassim, Soni and Karodia (2014) it is evident that entrepreneurship can positively influence economic growth and development, and therefore governments should support educational programmes in entrepreneurship in order to increase the supply of entrepreneurs. "Two reasons for students to study entrepreneurship are that this will help them set up their own businesses and also that the knowledge and skills gained will be relevant in any setting within larger organisations as well" (Maimane 2016: 1682). The focus of this study is however on the former, while many courses still focus on the latter.

1.7.1 Entrepreneurship education and training

Entrepreneurship education and training is now a well-established field of study (Iwu *et al.* 2019), involving formal training interventions that seek to provide individuals with an appropriate mind-set and range of skills (Littlewood and Holt 2018); Robb, Valerio, and Parton (2014). Such an education is contributing to the establishment of a culture of entrepreneurship in South Africa (Harrington and Maysami 2015; Fatoki 2018).

Ojeifo (2013) explains that the difference between education and training is that the former is building knowledge regarding entrepreneurship generally, while training is the building of knowledge and skills specifically related to the practical issues involved in beginning and running a business. Education aims to develop critical thinking skills (Rennemo 2015) while training is more orientated to learning skills for practical decision-making and on-the-job management (Sanchez-Garcia 2015).

Entrepreneurship education helps to instil an entrepreneurial attitude and entrepreneurial training helps to refine the entrepreneurial process needed to support entrepreneurial action (Ramchander 2019). Therefore, a holistic approach is required to combine knowledge transfer (education) and skills development (training) (Maimane 2016).

1.7.2 Importance self-employment

There are many descriptions of self-employment (Akinbami 2015; Santhosha Shetty and Siddiq 2015). However, the description by Iwu *et al.* (2019: 2),

contains the basic common elements, and forms the basis for use of the term in this study. According to these authors, a self-employed person is someone who does not earn their income from being employed by another individual or organisation, but through their own elf-managed economic activity. Thus, in the context of this study, the term self-employed graduate refers to people who have completed their university education in any discipline and have chosen to start their own businesses which they will own and from which they will derive their primary income.

The term entrepreneurship has a larger meaning than merely starting a business (Ramchander 2019: 2). Thorgren and Omorede (2018) state that this term can include other types of activities as well, such as social and public enterprises. The differences between such enterprises are that economic entrepreneurship is the creation of a business in order to make a profit. A social enterprise may also make a profit, but such profit is orientated towards creating social value. Public enterprises are orientated towards helping public officials be more efficient in the provision of services (Solomon, Alabduljader and Ramani 2019). “There is a notion too of corporate entrepreneurship which refers to the application of entrepreneurial culture in the form of innovation and modern technology so as to improve the function and services of companies” (Pitso 2019: 3). In this sense, entrepreneurship can be applied and integrated in different undertakings. Thus, “entrepreneurship” is an economic and social phenomenon (Fayolle and Gailly 2008; Akhuemonkhan, Raimi and Sofoluwe 2013; Baldry 2015). However, as explained above, the focus of this study was on the competencies required for an individual to be sufficiently empowered to start a successful new business on his or her own initiative.

1.8 GLOBAL TRENDS ON ENTREPRENEURSHIP AND ENTREPRENEURSHIP EDUCATION

Despite the desperate financial position at universities today, entrepreneurship education continues to play a vital role at university level. Increased competition from companies, international schools, the internet and a decrease in the number of foreigners applying to graduate schools, have been experienced as challenges, but have not stopped universities from building their entrepreneurship programmes (Claudia 2013). Considering that entrepreneurship is a driving force for economic

development and job creation, academic institutions are being called upon to contribute through education and training (Harrington and Maysami 2015; Nag and Das 2015). Therefore, considerable academic efforts have focused upon entrepreneurship education in recent years, helping the field to develop and to gain momentum (Ojeifo 2013). Entrepreneurship education is now taking place at most colleges and universities around the world (Robb, Valerio and Parton 2014), although there is increased competition from companies and the internet to provide such education. This has therefore contributed to the situation where universities are in an increasingly precarious financial position (Claudia 2013).

Small businesses in the United States of America (USA) are thriving, having provided over 20 million jobs in the last decade. Entrepreneurship is also responsible for almost zero unemployment in countries like Indonesia, Malaysia and Singapore (Chimucheka 2014). The economic recession experienced by many developed countries, and the associated high levels of unemployment, has revived interest in entrepreneurship (Harrington and Maysami 2015). Politicians and policy-makers have woken up to the fact that entrepreneurship can be an answer to unemployment and lack of economic growth so are now promoting entrepreneurship education (Cassim, Soni and Karodia 2014).

1.8.1 Entrepreneurship education in Europe

Interest in entrepreneurship education in Europe is relatively new compared to in the USA, but this trend is changing and courses on entrepreneurship are now being offered in all the main centres in Europe (Florea and Florea 2013). Embedding entrepreneurial courses in university curricula is advocated by several academic and governmental studies. A survey of entrepreneurship education in Europe by Stokaitė (2013: 143) revealed that “entrepreneurship courses were offered at European universities at both undergraduate (73%) and post-graduate levels (69%)”.

Universities provide a variety of entrepreneurship educational opportunities beyond formal degree courses, including coaching for start-ups, business plan writing competitions, student internships and incubation facilities (Florea and Florea 2013). However, contrary to the USA, successful entrepreneurs in Europe rarely give back by funding centres or chairs. Most of the funding sources for these centres come from

governments, foundations and the universities themselves, whereas in the USA there is a tradition of successful entrepreneurs “giving back” and funding centres or chairs of entrepreneurship in their former universities (Stokaitė, 2013).

1.8.2 Entrepreneurship education in South Africa

The Global Entrepreneurship Monitor (GEM) conducts assessments in countries around the world to determine the level of entrepreneurial activities per country, particularly early-stage entrepreneurial activity. The GEM report on South Africa for 2015 indicated that entrepreneurship education in South Africa was still at an early stage although some higher education institutions had been running entrepreneurship programmes since the early 1990s. The report identified the urgent need for more business start-ups (Herrington, Kew and Kew 2015).

Many people blame the school system for the lack of entrepreneurial excellence in South African. Jones and Iredale (2010) point out that most school leavers will not have been educated adequately in subjects such as Business Economics or Economics therefore arrive in the working world as “economic illiterates”.

1.8.3 Graduate unemployment in South Africa

Unemployment in South Africa is chronic and structural. The supply of labour in South African outstrips demand, leading to a chronic structural unemployment problem (Baldry, 2015). This problem is succinctly expressed by Oluwajodu et al. (2015): unemployment is probably the most severe problem South African society is experiencing and it is conceivably the root cause of many other problems, such as high crime rates, violence, and abject poverty. The unemployment rate for graduates according to the 2019 QLFS is about 2.1%. That percentage reflects unemployment across all ages and not those of recent graduates, though graduate unemployment is much lower compared to 6.9% of students with other tertiary qualifications, 34.5% for matriculants and 55.9% for individuals with less than matric (Steynvaat 2020). At the same time, the number of graduates being produced is growing. President Cyril Ramaphosa’s Cabinet has expressed concern that the unemployment rate of university graduates during the first quarter of 2021 stood at 9.3% and the Minister in the Presidency Khumbudzo Ntshavheni described it as “worrisome.” The Higher Education Management Information System determined that South African

Universities produced about 190 000 new graduates each year. Based on the 2019 QLFS the formal market only absorbs an estimated 41 000 graduates each year. According to Fulgence (2015), graduate unemployment cannot solely be blamed on the economy. Steynvaat (2020) stated that another factor involves the mismatch between what and how students are taught at tertiary institutions compared to the practical skills and knowledge that employers want. This issue needs to be addressed at an institutional level (IEJ 2021).

1.9 CATEGORIES OF EDUCATION: PUBLIC AND PRIVATE

According to Styger, Vuuren, and Heymans (2016), the term public institution of learning implies that the funding comes from government, and private education refers to education that gets no funding from the government. There is an idea, that everyone has a right to an education financed at public expense. The South African Constitution (1996) guarantees the right to basic education, and 'progressively' to further education (S29(1). Education as a human right means:

- the right to education is legally guaranteed for all without any discrimination
- states have the obligation to protect, respect, and fulfil the right to education
- there are ways to hold states accountable for violations or deprivations of the right to education.

1.9.1 Public High Schools

Public fee-free schools are subsidised by the government. These schools are only available in the poorest areas along with the National Schools Nutrition Programme (NSNP). The NSNP feeds 1.6 million children every day and established almost 2,000 school gardens. At the start of upper secondary school in grade 10, students are streamed into one of two tracks – academic (general) or technical. Students who select the technical track must be enrolled in a technical secondary school (Levy 2017: 802).

"In both academic (general) and technical routes all students must study seven subjects. Four subjects are mandatory regardless of stream. These include two official languages, mathematics (mathematics courses differ in scope between the two tracks), and life orientation. Students can select the remaining three subjects as

electives. Students are advised to study subjects that they might be interested in pursuing in higher education" (South African National Qualifications Framework 2020: 7).

Graduation depends on performance on a final exam, the National Senior Certificate or "matric," at the end of grade 12. Those who earn a second level or "higher certificate" pass, but who do not score high enough to continue on into diploma or degree-granting institutions of higher education may enrol in a bridge year at an accredited institution (UMALUSI 2020). Since the syllabi followed in public high schools is the same throughout the country this was seen to be a representative 'snap shot' of the situation within these PILs as far as entrepreneurship education is concerned.

1.9.2 Public TVET Colleges

Buthelezi (2018) explains that Public Technical and Vocational Education and Training (TVET) colleges were established on 01 April 2015 by the Department of Higher Education. These colleges were previously known as Further Education and Training colleges (FET) to train people in technical, as well as other vocational fields (a vocational field is a field of study that prepares you for a particular career).

In TVET colleges, students study the theoretical component of a National Diploma in a certain career field, and then complete a practical component, i.e. work to gain experience.

Courses offered by TVET Colleges:

- Technical Courses (Boiler-making, Welding, Fitting & Turning, Electrical, and Motor Mechanics)
- Business Studies
- Marketing
- Beauty
- Accounting
- Human Resource Management

Students have the option to apply for government funding, like NSFAS (National Student Financial Aid Scheme) or pay for their own studies.

Six TVET Colleges were included in this study, these being: Coastal TVET College, Elangeni TVET College, Majuba TVET College, Thekwini TVET College, Umfolozi, TVET College, and Umgungundlovu TVET College.

1.9.3 Universities of Technology

“Universities of Technology used to be called ‘technikons’. They mainly offer diploma and degree courses. They maintain a good balance between the theoretical and practical aspects of a subject” (Knowledge Hub 2020: 2).

Universities of Technology offer courses like:

- Engineering
- Marketing and Public Relations
- Dramatic Arts and Film
- Business

To study at a University of Technology, you need a Higher Certificate or Diploma Pass. Sometimes they recognise qualifications from TVET colleges, which means students can continue their studies at a University of Technology once they have completed an N6 Certificate at a TVET college.

Universities of Technology are mostly government funded and offer different forms of bursaries, loans and grants.

Both Universities of Technology in KZN were included in the study: Durban University of Technology and Mangosuthu University of Technology.

1.9.4 Universities

At a university, the primary focus is on studying the theory of a certain subject. Universities can either be private or funded by the government. The purpose of a university is to introduce students to academic enquiry, after which they can choose to find a job in a relevant field or continue studying (Knowledge Hub 2020: 2).

Universities have different faculties:

- Humanities
- Business and Commerce

- Science
- Engineering
- Health Sciences
- Law

To study at a university, you need to achieve a Bachelors Pass in Matric. Each faculty or course has its individual entry requirements.

Universities offer different funding options like bursaries, loans and grants, but most require that you pay for your studies in the first semester of every year. NSFAS funding is also available for university students.

Each of the Universities in the Province were included in the study: The University of Kwa-Zulu Natal and the University of Zululand.

1.10 RESEARCH METHODS

Research designs are plans and procedures for research that span the decisions from broad assumptions to detailed methods of data collection (Reilly and Jones 2017: 186). The method that was used in this study was a mixed method, which included the collection of quantitative data from questionnaires administered to both instructors and students, open-ended questions within the questionnaires and interviews conducted with both staff and students. Mixed methods research, according to Johnson (2007:123) cited in Norman and Lincoln (2013:132), “is the type of research in which a researcher or a team of researchers combines elements of qualitative and quantitative research approaches for the broader purposes of breadth and depth of understanding and corroboration”.

The study considered the perceptions of instructors and students in PILs (that is, teaching and academic staff and final year students in secondary schools and tertiary institutions), and then engaged in an inductive approach with testing reality by gathering data using both qualitative and quantitative techniques. The qualitative responses from the interviews were used to describe and interpret people’s feelings and experiences in “human terms rather than only through quantification and measurement (Azhar *et al.* 2013). Reilly and Jones (2017: 186) explain that the “mixing” indicates that the data or findings are integrated at one or several points within the study. The framework of the study involved a systemic approach in order to

develop a theoretical understanding of the participants “lived” experiences (May, Hunter and Jason 2017). According to Shannonhouse, Barden and McDonald (2017) social constructionism oriented qualitative research regards the responses of research participants as constructed within a particular context. Thus, knowledge is a product of interactions over time and in relation to social structures, contexts and resources (Azhar *et al.* 2013). Reilly and Jones (2017: 186) emphasise that the “subjective experiences of people” and “making sense of that experience” involves listening carefully to what respondents are saying. This was achieved through the qualitative data that engaged participants and evoked “first-hand” accounts of subjective experiences in “rich detail” (Shannonhouse, Barden and McDonald 2017).

In this research, the target population were the final year students (that is: final year tertiary students and matriculants in secondary school) and the teaching staff in government funded educational institutions/ public institutions of learning in the KZN. Public institutions were targeted as instruments supportive of government policy which aims to improve economic growth and create jobs. These included all four universities in the Province (the University of KwaZulu Natal, the University of Zululand, the Durban University of Technology and Mangosuthu University of Technology), six selected TVET Colleges and three selected high schools. In terms of sample size, 256 questionnaires were distributed to the targeted population. 223 responses were received, making a response rate of 85%, comprising 87 teachers and academics, and 136 final year students. Interviews were conducted with each of these respondents. The group interview process was monitored by the research assistant and was conducted by the researcher. The respondents were asked questions and the researcher and his assistant wrote down the responses. The researcher opted for writing down the responses, instead of recording them, as the large numbers of respondents involved would have entailed too great a monetary expense and too great expenditure of time on the transcription process.

The respondents were provided with the questionnaires and the researcher and research assistant explained what the researcher wanted to accomplish. The respondents were then requested to complete the questionnaires following a briefing by the researcher. The basic questions covered were derived from the objectives of the study which are guided by the literature review. A covering letter aimed to ensure that the respondents were informed of the nature and purpose of the research. The

researcher administered the questionnaires to the respondents. In order to ascertain that all the respondents could completely understand all questions, the researcher assisted the respondents with suitable and accurate explanations. The data collected, coded, and captured was analysed in order to draw inferences. Data collected using close-ended questions was analysed by means of Statistical Programme for Social Sciences (SPSS) version 24.0. A series of relevant statistical analysis methods including descriptive and inferential analysis were then conducted. NVIVO 10 software was used to analyse the data obtained from the interviews helping to uncover trends. Words with similar meanings were identified and displayed by means of word clouds and tree maps. Cluster analysis revealed the main themes and sub-themes.

In order to obtain standardised data, the researcher concurrently conducted a familiarisation session with the institutions and a pilot survey, after which the questionnaires were distributed and time set for collection. The information obtained was captured using SPSS 24.0. Content validity was established by matching the research findings to the set objectives of the study.

1.11 PILOT STUDY

A pilot study is a smaller scale version of the main study and is designed to check that the questionnaire gathers the information that it intends, or is designed to collect (Zikmund and Babin 2007). According to Reilly and Jones (2017), a pilot study is crucial when research is based on self-completed questionnaires. The pilot survey in this study was conducted to detect possible flaws in measurement, and to identify unclear questions. Ten percent of the respondents from the main study were selected for the pilot study (Shannonhouse, Barden and McDonald 2017). These participants were excluded from the main study. The purpose of conducting a pilot test is to try out the research method in order to identify potential problems that might affect the quality and validity of the results before the final questionnaire is administered (Quinlan *et al.* 2011). The findings of the pilot study were scrutinised to make sure that the questionnaire was filled-in correctly and any flaws were corrected. Minor grammatical errors were found and corrected accordingly.

1.12 DELIMITATIONS/SCOPE OF THE STUDY

The main delimitation is that only Government High Schools, TVETs Colleges and Universities in KwaZulu-Natal were included. Students who are not doing final year in the Department of Management and Entrepreneurial Studies / or Commercial Department were excluded from the study. Furthermore, the study was delimited to evaluate the effectiveness of entrepreneurship education in final year students. Finally, the study sample 256 participants with the assumption that the results would be reflective of the general situation of students and teaching staff in Government educational institutions. While the numbers could be considered small for a quantitative study, they were entirely adequate for a qualitative study involving interviews with each of the 223 respondents who agreed to participate. It was also the case that respondents from each of the four universities in the Province of KZN was included in order to ensure adequate responses from differing university curricula, since universities have the freedom to design their own curricula, within limits set by the DHET. The experiences of learners and students and instructors in the three high schools and six TVET colleges can be deemed to have been similar, and reasonably representative of other government high schools and TVET colleges since the syllabus followed by these government institutions is fixed and does not vary from one institution to another.

1.13 ETHICAL CONSIDERATIONS

According to Quinlan *et al.* (2011: 197), “ethics is based on norms or standards of behaviours that guide moral choices about our behaviour and our relationships with others”. Research that is likely to harm participants is as unacceptable (Welman, Kruger and Mitchell 2005). In this study there was no physical or other form of harm to participants while conducting this research. Quinlan *et al.* (2011) suggest that the primary responsibility of the researcher in relation to all the participants is to obtain consent, protect from harm and maintain privacy. Participants were assured that responses would be treated with confidentiality. Their identities remained anonymous throughout the research process.

The researcher made it clear to participants that they had the right to leave the study at any stage. The study was conducted according to the research ethics policy and guidelines of the Durban University of Technology.

1.14 DEFINITION OF TERMS

In order to get a meaningful understanding of the terms used in the thesis, it is very important to provide some definitions. The following definitions are therefore provided:

Entrepreneur. The word “entrepreneur is traced to a French word entreprendre which means to do something. An entrepreneur is therefore a person who has the ability to create a job for himself with a tolerance for the risk he believed was inherent in providing for one’s own economic well-being” (Voda and Florea 2019: 3). According to Armuna *et al.* (2020), entrepreneur is defined as someone who has the ability and desire to establish, administer and succeed in a start-up venture along with risk entitled to it, to make profits. Matricano (2020) concurred that entrepreneur is defined as an innovator or developer who recognizes and seizes opportunities, converts those opportunities into workable or marketable ideas, adds value through time, effort, money or skills, assumes the risks of the competitive marketplace to implement these ideas and realizes the rewards from these efforts.

Entrepreneurship. Amini, Arasti and Bagheri (2018) state that entrepreneurship is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties in order to make a profit. The most prominent example of entrepreneurship is the starting of new businesses. According to Yang (2020: 683), “entrepreneurship is a process through which opportunities to create future goods and services are discovered, evaluated and exploited”. The author contend that the field of entrepreneurship encompasses the study of sources of opportunities; the process of discovery, evaluation, and exploitation of opportunities. It is about learning skills and competencies needed to assume the risk of commencing a business (Shu, Ho and Huang 2020). Entrepreneurship is defined as the occupational choice to work for one’s account and risk

Entrepreneurial. Sandroto *et al.* (2018) explain that being entrepreneurial means recognising an opportunity which has not been exploited and making the most of it: essentially, finding a gap in the market and filling it. However, according to Matricano

(2020), it can also be about trying something new or improving a process to increase efficiency or boost results.

Entrepreneurial skills. Entrepreneurial skills encompass a broad range of various skill sets like technical skills, leadership and business management skills and creative thinking. Entrepreneurial skills can be applied to different job roles and industries, therefore, developing entrepreneurial skills can mean developing several types of skill sets (Loué and Baronet 2012; Sandroto *et al.* 2018).

Entrepreneurial Competencies. Huang *et al.* (2020) state that entrepreneurship competencies can be defined as underlying characteristics such as generic and specific knowledge, motives, traits, self-images, social roles, and skills which result in venture birth, survival, and/or growth. According to Sandroto *et al.* (2018), competencies include three clusters of related knowledge; attitudes and skills which an entrepreneur must acquire through managerial training and development to enable him produce outstanding performance, and maximize profit, while managing a business venture.

Start-up entrepreneur. According to Matricano (2020), a start-up entrepreneur starts a business knowing (ideally) that their vision can change the world. They attract investors who think and encourage people who think out of the box. Ideally their vision should focus on a scalable business and experimental models. They hire the best and the brightest employees. However, it is acknowledged that they also require venture capital to fuel and back their project or business and that this is hard to source in the South African context

Teaching staff refers both to high school educators and to university academic staff that are responsible for the teaching entrepreneurship education subjects in public institutions of learning. This term is used to describe professional personnel who are directly involved in teaching students, including classroom teachers; special education teachers; and other teachers who work with students as a whole class in a classroom, in small groups in a resource room, or in one-to-one teaching inside or outside a regular classroom.

Youth. In SA, youth are classified as people who are below the age of 35. For this study, interest is in youth who are doing their final year in public institutions of learning.

Student. This denotes someone who is studying, normally in order to enter a profession.

Public institution. A public institution of learning is any educational institution that is in state ownership or receives significant public funds through a national or subnational government, as opposed to a private institution.

1.15 OUTLINE OF THE RESEARCH

The presentation of the research is organised into seven chapters:

- **Chapter 1: Introduction**

Chapter 1 deals with the background, problem statement, research objective(s) and research questions, as well as the scope and limitations, and the research framework. The chapter explains the intentions of the study and the intended outcome.

- **Chapter 2: Theoretical and conceptual framework for entrepreneurship education**

This chapter deals with theories relevant to this study. It proffers a detailed description of the selected theories and relates these to the concept of entrepreneurship education. The chapter also deals with the constructs which shape the study.

- **Chapter 3: Literature review**

This chapter reviews the literature relevant to the topic of the study including the definition of entrepreneurship education, the importance of entrepreneurship education, governance, operational models, as well as implementation and problems related to the facilitation of entrepreneurship education.

- **Chapter 4: Research methodology**

This chapter sets out the approach/design that this study adopted to gather data and analyse and present the findings. This chapter also considers validity and reliability statements regarding this research.

- **Chapter 5**: **Statement of findings, analysis and interpretation of the primary data**

The data collected is analysed in this chapter in such a way that the reader can easily understand it, in the form of themes and a detailed description of the phenomena under investigation.

- **Chapter 6**: **Discussion of the findings of primary data**

This chapter draws inferences from Chapter 5 and from the literature surveyed. It offers interpretation of the statistical analysis presented in Chapter 5 and underscores the relevance and the importance of the study.

- **Chapter 7: Conclusions and recommendations**

Chapter 7 draws conclusions and makes recommendations based on the findings arising from the study, along with recommendations for further research.

1.16 CONCUSION

This chapter described the background and explained the motivation for conducting the research as a problem of importance to individuals and society, namely how to make entrepreneurship education as effective as possible in empowering students with the competencies required to become future entrepreneurs. The chapter emphasised that existing research suggests that entrepreneurship is essential for economic growth and for creating a society in which individuals are able to achieve their potential, however the efficacy of entrepreneurial education has been disputed and has not been explored in the setting chosen or at the depth undertaken in this study The chapter also outlined the research process, indicated the delimitations of study, provided definitions of key terms, indicated the ethical standards adhered to, and gave an outline of the content of the chapters.

This is a systematic study that leads to evidence-based conclusions. It makes a theoretical methodological and practical contribution to the field.

CHAPTER 2: ENTREPRENEURIAL EDUCATION AND ASSOCIATED THEORIES

2.1 INTRODUCTION

Chapter 1 argued that entrepreneurship can play a critical role in achieving the socio-economic goals of employment creation, economic development and equitable distribution of wealth (Akhuemonkhan, Raimi and Sofoluwe 2013; Cho and Honorati 2014; Waghid 2019), and in the reduction of poverty through the provision of goods and services (Touzani *et al.* 2015; Wilson and Martin 2015; Waghid 2019). It will not be possible however, according to Urban and Chantson (2017), to achieve these generic goals fully and solve the challenges faced by South Africa today, considering the wide range of challenges that are faced by PILs.

Jayeoba (2015), Bignotti and Le Roux (2016), and Ncube and Zondo (2018: 1) concur that entrepreneurship in South Africa is confronted by various challenges, including high failure rates, low employment capacity, lack of growth in businesses and lack of educated entrepreneurs. These challenges are deemed to be the explanation for the lack of entrepreneurship knowledge and skills as well as the lack of access to finance (Ramchander 2019: 3). However, according to Ondiba and Matsui (2019), it is possible that entrepreneurial performance can be improved by entrepreneurship education. This indicates that improved entrepreneurial performance can lead to an improved rate of establishment of new ventures, increased profitability, and growth and survival of businesses (Ramchander 2019: 2). Although it may seem difficult to determine the relationship between entrepreneurship education and performances of small and medium business start-ups, some output measures of entrepreneurship education can be used to determine the relationship. Changes in entrepreneurship competencies, changes in orientation towards entrepreneurial careers, changes in personal assessment of entrepreneurial skills and knowledge are some of the output measures for assessing entrepreneurship education (Chimucheka 2014). Through provision of entrepreneurship education and motivation, the performance of business ventures should improve and therefore assist in the reduction of poverty and unemployment in the nation (Ncube and Zondo 2018).

In recent years, entrepreneurship education has become a topic of considerable interest in South African universities (Ahmad and Buchanan 2015; Urban and Chantson 2017), with literature stimulating the discussion of entrepreneurship in regard to local markets and emerging economies in general (Tehseen *et al.* 2019). Many changes in South African society have magnified the importance of entrepreneurship: e.g. the world economic recession of 2010/2011 and slow growth of the industrial sector (Wilson and Alebeek 2017; Waghid 2019). “The economic value of supporting the development of entrepreneurship has been increasingly perceived by policy makers as having the potential to make a real and sustainable investment in the future prosperity of the country” (Waghid 2019: 6).

This chapter explores some conceptual models relating to entrepreneurial education and the ontological dimensions of teaching models and agency that underscore the study. The chapter also conceptualises a model and implementation framework for entrepreneurial education that guided the study. Moreover, it highlights what other researchers have said about the progress of entrepreneurship education; the factors that promote or retard the effectiveness of entrepreneurship education; and the competencies needed to instil the entrepreneurial mind-set in undergraduate students in PILs in particular.

2.2 CATEGORISATION OF EDUCATION ABOUT, FOR AND THROUGH ENTREPRENEURSHIP

There is no consensus over the definition of entrepreneurship or regarding a suitable model for entrepreneurship education. Nevertheless, Jabeen *et al.* (2017) have tried to define what entrepreneurship education is: Entrepreneurship education is the set of activities aimed at developing enterprising or entrepreneurial people and cultivating their understanding and knowledge about entrepreneurship and enterprising. Unfortunately, even this definition does not resolve the debate on how entrepreneurship education should be carried out (Bauman and Lucy 2019). There is a difference between education *about* entrepreneurship and education *for* entrepreneurship. Education *about* entrepreneurship raises awareness about entrepreneurship while education *for* entrepreneurship teaches students about starting and carrying on a business (Rauch and Hulsink 2015; Botha and Bignotti 2017). The latter type of education emphasises a practice and action-oriented learning

philosophy (Fellnhofer 2017a; Iwu *et al.* 2019: 3). Such education programmes promote knowledge and competencies that increase the likelihood of starting a business, identifying and stimulating entrepreneurial ambition and talent aimed at supporting the creation of new ventures. Understanding the difference between education *about* and education *for* entrepreneurship is helpful in the evaluation of education outcomes (Fidalgo-Blanco *et al.* 2018).

Teaching "through" means a process based and often experiential approach where students go through an actual entrepreneurial learning process. This approach depends on the wider definition of entrepreneurship, and can be integrated into other subjects in general education, connecting entrepreneurial characteristics, processes and experiences to the core subject (Fulgence 2015; Armuna 2020). While "the *about* and *for* approaches are relevant primarily to a subset of students on secondary and higher levels of education, the embedded approach of teaching *through* entrepreneurship can be relevant to all students and on all levels of education" (Botha and Bignotti 2017: 1073). However, according to Fulgence (2015), some important challenges have been identified when trying to embed entrepreneurship into education this way, such as resource and time constraints, resistance from teachers, assessment challenges and cost implications.

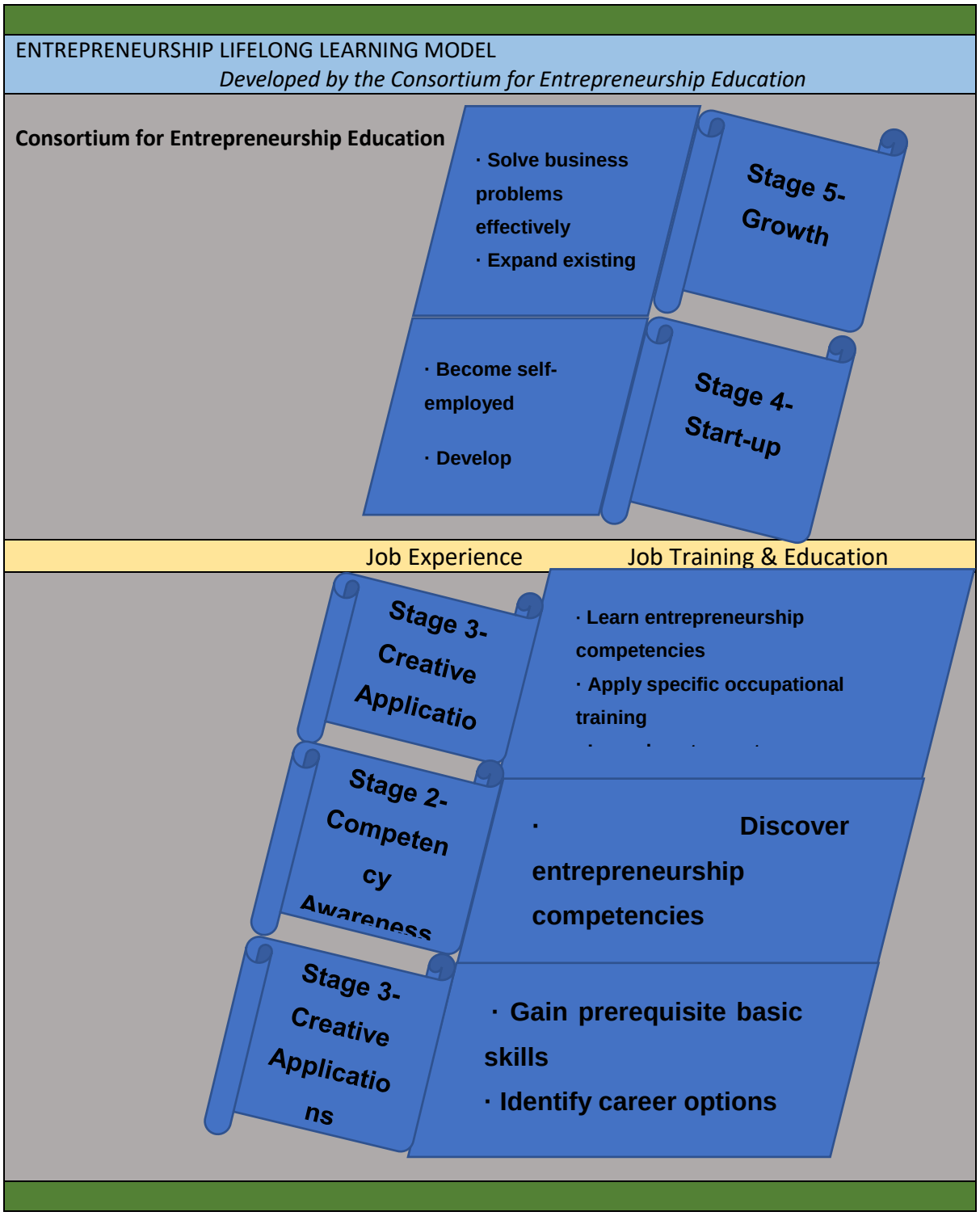
It can be noted that curriculum design and delivery in entrepreneurship education is still being developed not only in South Africa but also globally with uncertainty around suitable pedagogic practices, course scope and position within the institution. Ramchander (2019) states that there is no evaluation system in place to determine whether the teaching techniques used could accomplish the course objectives. To improve the entrepreneurship course design and delivery, Bauman and Lucy (2019) recommended practices such as the evaluation of teaching and assessment methodologies, curriculum development, increased usage of interactive teaching methods (role-playing and simulation) and the use of outside classroom methods (internships, small business consulting and community development).

Entrepreneurship education studies programmes have been explored in educational institutions by a number of researchers (Mashau, Fields and Nyawo 2019). Hechavarria and Reynolds (2009) used a linear regression method and their findings

were that there was a positive correlation (significant) between participation in entrepreneurial programmes and creation of a business. However, there are still some challenges in implementing entrepreneurship education in secondary schools since not all schools offer entrepreneurship education and there is a lack of teachers to teach entrepreneurship education. According to Chimucheka (2014) entrepreneurship education at school level did not receive a high priority in the South African context. The results of the study by Tshehla, Chodokufa and Costa (2021) reveals that almost 60% of secondary schools offered no entrepreneurship training programmes, which meant that fewer than 50% of learners coming into tertiary institutions had had prior exposure to entrepreneurship education and training. Chimucheka (2014) emphases that there is a low level of entrepreneurship education at primary school level as well. Shay & Wood (2004:34) found that the lack of adequate training and resources hampered the implementation and development of entrepreneurship in all of government funded educational institutions. It was suggested that training for teachers, the provision of resources and closer co-operation between government and service providers would assist in the improvement of the provision of entrepreneurship education.

There is an ongoing debate about whether entrepreneurship can be taught (Chimucheka 2014; Ahmad and Buchanan 2015). Some authors are of the view that entrepreneurship is tied to personality and psychological characteristics, so cannot be taught (Fayolle and Gailly 2008; Akhuemonkhan, Raimi and Sofoluwe 2013; Chuanyin and Jin 2014). Other authors are of the view that entrepreneurship can be taught as a subject (Chimucheka 2014; Boi 2018: 403; Akinbami 2015). According to Fayolle and Gailly (2008), entrepreneurship teaching activities are closer to craft than science because (Rauch and Hulsink 2015) learning in this field is driven by experience rather than information teaching as such. Education *for* and *about* are to some extent similar when it comes to the content and outcomes, and as a result, it is possible to compare and evaluate these two approaches on the same basis. Both of these approaches focus on teaching students' cognitive entrepreneurial skills (what) and on increasing students' awareness of self-employment as a potential career choice (objective). Education for entrepreneurship does, however, also focus on teaching students' non-cognitive entrepreneurial skills (what), which entails the use of action-based teaching methods (how). Learning outcomes such as an increased competence level in

managing ambiguity and uncertainty (objective) as well as an increased understanding of how to apply and use discipline-specific knowledge (objective) can also be viewed as important learning objectives of this approach. In this sense it is possible to compare education *for* entrepreneurship with education *through* entrepreneurship, as they, to some degree, focus on similar learning outcomes (objective) and use similar action-based teaching methods (how). Three interrelated categories, each of which can be divided into two dimensions, are therefore specifically important in this categorization of entrepreneurship education: 1. Skills (cognitive and non-cognitive), 2. Teaching methods (active and passive), and 3. Outcomes (self-employment and creative self-directed individuals). In figure 2.1 the three educational approaches are positioned in the models according to their focus on the dimensions in these three categories.



Source: Consortium for Entrepreneurship Education (2018)

As figure 2 shows, it seems that education for entrepreneurship is always better than the other two approaches, since it is always located in the plus quadrants. However, this is far from the case, as resources and costs, as well as the specific objectives, all play a major role in determining the effectiveness of an educational approach.

Education about entrepreneurship can easily be taught to hundreds of students, because it does not rely on action-based teaching methods. If the primary objective is to increase students' awareness and knowledge of entrepreneurship, then this is an effective educational approach.

> If, on the other hand, the goal of the intervention is to foster creative and proactive students who understand how they can use and apply their knowledge in innovative ways, education *through* entrepreneurship is clearly more effective, because it can be embedded in many different topics in a cross-curricular manner. So where do the advances in entrepreneurship research and the new approaches in entrepreneurship education fit into this model? As these approaches focus predominantly on education *for* entrepreneurship, which in my model has a high focus on the dimensions of each of the three categories, it is the degree of this focus that matters" (Botha and Bignotti 2017: 1074).

The traditional process-oriented approach to entrepreneurship education typically has a higher focus on cognitive entrepreneurial skills and on the exploration and evaluation phases, which most often entails an increased use of passive teaching methods. The more recent entrepreneurship as a method approach has a higher focus on non-cognitive entrepreneurial skills and on the exploitation phase, which entails an increased use of active teaching methods.

Rengiah (2013) states that the concept behind the framework illustrated in Figure 2.1 shows that entrepreneurship education has to be aligned with its definitional and general objectives.

Shonin, Van Gordon and Griffiths (2016) trace the development of entrepreneurship education:

> Firstly, it was focused on specific objectives to train individuals *for*, *about* or *in* entrepreneurship. Secondly, to support the local communities through the types of courses, target groups and outreach projects. Thirdly, to introduce appropriate teaching methods and community outreach activities. Fourthly, it was to establish success indicators and methods of evaluation and impact measurements.

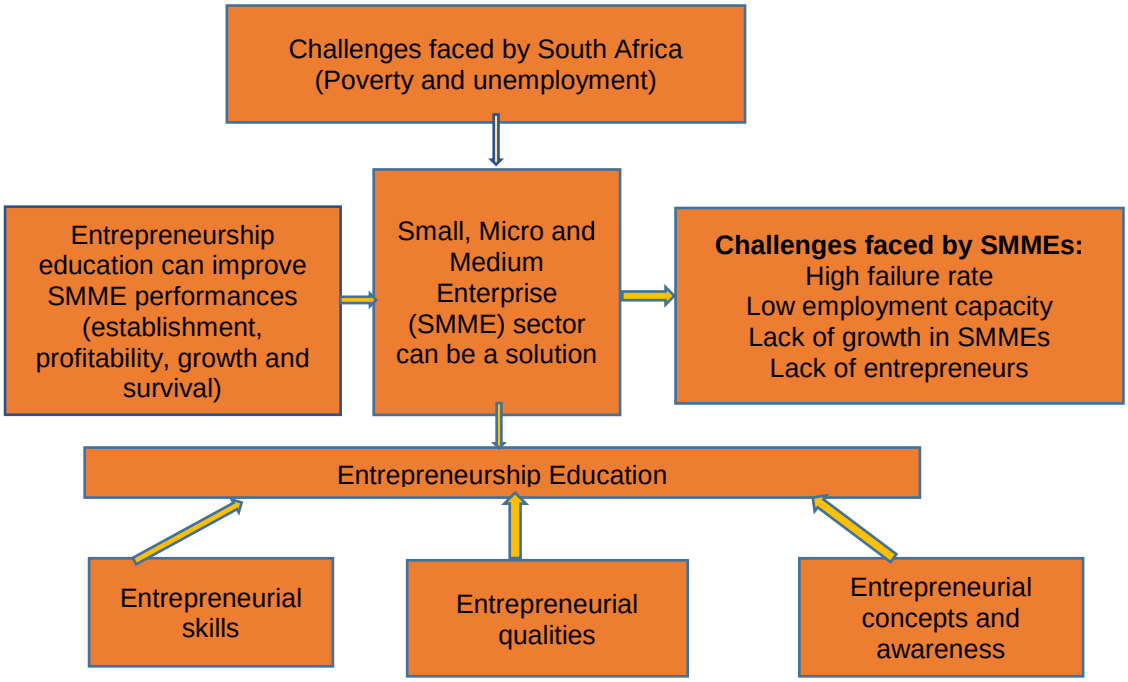


Figure 2.1: Conceptual model of entrepreneurship

Source: Adopted from (Chimucheka 2014)

2.3 ENTREPRENEURSHIP EDUCATION

One of the main research foci in the field of entrepreneurship is the nascent entrepreneur's ability to identify and exploit business opportunities (Franco and Haase 2009). A key element in this ability is learning (Le Cornu 2017). Entrepreneurs are extraordinary learners since they learn from everything and everyone, especially from their disappointments (Franco and Haase 2009; Le Cornu 2017). According to Rani, Srivastava and Vyas (2016), the entrepreneurial learning process is not limited to the business venture creation phase because it is dynamic so is constant throughout the business's lifetime. Thus, entrepreneurship is a never-ending learning process aimed at the identification of new or continued business opportunities (Franco and Haase 2009).

Organisation-learning theory proposes that the two key entrepreneurial learning mechanisms are intuiting and interpreting (Le Cornu 2017). The entrepreneurial learning process is affected by external motivation and is contingent upon the internal predisposition to preparedness and creativeness (Edwards-Schachter *et al.* 2015). The model of entrepreneurship education is shown in Figure 1.3 below.

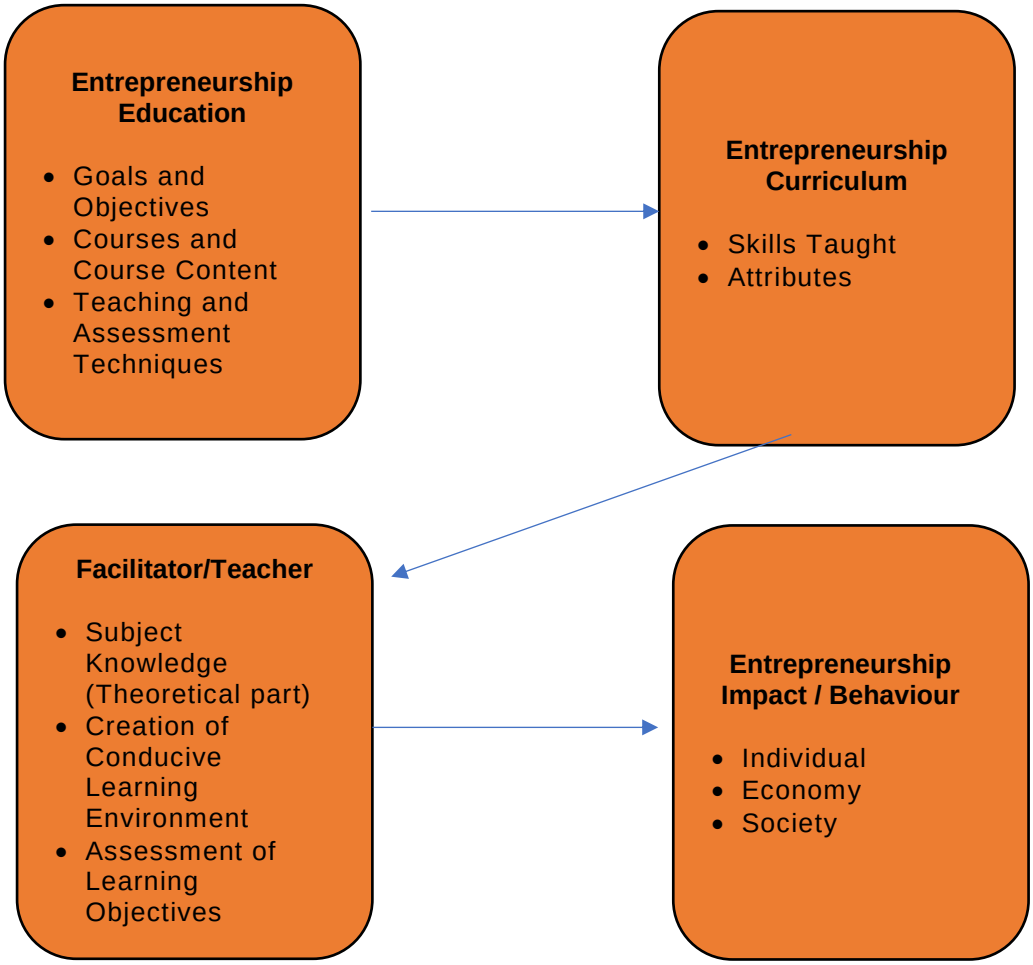


Figure 2.2: Model of entrepreneurship education

Source: Adapted from (Fulgence 2015)

Entrepreneurship education involves both training and education. Entrepreneurship training focuses on the formation of the skills, behavioural change, and the mind-set required for recognising and starting new businesses (Lahn and Erikson 2016; Bridge 2017: 684). Entrepreneurship education instils functional skills to develop the kind of knowledge, character, attitude and values that enable the student to address a broad range of problems (Bauman and Lucy 2019). Entrepreneurship education is a precondition for entrepreneurship training and it needs to form part of teachers' training programmes. Entrepreneurship is a "science" and an "art" (Fayolle and Gailly 2008; Bagheri and Lope Pihie 2013; Nag and Das 2015). According to Mustapha and Selvaraju (2015), the content of the "science" component enables students to build theoretical foundations and a knowledge structure that advances the understanding of entrepreneurship. The "science" aspect is teachable via conventional methods, but the

“art” aspect requires teachers to draw from their own experience and creativity to develop interactive teaching activities (Fayolle 2013b).

2.4 ENTREPRENEURIAL BEHAVIOUR, SKILLS AND ATTRIBUTES

Successful entrepreneurs should be innovative, creative and risk-taking (Ghosh 2019). This view later has been supported Abdullah (2019), who stressed that entrepreneurs are creative, seek and discover niches for market innovations, bear risks, are growth-oriented, and are driven to maximise profit or investors' returns. Pavlova (2019) described entrepreneurship as a process of creative destruction, in which the entrepreneur continually displaces or destroys existing products or methods of production with new ones. Ghosh (2019) have stressed the importance of exploitation and stated that entrepreneurship is about entrepreneurial individuals interacting with their environment, and thus discovering, evaluating and exploiting opportunities. According to Abdullah (2019), it may be that readiness and a capability to take risks is related to the identification of entrepreneurial opportunity, i.e. entrepreneurs see opportunities where other people see risks. Amini, Arasti and Bagheri (2018) have defined opportunity identification as being the most distinctive entrepreneurial behaviour separating entrepreneurs from salary-workers. unknown

Wolfe and Prichard (2019) promote an interdisciplinary approach to entrepreneurship education which involves experience-based co-learning between teachers and students. There is debate in the entrepreneurship academy regarding whether entrepreneurship can be taught or not (Bullen and Flavell 2017). Bauman and Lucy (2019) are of the view that entrepreneurship is a matter of personality and psychological characteristics which are not possible to teach. Fayolle and Gailly (2015) and Egerová, Eger and Mičík (2017) state that entrepreneurship can be taught within any discipline curriculum. Ngibe (2020: 9) in his study found that “entrepreneurs whose skills are constantly developed and improved stands a better chance of implementing strategic and relevant business innovation that is projected at business sustainability and growth”.

A conceptual development of entrepreneurship and process behaviour is presented in Figure 2.4.

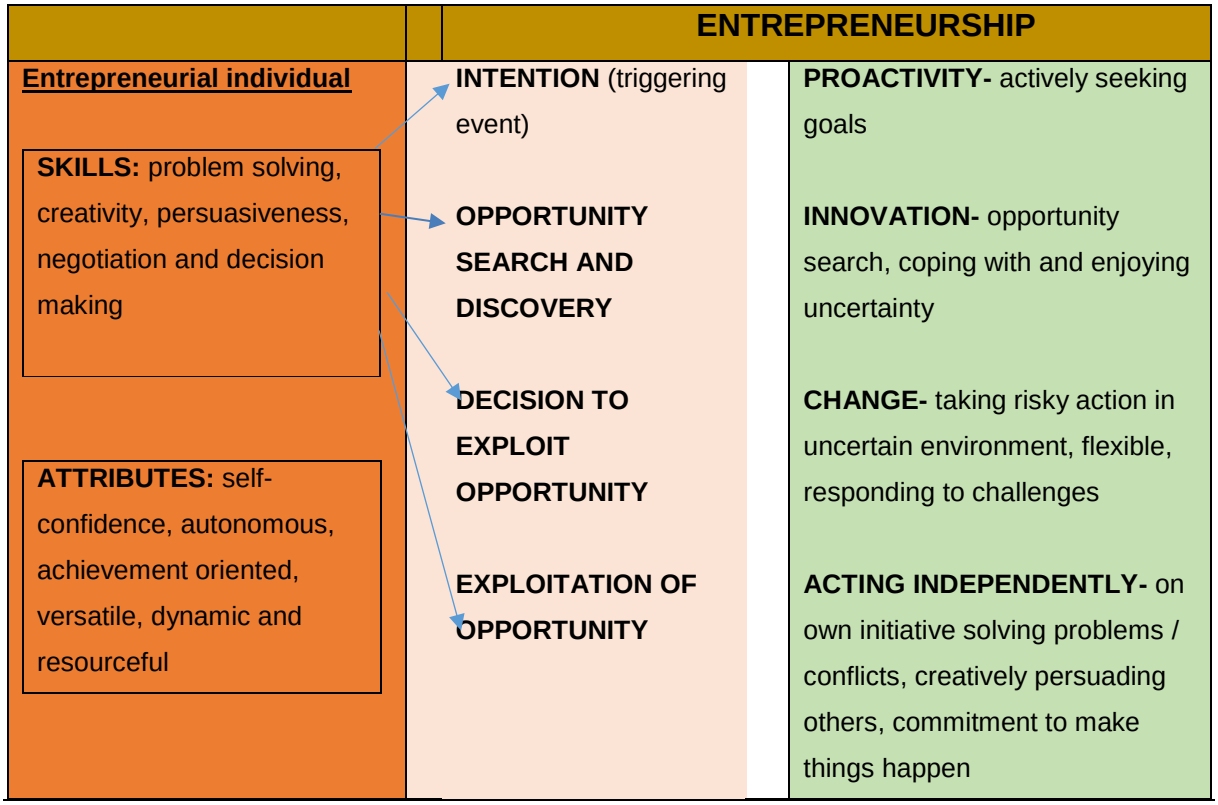


Figure 2.3: Process behaviours
Source: (Gibb 1993)

The key skills required by an entrepreneur can be divided into three categories: technical skills, business management skills, and personal entrepreneurial skills (Taatila 2010; Robb, Valerio and Parton 2014; Nag and Das 2015).

> *Technical skills* include written and oral communication, technical management, and organising skills. They are typically a type of hard skills. *Business management skills* are managerial skills like planning, decision-making marketing and accounting. Entrepreneurs also should also have *personal skills* such as innovation, risk-taking, and persistence" (Edwards-Schachter *et al.* 2015: 29).

Entrepreneurship education can facilitate the development of such skills (Fellnhofer 2017b; Postiglione and Tang 2019). Bagheri and Lope Pihie (2013) define the term "entrepreneurial learning" as "learning to recognise and act on opportunities through initiating, organising, and managing ventures in social and behavioural ways".

Although there are differences in the personalities and characteristics of entrepreneurs, the readiness to risk and the possession of entrepreneurial skills sets are common to all types of entrepreneur (Jabeen *et al.* 2017). The question is not who entrepreneurs are, but what they do, and more important than business skills can be other competencies that provide a foundation for those business skills. Entrepreneurial behaviour is the result of a combination of strong motivation to achieve something, and the capabilities to achieve it.

Furthermore, there are *three levels of competencies*, which all entrepreneurs need:

- *Personal competencies:* creativity, determination, integrity, tenacity, emotional balance and self-criticism.
- *Interpersonal competencies:* communication, engagement/charisma, delegation, respect.
- *Business competencies:* business vision, resource management, networking, negotiating skills.

Acquiring and developing entrepreneurship competencies is more significant than the direct provisioning of financial resources and consulting support that may be needed by entrepreneurs (Chimucheka 2014). According to the Entrepreneurship Education model, competencies consist of more than just a single characteristic. They consist of a group of attributes such as personal effectiveness, academic, workplace, industry wide and industry-sector technical competencies, where some of the attributes are applicable to entrepreneurs, while others are occupation or industry specific. The universal competencies occupy the bottom portion of the pyramid and are defined as the extent to which an individual has satisfactorily met the task requirements for their job and the application of knowledge, skills, attitudes, values, and behaviours in the workplace respectively (Fayolle and Gailly 2015). Entrepreneurship education aims to improve and augment general competencies through its innate capacity to foster individuals to have a greater intention to start a business or become self-employed (Wilson and Alebeek 2017; Waghid 2019). It is frequently seen as a response to the increasingly globalised, uncertain and complex world, requiring all people and organisations in society to be increasingly equipped with entrepreneurship competencies (Jabeen *et al.* 2017).

It is difficult to form an exact definition of what skills are required of an entrepreneur. However, the referenced studies agree that entrepreneurial competencies are often

psychological or social skills, not skills specific to a business or academic branch. It appears that the PILs focuses deeply on the transmitting of academic knowledge, but ignores aiding the psychological growth of students, which has resulted in the current situation. While that is not necessarily a negative issue, generally speaking, it can be said to be so when looking at it from the point of view of entrepreneurship success, in which the results are not entirely positive.

2.5 TEACHING MODEL FRAMEWORK FOR ENTREPRENEURSHIP EDUCATION

The concept of a teaching model is understood in education science but less so in the field of entrepreneurship specifically (Rauch and Hulsink 2015; Fellnhofer 2017). Fidalgo-Blanco *et al.* (2018) define model of teaching as instrumental design which describes the process of specifying and producing particular environmental settings which cause the students to interact in such a way that a specific change occurs in their behaviour. Teaching models link the conceptions that teachers have about teaching and their actual teaching behaviour (Jones and Iredale 2010; Cassim, Soni and Karodia (2014). A teaching model needs to be able to integrate the ontological and educational dimensions (Fulgence 2015); Karanda and Toledano (2012: 203). Karanda and Toledano also state that key questions that need to be addressed by educators in this regard are: what, for whom, why, how and for what results (Karanda and Toledano, 2012). Figure 2.3 shows a teaching framework for entrepreneurship education based on these questions.

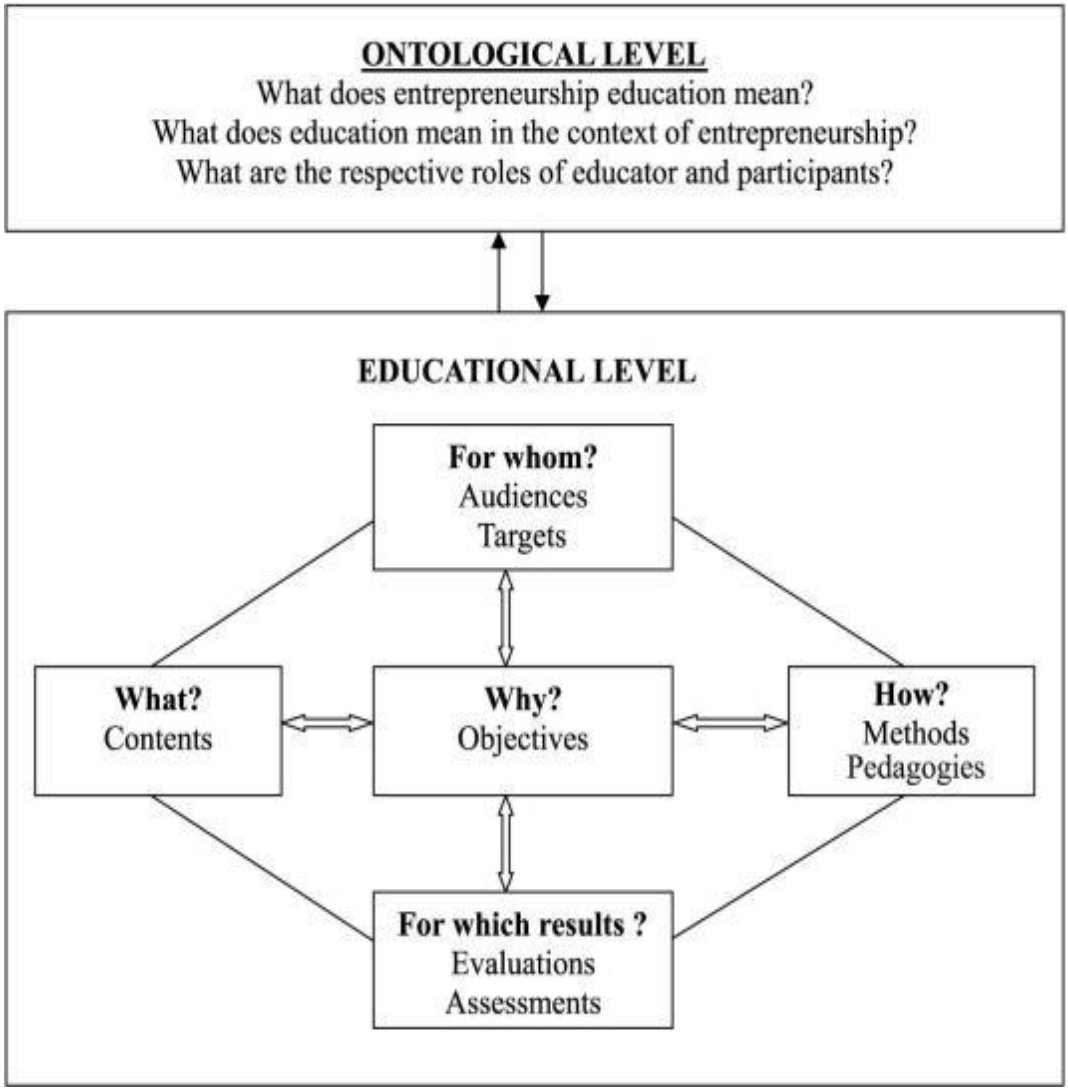


Figure 2.4: The ontological dimensions of teaching models

Source: Fayolle and Gailly (2008)

2.6 ONTOLOGICAL DIMENSIONS OF TEACHING MODELS

According to Fayolle (2013), the ontological dimension is related to teachers' assumptions regarding the nature of the world in general and of education in particular. This dimension includes: philosophical paradigms, theoretical bases, and conceptions that teachers may have in regard to education (Karanda and Toledano 2012; Fidalgo-Blanco *et al.* 2018). Philosophical paradigms relate to perspectives an individual has regarding the nature of reality (Le Cornu 2017: 100). Different perspectives will give rise to different theories of education and so to different teaching models (Fidalgo-Blanco *et al.* 2018). Béchard and Grégoire (2005) ask:

> does one conceive reality as independent of its perceiver, and education as apprehending this reality 'out there' – an objectivist stance? Or does one conceive reality as always being subject to the mental representations of its perceiver, and education as a process of making sense of this reality from the perceiver's point of view (a subjectivist stance)? Alternatively, does one conceive reality as both influencing and influenced by human agency, and education as a process of co-construction – an interactionist stance?

Thus, worldview has an influence on how an individual will approach education and teaching and therefore also the creation of particular programmes, courses and teaching activities.

Theoretical bases are theories (models) of human agency based in certain disciplines which then support particular teaching models. Relevant theories can be drawn from all social science disciplines such as psychology, sociology, economics and or anthropology.

Educator's conceptions are ideas that educators hold about what teaching is (its meaning / its focus), what a teacher is, what students are and what content should be taught (Fayolle and Gailly 2008; Fayolle 2013; Ismail, Sawang and Zolin 2018).

2.6.1 Educational level

The entrepreneurship teaching framework proposed by Fayolle and Gailly (2008) is based on five specific questions:

- "Why (objectives, goals)?
- For whom (targets, audiences)?
- What (contents, theories)?
- How (methods, pedagogies)? and
- For which results (evaluations, assessments)?"

2.6.2 Why?

According to Fayolle and Gailly (2008) and Fayolle (2013) the "why" of an entrepreneurship education programme addresses the desired outcomes. These

outcomes may be at the individual or societal level. At an individual level, entrepreneurship education is envisaged as overcoming some of the deficits in experiences and to rectify characteristics such as lower risk-taking propensity, lower entrepreneurial self-efficacy (ESE), misguided self-perception.

2.6.3 For whom?

This question relates to the target market which includes at least three categories of participants: (i) nascent business owners; (Seikkula-Leino *et al.*) (ii) business owners of start-up firms; (iii) growth-oriented business owners. Most support for entrepreneurs today addresses the second category, that of existing start-ups, either through specific programmes directed to youth or through the overall support structures for start-ups (Fayolle and Gailly 2008; Fayolle 2013).

2.6.4 What?

"The *what* dimension is focused on the content of entrepreneurship education. It has three dimensions itself: the professional dimension, the spiritual dimension and the theoretical dimension" (Fayolle and Gailly 2008:578). The professional dimension is the practical one including three kinds of knowledge: know-what (what to do in order to decide and act in a certain situation), know-how (how to deal with a given situation) and know-who (who are the people that could help in a given situation). The spiritual dimension has two kinds of knowledge: know-why (what determines human behaviour and actions, entrepreneurs' attitudes, values and motivation) and know-when (when is the right time to go ahead?). The theoretical dimension refers to the theories one needs to learn and use in order to understand the entrepreneurial phenomenon.

2.6.5 How?

Fayolle and Gailly (2008) and Fayolle (2013) contend that entrepreneurial education, training and support initiatives may be both formal (that is, structured training) and non-formal. Courses typically comprise structured training and informal support. Structured training usually focuses on developing technical skills, business management skills, and entrepreneurial skills with financial management, marketing and management knowledge. However, how should these formal skills and knowledge be imparted? Informal support for nascent entrepreneurs including mentoring,

business counselling, financial and networking opportunities are other ways of delivering support. Mentoring is highly recommended as a support mechanism for young entrepreneurs.

2.6.6 For which results?

Evaluation is the verdict of those involved according to results, impacts and the needs it intends to satisfy. For *which results* deals with the way evaluation is made within entrepreneurship education. As Fayolle and Gailly (2008: 579) claim, the "great challenge of entrepreneurship programmes is related to the selection of evaluation criteria but even more to their effective measurement". The criteria for evaluation are related to the objectives of the course or programme and therefore once the objectives are set, these can also be established. The problem arises when these criteria need to be measured effectively (Fayolle and Gailly 2008; Akinbami 2015).

2.7 THEORY OF PLANNED BEHAVIOUR AND ENTREPRENEURSHIP EDUCATION

The theory of planned behaviour (TPB) is a model that helps one to understand behaviour that is to some degree under volitional control (Rauch and Hulsink 2015). Intention, in turn, is shaped by attitudes, subjective norms, and perceived behavioural control (Pruett 2012). The TPB is an expansion of the theory of reasoned action (Fayolle and Gailly 2008; Jabeen *et al.* 2017). The central tenet of this theory is the individual intention to perform a particular behaviour (Rauch and Hulsink 2015). Intention, in turn, is shaped by attitude towards behaviour, subjective norms, and perceived behavioural control.

• **Attitude towards behaviour:** Rauch and Hulsink (2015) describe this is the extent of a person's favourable or unfavourable perception of a particular behaviour. Thus, when new issues arise requiring a judgement of some sort, people tend to draw on stored information (beliefs) each of which carries evaluative implications.

• **Subjective norms:** This refers to the perceived social pressure to act out the behaviour or not, or normative beliefs related to whether significant individuals or groups approve or disapprove of a given behaviour (Jabeen *et al.* 2017). These

normative beliefs will influence an individual's intention to perform a particular behaviour (Marques *et al.* 2012).

• **Perceived behavioural control:** This is the perceived ease or difficulty of performing a behaviour and relates to the non-volitional elements inherent, at least potentially, in all behaviours (Ojeifo 2013). An increase of perceived behavioural control increases the perception of opportunity (Jabeen *et al.* 2017).

Perceived behavioural control assumes that human social behaviour is coherent and takes into account the possible consequences of the any particular behaviour (Fayolle and Gailly 2008; Rauch and Hulsink 2015), and has been used for the prediction of human behaviour. Examples of its application include intention to expand the business, and advancing your education. Motivation (intention) and ability (behavioural control) both influence behaviour (Jabeen *et al.* 2017). Fayolle and Gailly (2015: 296) stressed that this concept is not the same as the concept of "perceived locus of control". According to Fatoki and Oni (2014: 587), "locus of control can be seen to include both internal (all depends upon me) as well as external (if something happens to me, it is because of my surroundings) elements". The concept of "perceived locus of control" emphasises the perception of control of the behaviour whereas "perceived behavioural control" emphasises the perception of control regarding how easily or not an individual can carry out the behaviour (Jabeen *et al.* 2017).

The notion of perceived behavioural control is similar to the notion of perceived self-efficacy (Ojeifo 2013; Robb, Valerio and Parton 2014). Perceived self-efficacy is the belief an individual has regarding their ability to control their own level of functioning and events that affect their lives (Rauch and Hulsink 2015). The difference between these two concepts is that perceived behavioural control is concerned with the ability to accomplish a particular behaviour (Jabeen *et al.* 2017), while perceived self-efficacy is concerned with control over the behaviour itself, not the outcomes or actions (Pruett 2012). The presence of an entrepreneurial role model can influence the degree of self-efficacy of an individual which can then increase intentions of behaviour (Jayeoba 2015; and Criaco *et al.* 2017). Santos, Neumeyer and Morris (2019) also state that a role model is very influential in the forecast of status (that is, self-employed or employee).

Research indicates that perceptions regarding the desirability and feasibility of entrepreneurial behaviour can be influenced by education and training (Fatoki 2014; Akhuemonkhan, Raimi and Sofoluwe 2013). According to Fayolle and Gailly (2015), perceived self-efficacy/control for entrepreneurial behaviours is influenced by the acquisition of management skills and exposure to entrepreneurial situations. Thus, an education programme can influence the antecedents of intention as identified by the theory of planned behaviour (Fayolle and Gailly 2015; Jabeen *et al.* 2017).

Akinbami (2015) and Rahman and Day (2015), concur that education plays a role in shaping people's behaviour, even though some successful entrepreneurs did not further their education. It is well-observed that many entrepreneurs have been greatly influenced by their education and established successful entrepreneurial ventures. Therefore, the importance of education in general and entrepreneurship education in particular should be realised as it helps individuals develop great ideas, execute them and launch and grow business ventures. Rauch and Hulsink (2015) state that the educational setting appears to be productive for development of perceived self-efficacy through mentorship by successful entrepreneurs, evaluation of work in and out of class, peer evaluation. All these elements can contribute to how and individual sees themselves and whether they believe they are able to become an effective entrepreneur.

As discussed below, the motivation for behaviour selection (the decision to behave or act in a certain way) is determined by the desirability of the outcome (what is to be the expected result of that selected behaviour) (Jabeen *et al.* 2017). Thus, Expectancy Theory provides a framework for understanding why and how people choose to be entrepreneurs. an individual's motivation to become self-employed is based on the subjective probability that his or her efforts will be followed by a specific outcome and the attractiveness of that outcome. Fayolle and Gailly verified that:

> The attraction of being self-employed for a given person depends on his/her perception that it will lead to desirable outcomes. In the body of theory that studies the role of motivation in the formation of entrepreneurial intentions, one line of research uses the self-determination theory to explain the motivational processes involved in an entrepreneurial behaviour. Self-determination theory

posits that people tend to move toward activities that satisfy their inner resources of development and optimal functioning (Fayolle and Gailly 2015:79).

2.8 A SUITABLE THEORETICAL MODEL FOR THIS RESEARCH

As stated above, there are several theories and models that seek to link the effectiveness of entrepreneurship education with *entrepreneurial intention* (Ferdous *et al.* 2014). The most suitable theory for this study is understood to be the Theory of Planned Behaviour as formulated originally by Ajzen (1991). This was confirmed by Robb, Valerio and Parton (2014) when they stated:

> TPB is a general model designed to be applicable to any behaviour, not only behaviour that individuals are motivated to perform. In fact, for most behaviours of interest to social psychologists, people vary greatly in their intentions. Some individuals intend to exercise, others do not; some intend to start their businesses, others do not; some intend to do long-life learning, others have no intention to do so.

This model, while very broad in its application, does capture the principal aspect of entrepreneurial education which is the main thrust of this thesis – that is, *supporting and enhancing the actual intentions of individuals to become entrepreneurs* – beyond an education system aimed simply at students gaining passive knowledge of the competencies required. It is therefore adopted as the underpinning theoretical model for this study.

2.9 ENTREPRENEURSHIP COURSE OBJECTIVES AND CONTENT IN PILs IN SA

The learning environment in the UoTs strives to provide a quality educative experience including innovative curriculum development and teaching excellence, taking into consideration the needs of all learners by providing an environment that encourages and rewards excellence, involves appropriate market research, the identification of small business opportunities, and support and mentorship of small business development. The learning approach sees the teacher as a partner and facilitator. The interaction between stakeholders (students, teachers and external partners) should result in creative networks which enable the students to participate equally with

lecturers and external partners, for instance, local entrepreneurs. The learning culture is ideally one of partnership and team-based learning. The teacher acts as a facilitator and other partners from, for example, the local community, can be involved. Such an environment and learning culture can enable the development of entrepreneurial competences.

2.9.1 Entrepreneurship education (government secondary schools)

Business Studies

Economic growth and personal financial empowerment are largely dependent on the positive contribution of both business and individuals to the economy. Business takes place in an inherently complex context that requires informed, imaginative, participative, contributing and reflective business practitioners who can dynamically perform a range of interdependent business operations.

Business Studies deals with the knowledge, skills, attitudes and values critical for informed, productive, ethical and responsible participation in the formal and informal economic sectors. The subject encompasses business principles, theory and practice that underpin the development of entrepreneurial initiatives, sustainable enterprises and economic growth.

“The Entrepreneurship in Schools’ programme focuses on Grade 8 to 12 educators and learners. The program is aligned with the Curriculum Assessment Policy Statement (CAPS) and supported by the Department of Education. Entrepreneurship education is provided in Secondary and High Schools as part of Economics and Management Studies, which includes subjects like Business Studies, Economics, Accounting, Consumer Studies and Tourism. Learners must select 3 subjects to add to the compulsory 4 subjects in order to register for the Matric (High school examination). Business Studies, being one of the subjects of the Economics and Management Studies (EMS) department, focuses more on business creation and management” (Entrepreneurship Education) (CAPS 2020: 2).

Business Studies (Grade 12)
Course objectives: • To introduce and develop entrepreneurial thinking through interactive class sessions and activities. • To create meaning and ideas by brainstorming, for concept development, and engaging in exercises to re-evaluate problems in personal and contextual terms • To influence learners' mindset by encouraging them to become job creators instead of job seekers once they leave the schooling system
Session Summary: Business management, Entrepreneurship, Global versus local economy, Business ownership, Ethics in business, Business opportunities and the business plan, Options for employment or self-employment, Personal qualities of a successful entrepreneur, Entrepreneurship and the economy, Economic systems.

2.9.2 Entrepreneurship education (TVET Colleges)

Department of Management and Entrepreneurial Studies

In this department, entrepreneurship education at third year level is offered in various programmes. The material centred on entrepreneurship and covered how to manage and / or to start a small business. The subject is regarded as one with an extensive scope covering various fields; however, the main objective is to develop the principles of entrepreneurship as practised in a commerce environment. The courses that are included in the study, within the Management and Entrepreneurial Studies Department are: Entrepreneurial Skills 1 and Small Business Management 1.

Entrepreneurial Skills 1 (Semester 1 and 2)
Course objectives: • To equip the student with the skills that will enable them to work in the business sector or to be self-employed. • To provide an overview of the knowledge and skills needed in the business sector to work in industry or to start their own business. • For the student to consider the knowledge and practical abilities that they have. • To demonstrate the relevant skills needed to succeed in entrepreneurship. • To develop innovative and creative products and services to fill a gap in the market. • To demonstrate the ability to provide self-analysis in the context of an entrepreneurial career
Session summary: Analysing the entrepreneurial mindset, creativity and opportunity evaluation, Understanding the basic theory behind creativity and innovation, Application of market research techniques to evaluate a business idea, Application of functional management principles and techniques to effectively and

efficiently run the daily business operations and business planning, An overview of what entrepreneurship is all about, Characteristics of an entrepreneur, Market analysis for start-up business and business planning for start-ups.

Small Business Management 1

Small Business Management 1 (Semester 1 and 2)
Course objectives: • To develop the student's entrepreneurial talent, capacity and skills. • To make students aware of business opportunities, both locally and globally by increasing their innovativeness and creativity. • To create an awareness of the pivotal role small businesses can play in the economic development of South Africa. • To provide the learner with the principles of managerial planning, organisational skills and control, and leadership skills • To equip the learner with the required decision-making skills to be able to put the theory into practice. • To demonstrate the relevant skills needed to succeed in entrepreneurship. • To develop innovative and creative products and services to fill a gap in the market
Session summary: Introduction to entrepreneurship, Skills set of an entrepreneur, Setting business goals, Networking, Entrepreneurship leadership and management, Creativity and innovation, Marketing, Operations management for entrepreneurs, Financial skills, Business registration and business plans, Human resources management for small enterprise development

An analysis of the aims of the final-year entrepreneurship courses showed that the emphasis was firstly on the development of entrepreneurial skills and competencies such as idea generation, problem-solving and decision-making skills, opportunity recognition and innovation through new product development. Secondly, the broad objective across the final-year courses was to create awareness, to expose students to entrepreneurship and to equip students with skills, whether for self-employment or as employees. Lastly, the outcomes of the courses included the development of a versatile student who could combine their technical knowledge and skills with their entrepreneurial and business management skills to enhance their employability options post-graduation.

2.9.3 Entrepreneurship education (UKZN)

The discipline of Entrepreneurship is a cross campus initiative by the University of KwaZulu-Natal supported by the University of Limerick, (Ireland) and initially Anglo-American Chairman's Fund and the National Research Foundation.

The discipline fulfils a strategic aim of the University of KwaZulu-Natal to provide students with enterprise skills, to foster the start-up of new businesses particularly in technology related fields and to support the development of entrepreneurial thinking and learning in the University.

In support of these activities, the discipline of Entrepreneurship is actively involved in programme development for various schools, research, knowledge transfer from University of Limerick and other institutions, technology transfer, policy formulation and projects with an emphasis on the upliftment of disadvantaged communities. The discipline is working as a catalyst and resource centre for supporting the development of entrepreneurship and small businesses in South Africa.

Through teaching and training intervention and its activities in other strategic areas, the discipline of Entrepreneurship is determined to make meaningful contribution to the process of small and micro business development among different communities in South Africa.

Business Management 311 (Entre & Leadership) / BBAP311 W1 P1

Aim: 1) To introduce learners to the theory and practice of entrepreneurship and to facilitate the acquisition of skills relevant to enterprise initiation, expansion and organisational renewal and turnaround strategies.

2) To introduce learners to the principles and processes related to successful change interventions in organizations with particular emphasis on the critical role of leadership.

Content: Fundamentals of entrepreneurship & its application to: SMME venture initiation, business growth, turnaround of a business demise & initiating organisational renewal. Introduction to nature of change facing organisations in 21st century & 'best

business practices & principles' related to leading successful organisational change interventions. Assessment: Class Mark 40%, Examination 60%.

Based on the above programme information, it can be concluded that the likelihood of entrepreneurship education to cultivate or develop entrepreneurship mindset is very low. Entrepreneurship has been elaborated as part of the curriculum for students who are doing business management.

2.9.4 Entrepreneurship (Uni-Zulu)

The aim of entrepreneurship curriculum is to prepare graduates with the basic knowledge and skills required for students who enter the field of economics or business with the necessary knowledge and skills to create intellectual property, to start businesses, to produce knowledge products and to create value for their employers at production, research, innovation and managerial platforms. The Bachelor of Commerce focuses on the factors that drive economic behaviour at both an individual and organisational level.

This programme is one of the first accredited academic diplomas in this field. It aims to equip students with skills and knowledge that will qualify them for employment as managers and supervisors of small and medium co-operatives.

Graduates will be able to manage the operations of co-operative organisations, mobilise resources from members of co-operatives for growth and wealth generation. Graduates will also acquire broad-based business management skills. Employment opportunities can be in any of the following positions: co-operative manager, co-operative training and educational specialist, co-operative promoters/advisor, co-operative auditor, credit officer for micro-financing or project development officer with a non-governmental organisation (NGO).

Business Management 3

This module deals with ownership, management and organisation; human resources; labour management relations; the marketing process; finance and risk management; information and management decision making as well as government and world business.

It can be noted that this programme focusses more on business management skills rather than instilling entrepreneurial behaviour in students. The university lack the involvement of entrepreneur expert involvement and experiential learning has not been mentions in the course snap shot information.

2.9.5 Entrepreneurship education (DUT)

The goal of entrepreneurship curriculum at the Dut is to nurture entrepreneurial thinking and action through education, training and business start-up support measures. They have entrepreneurship centre open not only for students but also to alumni, youth, community members and partners who share the same interests with DUT and are interested in establishing a mutually beneficial agreement with DUT. Through its innovative strategies, training and mentorship programmes, the centre aims to develop successful and sustainable student and community enterprises. Whether you are in Applied Sciences, Health Sciences, Engineering and the Built Environment, Management Sciences, Arts and Design or Accounting and Informatics field, you are welcome to register and contact the Centre staff. “We will assist you to convert your business idea into a commercially or socially viable product, service or will help you develop your innovative idea further”.

Entrepreneurship and Small Business Management

Aim: The purpose of this module is to expose students to the concept of entrepreneurship with a specific focus on the business management of small businesses in terms of start-up, growth, harvesting, failure and turnaround. The differences between a family business, a franchise and traditional small business start-up are explored as alternative routes to entrepreneurial small business ventures. Leadership, management, ethical decision-making and resource requirements are also focused on to enhance the sustainability of a small business. In addition, students will be exposed to practical small business development tools that equip those wanting to start their own business ventures with the required knowledge and analytical skills to establish sustainable business ventures that have the potential to contribute to the national and global economy.

Content: Understanding small business development; Entrepreneurial Leader and the Team; Resource Requirements; Managing the family business; Ethical decision Making and the Entrepreneur; Managing growth; Crises and recovery; Harvesting and beyond; Franchising; Business Management functions (general management, financial function, marketing, PR and sales function, operations and supply chain, purchasing function, information management, legal issues). Assessment: Tests, Presentations, Assignments and/ or Project (40%), Exam (60%).

This university painted entrepreneurship education as a career option, but the extent they develop entrepreneurship mindset in students in not clear. They specified that only students who want to start their own business are exposed to practical small business development tools. An element of entrepreneurship mindset can be noted when they stated that “we will assist you to convert your business idea into a commercially or socially viable product, service or will help you develop your innovative idea further”, but it is not clear enough whether or not students are encouraged to consider self-employment as a career option.

2.9.6 Entrepreneurship education (MUT)

Business Management 301

Aim: To introduce learners to core concepts in microeconomics such as pricing theory, supply and demand for a good or service, globalisation and other factors impacting on the operation of the market economy.

Content: The module covers the following topics: Needs, wants, resources, factors of production, supply and demand factors, elasticities both of demand and resources use, gains from trade, rents, costs, firm structure, globalization and markets.

The University continues its drive to promote the entrepreneurship spirit among its students. The MUT have a responsibility of nurturing and assisting student entrepreneurs to have the courage of taking their businesses to the next level.

The students participated in the event that gave them an opportunity to show case their businesses in whatever form. The university is showcasing entrepreneurship through storytelling, and evidence of their business activities. They invite current and

past students to share their entrepreneurial journey and experiences with other students.

With the above information is can be noted that the above-mentioned university do have measures in place to try and develop entrepreneurship mindset in their students. The involvement of successful entrepreneurs show that they are a step ahead in terms of entrepreneurship education compared to other institutions in the province.

2.10 CONCLUSION

This chapter highlighted various concepts regarding entrepreneurship and entrepreneurship education. The examples are from international settings but offer valuable lessons and are useful as a benchmark for South African studies. It also provided details of the entrepreneurship courses offered by PILs in KZN

It is evident from the literature survey that entrepreneurship education is a growing phenomenon that developed countries are promoting. Lessons that South Africa can learn include: an experiential approach to teaching entrepreneurship; government support through policy implementation and funding; networking to provide access for practical experience of the subject; training and development for teachers to improve the pedagogy of entrepreneurship education.

Even though there has been great expansion of entrepreneurship and entrepreneurship education, the development and implementation of such education remains a challenge (Ojeifo 2013; Cho and Honorati 2014; Littlewood and Holt 2018: 526). Entrepreneurship education has been introduced to South Africa relatively recently (about a decade ago), and implementation has not been smooth (Akhuemonkhan, Raimi and Sofoluwe 2013; Chimucheka 2014; Ngibe 2020: 9). This study investigates the extent to which the introduction of entrepreneurship education has cultivated entrepreneurship knowledge and competencies among students of the Kwa-Zulu Natal PILs. Arising from the findings of this study recommendations have been made in order to address the problems identified so as to improve the implementation of entrepreneurship education in PILs.

CHAPTER 3: LITERATURE REVIEW

3.1 INTRODUCTION

Entrepreneurship education programmes have the potential to generate high job satisfaction and improve standards of living (Harrington and Maysami 2015; Jabeen *et al.* 2017). There is evidence that the attainment of high levels of entrepreneurship education correlate to higher earnings and improve employment opportunities for graduates (Akhuemonkhan, Raimi and Sofoluwe 2013; Cho and Honorati 2014; Akinbami 2015). For this reason, many universities are making their entrepreneurial education programmes stronger (Chuanyin and Jin 2014; Touzani *et al.* 2015), with constant review to make sure that these meet the challenges of the changing environment of the business world (Henry and Lewis 2018). Economic development requires individuals to have the appropriate competitive attributes, behaviour, knowledge, skills and competencies to be able to alleviate poverty and create jobs (Chuanyin and Jin 2014; Rauch and Hulsink 2015; Ustav and Venesaar 2018).

Researchers such as Akhuemonkhan, Raimi and Sofoluwe (2013), Ojeifo (2013), and Littlewood and Holt (2018) state the spirit of entrepreneurship should be instilled in all disciplines so that the variety of knowledge associated with the variety of academic disciplines can be brought to bear on the development of society.

Harris, Gibson and Taylor (2015) and Waghid (2019) suggest schools should try to instil a positive attitude and mind-set regarding entrepreneurship education and add basic entrepreneurial competencies to their curricula. This would help to prepare students for entrance into the labour market and also to consider enterprise creation (Chuanyin and Jin 2014; Dobratz, Singh and Abbey 2015).

This chapter reviews the relevant literature regarding the significance of, and benefits of, entrepreneurship education and training as well as the underlying theories, models and concepts and the way that these have been applied to embed entrepreneurship education in school and university curricula. Literature regarding the pedagogics of entrepreneurship will be reviewed. The chapter concludes by examining the knowledge gaps found in the existing literature of entrepreneurship and entrepreneurial education.

3.2 FOCUS OF ASSESSMENT OF ENTREPRENEURSHIP EDUCATION IN PILs

The method of assessment of entrepreneurship education differed greatly between those who identified as academics and those who identified as support professionals (Hu and Yuan 2020). The focus of academic staff is on entrepreneurship education (Fatoki and Oni 2014). Entrepreneurship education, it can be argued, differs from the wider umbrella of entrepreneurship development, since it focuses on developing an entrepreneurial mind-set and understanding the tenets of entrepreneurship (Gamede and Uleanya 2017).

According to Jabeen *et al.* (2017) assessing the broader entrepreneurial mind-set has significantly challenged traditional business school educators. González Moreno, López Muñoz and Pérez Morote (2019) assessment practice is important and has perhaps been neglected as a subject in enterprise education. According to Chimucheka (2014), entrepreneurship education has broader outcomes than simply producing entrepreneurs with business plans. The author states that is very important to measure or assess the impact of entrepreneurship education on the performance of SMMEs in South Africa, for this will show whether the objectives of entrepreneurship education are being achieved.

In the past, little attention has been dedicated to how to measure the overall effectiveness of entrepreneurship education towards both individuals and the society (Yu Cheng, Sei Chan and Mahmood 2009; Saji and Nair 2018). According to Abereijo (2018) the main challenges related to the assessment of entrepreneurship education lie in measuring output from the entrepreneurial education process. The methods for assessing the results of entrepreneurship education are still not well defined and there is no one standardised and generally accepted way of measuring the results (Fayolle and Gailly 2008; Fatoki and Oni 2014; Fidalgo-Blanco *et al.* 2018).

Assessment Approaches Entrepreneurship education curriculum is designed and delivered in large part by individual academic staff within their subject areas, with the large majority being from areas such as a Business School or Faculty of Management Sciences (Fatoki and Oni 2014; Iwu *et al.* 2019). The assessment of entrepreneurship activities in PILs by academic staff is largely personal. According to Boi (2018) the pedagogical focus has remained on the business school environment and the application of business skills in other disciplines. These pedagogies tend to focus on

analytical approaches with the preponderance being positivistic engagement, where assessed outcomes are clearly defined and predictable (Jones and Iredale 2010; Solomon, Alabduljader and Ramani 2019).

Fulgence (2015) states that the citing of appropriate expert texts and deconstruction of case studies, where analysis can be made with the benefit of hindsight, are common practices. These approaches rarely extend into how the lessons learned might be employed in new and unpredictable scenarios. As creativity and predictability are opposed to one another, the dichotomy highlights significant challenges. Assessment strategies normally assume that teaching staff know what the students need to learn, in what order, and how it may be accomplished (Fayolle and Gailly 2008; Fatoki and Oni 2014).

There is also an assumption that the teaching staff has considerable insight into the ways that students learn (Eliana *et al.* 2015; CELT 2014). The goal of assessment is to judge how well a student has learnt and to improve student learning, or for accreditation of student performance, so that we see how central the issue is to curriculum developers. Moreover, if lecturers are to communicate their requirements to students effectively, there needs to be a clear value attributed to the specified outcome.

3.2.1 Entrepreneurial education intentions

Regarding an entrepreneurial educational intention, Abella (2016) notes:

> Despite the varying definitions of entrepreneurship and the absence of one commonly accepted definition of the term, all the accepted definitions revolve around the concept of initiating or attempting to start up a business.

According to Rauch and Hulsink (2015), “intention” is a state of mind (a mind-set) which influences an individual’s focus in a particular direction towards the accomplishment of desired goals. Entrepreneurial intention can therefore be seen as the decision a person makes about starting their own business at some time in the future (Pruett 2012; Bignotti and Le Roux 2016; Ghosh 2019).

Intentions are a bridge between beliefs and subsequent behaviour (Fayolle and Gailly 2015; Jayeoba 2015). In this way, individuals form attitudes about a particular behaviour based on their perceptions (beliefs) of the outcomes of carrying out such behaviour and the existing cultural beliefs about such behaviour (Belitski and Heron 2017). Thus, attitudes drive behaviour (Eggers *et al.* 2010), and without intentions action is less likely to occur (Jayeoba 2015; Jabeen *et al.* 2017).

Rauch and Hulsink (2015) believe that individuals can experience key moments of motivation that radically transform their heart and mind which cause them to think seriously about becoming an entrepreneur or a job creator. Robb, Valerio and Parton (2014) echo this when they note that entrepreneurial beliefs are fuelled by motivation, but actual intentions are required for the idea to be realised. Rauch and Hulsink (2015) point out that the term “entrepreneurial intention” has a similar but more concrete meaning than terms such as entrepreneurial awareness, entrepreneurial potential, aspiring entrepreneurs, entrepreneurial proclivity, entrepreneurial propensity and entrepreneurial orientation. This study, employs the term “entrepreneurial intention”.

Belitski and Heron (2017) list certain factors which they regard as influencing whether an individual act entrepreneurially or not:

- ✓ “Perceived ability to execute the entrepreneurial behaviour;
- ✓ Attitude (negative or positive) towards entrepreneurial behaviour; and
- ✓ Subjective and social norms (the perceptions of others regarding entrepreneurship, the level of motivation and social support systems).”

Factors such as these can be inspired by personality characteristics as well as education (Memani and Fields 2014).

Factors affecting entrepreneurial education intention are outlined in Figure 3.1 below.

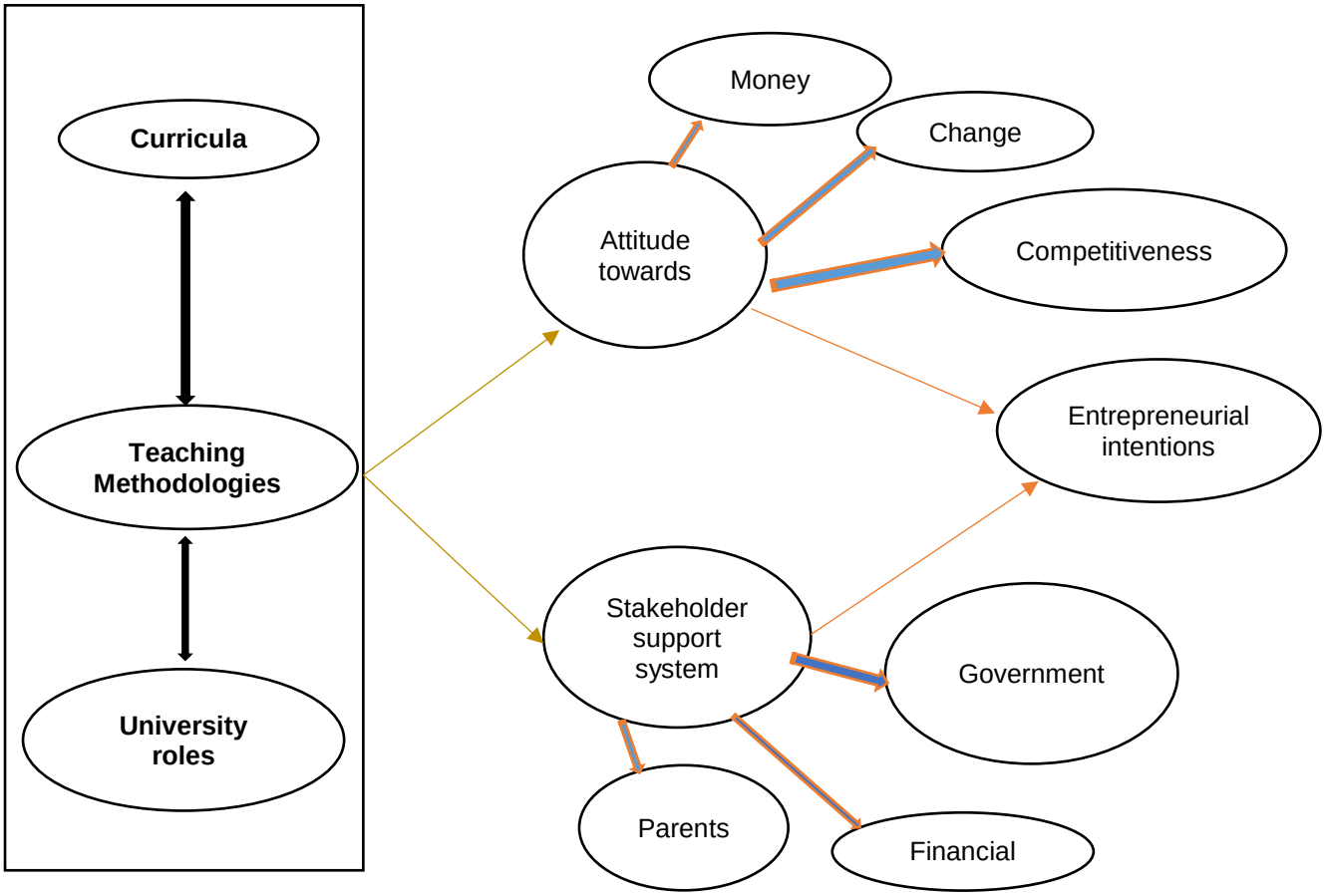


Figure 3.1: Entrepreneurial education intention
Source: Adopted from Rauch and Hulsink (2015)

3.2.2 Entrepreneurial education on self-efficacy

Entrepreneurship education and training play an important role in developing entrepreneurial self-efficacy (ESE) according to Pruett (2012). The term “self-efficacy” refers to the internal belief of an individual about their ability to follow through on the type of behaviour needed to carry out a particular performance according to Chimucheka (2014), Thus, “self-efficacy” affects the degree to which a person is able to become aware of opportunities in the environment and to act on them. Therefore, education about self-efficacy is important in entrepreneurship education (Fayolle and Gailly 2008; Akinbami 2015).

Chuanyin and Jin (2014) confirm that entrepreneurial education and training is effective in ESE and in forming the intention to start a new business enterprise. Robb,

Valerio and Parton (2014) also found that developing students' self-confidence, along with their general knowledge and self-efficacy, ensured that entrepreneurship education can increase students' perceptions of the possibility of pursuing an entrepreneurial career. Self-efficacy develops over time as entrepreneurs reflect on and learn from their experience (Fulgence 2015). Therefore, entrepreneurship training must focus both on technical knowledge and on developing the self-confidence of potential entrepreneurs which will develop entrepreneurship intention.

Broadly speaking, it is evident that entrepreneurial behaviour consists of a range of factors including demographic factors and personal characteristics, attitudes and beliefs, intentions, environment, entrepreneurial competencies and education (Memani and Fields 2014; Robb, Valerio and Parton 2014). For this reason, Bignotti and Le Roux (2016) warn that it is simplistic to assume that it is university education only that leads to the development of entrepreneurship because it could also be due to personality traits (Bignotti and Le Roux 2016). These complexities make it difficult for curriculum developers to design content that can effectively develop entrepreneurship (Robb, Valerio and Parton 2014).

There is little research regarding the effects of entrepreneurship programmes on student's subsequent behaviour, but Bignotti and Le Roux (2016) assert that such programmes do amplify entrepreneurial intentions. It is reasonable to assume that the selection of entrepreneurship programmes would be an indicator of students being more likely to consider starting their own enterprises (Sánchez 2013; Dobratz, Singh and Abbey 2015), and that participating in such programmes raises students' entrepreneurial intentions (Jayeoba 2015). However, barring a study by Harris, Gibson and Taylor (2015), there is little research evidence of what specific factors within these programmes have the effect of increasing entrepreneurial intentions. One factor that has received some research support is the role of creativity in the entrepreneurial process, which (Abereijo 2018) found to be typical of entrepreneurial behaviour and entrepreneurship educational programmes. Velasco 2013; Jabeen *et al.* (2017) found that introducing innovation and creativity increased students' willingness to engage in entrepreneurial activities. In support of the notion that entrepreneurship education can make a difference, Chimucheka (2014) found that people with limited education were less likely to establish entrepreneurial businesses, contradicting the idea that entrepreneurs are born not made. A contrary finding is that of Gomera, Chinyamurindi

and Mishi (2018) who state that there is often a mismatch between competencies gained during a university education and those needed by the students for embarking on an entrepreneurial enterprise after graduation, because realistic entrepreneurial competencies are often poorly developed within university programmes so can actually have an adverse effect on the outcome of engagement in entrepreneurship.

3.3 PERSPECTIVES OF ENTREPRENEURIAL EDUCATION

According to Harrington and Maysami (2015), there are four main perspectives of entrepreneurship, namely: psychological, sociological, economic and cultural. These entrepreneurship perspectives are discussed below.

3.3.1 Psychological perspective

This perspective emphasises the distinctive qualities and special psychological characteristics of an entrepreneur (Fidalgo-Blanco *et al.* 2018). Harrington and Maysami (2015) state that there is evidence that entrepreneurs have exclusive values and attitudes towards work and life, and these characteristics drive the individual to behave in certain ways. These traits include: propensity to risk-taking, high achievement, internal locus of control, and innovation (Harrington and Maysami 2015).

3.3.2 Sociological perspective

The sociological perspective explores the social factors that are influential the decision-making process of an entrepreneur (Baldry 2015). Some authors note that an unstable upbringing, including being exposed to poverty and parental neglect, can lead some individuals to seek control over their lives and lead them to create their own businesses in order to sustain themselves (Rahman and Day 2014; Henry and Lewis 2018). In addition, research by Cho and Honorati (2014) indicates that children who have grown up with parents or care-givers that are entrepreneurs have a higher probability of choosing entrepreneurial careers than being employed by others.

3.3.3 Economic perspective

Economic growth and the concomitant increase in demand for goods and services opens up business opportunities which means there is more scope for entrepreneurship (Lahm and Scott Rader 2015; Jabeen *et al.* 2017). Technological

advances enable entrepreneurs to take advantage of emerging business opportunities (Cassim, Soni and Karodia 2014; Cho and Honorati 2014). Thus, a poorly performing economy is a major drawback for entrepreneurship.

3.3.4 Cultural perspective

It has also been established that culture serves as a conduit for inculcating entrepreneurial behaviour and can be a catalyst for entrepreneurship (Touzani *et al.* 2015). Culture includes language, ethnic, religious, regional, national, and social class components (Harrington and Maysami 2015). A positive environment combined with motivational factors, including financial reward and individual fulfilment, can be stimulating for entrepreneurship (Rauch and Hulsink 2015). Entrepreneurship education is regarded as a key factor in the development of entrepreneurship, from a sociological point of view (Chuanyin and Jin 2014).

3.4 CONNECTION BETWEEN GENERAL EDUCATION AND ENTREPRENEURSHIP EDUCATION

Although education is not necessary for new business formation, education provides for ordered transfer of knowledge, competencies and skills that are important for success in businesses. Research shows that education at a tertiary level, particularly entrepreneurship education, increases the probability that a new business will survive beyond the start-up phase (Lautenschläger and Haase 2011). Furthermore, entrepreneurship education inculcates knowledge, skills, competencies and attitudes that can be applied in entrepreneurial enterprises as well as corporate enterprises (Akinbami 2015).

3.5 SIGNIFICANCE OF ENTREPRENEURSHIP EDUCATION

The main objective of entrepreneurship education in PILs, as highlighted by Mustapha and Selvaraju (2015) is to produce “entrepreneurial graduates as well as graduate entrepreneurs”. Nieman and Nieuwenhuizen (2009) point out that the key aim of entrepreneurship education is to increase the variety of ideas experienced by students, to learn how to exploit a business opportunity, and to become familiar with the sequence of actions required to create a new venture. Chimucheka (2014) is of the view that entrepreneurship education in South Africa:

- “tries to prepare people to be responsible, to take risks, to manage the business and to learn from the outcomes by immersing themselves in real life learning experiences.
- The main objective of entrepreneurship education is to foster the creation of new entrepreneurs who could start new ventures.
- Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development. It is also the objective of entrepreneurship education to encourage creative thinking and to promote a strong sense of self-worth and accountability.
- Entrepreneurship knowledge and skills are essential resources for the success of the SMMEs and ultimately for economic development. Entrepreneurship education has been driven especially by academics, business leaders, entrepreneurs as well as government officials seeking an advantage in a globalised world” (Chimucheka 2014: 406).

According to Fulgence (2015) entrepreneurship education aims to achieve the following:

- Enable individuals to be self-employed and self-reliant;
- Enable people to be creative and innovative in identifying business opportunities;
- Serve as a catalyst for development and economic growth;
- Reduce the level of poverty;
- Create employment opportunities;
- Reduce rural-urban migration;
- Empower tertiary institution graduates with adequate training in risk management; and
- Inculcate a spirit of persistence in people which will enable them to persist in any business venture.

It is the consideration of the objectives of entrepreneurship education programmes that introduces a deeper understanding of different audiences for entrepreneurship education.

3.6 ENTREPRENEURSHIP EDUCATION IN SOUTH AFRICAN PRIMARY SCHOOLS

South African (SA) primary education is for children aged six to twelve years. (Stokaitė 2013) maintains that the foundation for entrepreneurship skills should be laid as early as possible. Entrepreneurship education should nurture the entrepreneurial essence in children so that they can develop an enterprising attitude and become creative and constructive citizens in due course (Rauch and Hulsink 2015). Education can raise an awareness of entrepreneurship at a young age, and if entrepreneurship education is introduced at an early age, the youth are enabled to become initiators and creators of business ventures and to believe in themselves in whatever they do, which also encourages them to become socially responsible citizens (Littlewood and Holt 2018).

3.7 ENTREPRENEURSHIP EDUCATION IN SOUTH AFRICAN SECONDARY SCHOOLS

Secondary education in South Africa is also referred to as High School (Grade 8-12). The content of entrepreneurship education at this level should include all the tasks necessary to facilitate entrepreneurial success (entrepreneurship days, for instance) giving learners the opportunity for practical experience of entrepreneurship (Lahn and Erikson 2016; Ondiba and Matsui 2019). Schools can promote entrepreneurship as a career of choice (Henry and Lewis 2018). A study conducted by Stokaitė (2013) indicated that entrepreneurship education at secondary school level has an impact on the number of students who seriously consider starting a business sometime after completion of their studies.

3.7.1 Barriers to entrepreneurship education at the primary and secondary levels

Barriers to effective entrepreneurship education in South Africa include financial, political, assessment standards, and perceptual barriers – educators may view entrepreneurship education as an extra to a student's education, rather than as a central component of their educational foundation (Ševkušić, Stojanović and Simijonović 2018; Gamede and Uleanya 2017).

One of the ways to overcome resource constraints regarding entrepreneurship education is through the use of technology (Robb, Valerio and Parton 2014; Bauman and Lucy 2019). For example, video conferencing can be used, whereby entrepreneurs can simultaneously share their experiences in several classrooms, or with several schools. Students should also be taught how to start e-commerce types of business and not just brick and mortar types (Bauman and Lucy 2019).

The training of educators to teach entrepreneurship is a barrier (Henry and Lewis 2018). Typically, the lecture format is the preferred method of instruction at schools, but is the least suitable format in entrepreneurship education (Kubberød, Fosstenløkken and Erstad 2018). Learning by experience and team-based teaching are accepted as the norms for teaching entrepreneurship (Rauch and Hulsink 2015). However, these require extra training of the educators to be able to implement them successfully (Ismail, Sawang and Zolin 2018). Entrepreneurship education has become (or should become) a priority for university administrators, course developers, government officials and researchers. The reason for this is the impact of entrepreneurship on economic growth and employment (Iwu *et al.* 2019).

Entrepreneurship education is the structured, formal conveyance of entrepreneurial knowledge (Stokaitė 2013) including the mentality and skills that individuals use as they start and develop their businesses (Stokaitė 2013; Matlay 2018). Such education promotes self-employment as a career option (Ramchander 2019). This awareness motivates young people to equip themselves with the skills, knowledge and experience required for effective business ownership (Ondiba and Matsui 2019).

Entrepreneurship cannot be developed from education only, but education can contribute to the formation of entrepreneurship. Bagheri and Lope Pihie (2013) found that students who had been in an entrepreneurship programme were more likely to start their own business compared to students who had not. Saeed, Muffatto and Yousafzai (2014: 301) state that “entrepreneurial universities can play an important role in identifying and developing students’ entrepreneurial traits and ability to start their own ventures, thus effectively contributing to economic prosperity and job creation”.

Successful entrepreneurial programmes teach students to think creatively and problem-solve, so they are able to analyse business ideas and provide leadership on

any project (Robb, Valerio and Parton 2014). The entrepreneurship mind-set is appropriate for everyone, helping people to be more creative and self-confident in whatever they undertake (Cho and Honorati 2014; Maclean and Fien 2017).

3.8 ENTREPRENEURSHIP EDUCATION IN TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET)

TVET is an internationally recognised acronym for 'technical vocational education and training' (Abdullah *et al.* 2019). The difference between technical and vocational types of education is related to the degree of analytical knowledge and practical skills that are imparted in each (Pavlova 2019). The aim of TVET is to provide lifelong education and training for self-reliance (Maimane 2016). TVET courses seek to enable individuals to learn the relevant practical, social and personal skills for them to be able to function at workplaces and in social settings (Postiglione and Tang 2019).

According to the African Union (2007), entrepreneurship education can be particularly effective in a vocational training context because students are close to entering working life and self-employment may be a valuable option for them.

3.9 STRATEGIES FOR EFFECTIVE ENTREPRENEURSHIP EDUCATION

Robb, Valerio and Parton (2014) believe that human talent is the most useful ingredient in today's knowledge economy. Thus, education and training are important for releasing latent talent. Ojeifo (2013) argue that focusing on entrepreneurship education will be able to produce a skilled workforce and also that it will help graduates not only to find suitable jobs but also embolden them to start their own business ventures. Cho and Honorati (2014) propose the following strategies to help lessen the challenge of a lack of entrepreneurship education in South Africa:

- There should be some form of genuine schoolwork-based learning incorporated in some studies as part of the national economic development strategies. The development of an apprenticeship scheme would give new graduates some work skills and experience;
- Pool local public and private funds to create a small venture capital fund;
- Introduce school-based enterprises where students identify potential businesses plans, and create and operate small businesses using the school as mini incubators;

- Provide small business schools where interested students and community members can participate.
- Develop entrepreneurship internship programmes, matching students with locally successful entrepreneurs with clearly established education programmes;
- Establishing an enterprise college aimed at fostering the specific skill sets required for entrepreneurship to serve as skill acquisition centres for the youth;
- Creating an economic friendly political environment; and
- Improving on the government's taxation policy for small-scale businesses. (Cho and Honorati 2014: 117)

3.10 INFLUENCE OF PERSONAL FACTORS ON ENTREPRENEURSHIP EDUCATION IN SOUTH AFRICA

Herrington, Kew and Kew (2015) report that most South African young people believe that they do not have the skills to initiate a business. This could possibly be due to the low percentage of secondary education completion.

The poor education and training system are a major inhibiting factor regarding entrepreneurship in South Africa (Herrington *et al.* 2010). An improvement in entrepreneurship education can make a difference to improve this state of affairs (Chimucheka 2014). Educating individuals in the field of entrepreneurship through integration into school curricula at all levels can inculcate an entrepreneurial mind-set and culture which can inspire individuals to generate jobs rather than just be job-seekers (Santhosha Shetty and Siddiq 2015). There is a need to develop an entrepreneurial mind-set which includes a good grounding in basic business, administration and financial skills (Herrington *et al.* 2010; Jayeoba 2015).

Entrepreneurship education is still developing, although some institutions of higher learning in South Africa have been teaching it since the early 1990s (Herrington *et al.* 2010). Tangible results are difficult to see (Oluwajodu *et al.* 2015). This may be due to the history of discouragement of entrepreneurship and the culture of working for others (Nieman and Nieuwenhuizen 2009; Hu and Yuan 2020).

Engagement in the start-up process is what really matters, but is missing from most entrepreneurship programmes in South Africa (Memani and Fields 2014). Entrepreneurship education in South Africa needs to be improved so that the entrepreneurial capabilities of it people can be harnessed and the nation achieve the goal of economic growth, employment creation and improved total entrepreneurial activity (Maimane 2016; Fidalgo-Blanco *et al.* 2018).

3.10.1 Roles of entrepreneurship education in economic empowerment and development in SA

According to Gordon and Bursuc (2018: 140), “an entrepreneurship education should be able to excite and equip students with entrepreneurial skills and in this way shift the perceptions of students from paid employment to self-employment”. This perception dates from the colonial era when education and training were specifically designed to prepare people to work in the kinds of paid employment required by their colonial masters (Akinbami 2015).

According to Chuanyin and Jin (2014) and Henry and Lewis (2018) entrepreneurship education can equip students to channel their creative abilities and skills to their personal areas of interest, for example, craft work, sewing, manufacturing, mining, farming, information technology, retail, entertainment, or catering (Akinbami 2015; Ismail, Sawang and Zolin 2018). South Africa’s future entrepreneurial capacity depends on how well the nation is enabling individual citizens to start their own businesses and to be able to provide employment (Cassim, Soni and Karodia 2014; Hu and Yuan 2020).

3.11 AREAS OF ENTREPRENEURSHIP EDUCATION

Florea and Florea (2013) distinguish two aspects of entrepreneurship education, namely:

i. **Education about entrepreneurship**

   This aspect perceives of entrepreneurship as a social phenomenon. It is largely theoretical, involving the development, construction and study of theories regarding the entrepreneurial process and small and medium sized firms.

ii. **Education for entrepreneurship**

This aspect is more practical regarding the relevant skills and tools required for establishing a new venture.

The above aspects require different pedagogical approaches (Jones and Iredale 2010). The most common methods used in educating *about* entrepreneurship include lectures, case studies, thesis/dissertations and workshops (Robb, Valerio and Parton 2014; Fidalgo-Blanco *et al.* 2018). The most common methods used in educating *for* entrepreneurship include videos, business plans, computer simulations, and joining an entrepreneurial club (Jones and Iredale 2010; Robb, Valerio and Parton 2014; Henry and Lewis 2018).

3.12 STUDENT ENTREPRENEUR

The right “entrepreneurial attitude” makes a difference in terms of progression to starting up a business, with those who have the self-belief that they can start a business being five times more likely than average to make the attempt (Lautenschläger and Haase 2011; Ojeifo 2013; Lindner 2018). Role models are helpful in providing a vision of what is possible (Nag and Das 2015). Work experience and knowledge of markets and customer preferences contribute to development of appropriate entrepreneurial attitudes and likelihood of embarking on a business enterprise (Mustapha and Selvaraju 2015).

For the entrepreneurship education model to work, the correct student has to be recruited and be placed in an authentic environment where he/she can apply his/her trade. Fundamentally, teaching entrepreneurship is not enough, there must be learning from direct personal experience as well (Mustapha and Selvaraju 2015). Educational institutions need to design curricula which build in experiential learning as well.

3.13 INCORPORATION OF ENTREPRENEURSHIP EDUCATION INTO NATIONAL CURRICULA

There is often a challenge when attempting to consider the quantity and quality of entrepreneurship education because of diversity in curriculum (content, breadth and depth), pedagogical approaches, and level of offering whether at post-graduate level, undergraduate level, nascent/fledgling entrepreneur level or whether it is a full

programme or merely a module/course. As indicated earlier, this study focuses on entrepreneurship education whose purpose is to develop competencies, skills and knowledge in new venture creation, management and growth. There are various ways of integrating entrepreneurship education into general education, including integrating it into existing subjects or having it as a stand-alone subject (Ojeifo 2013).

3.13.1 ENTREPRENEURSHIP EDUCATION PROGRAMMES

The objectives of entrepreneurship education programmes vary and include development of entrepreneurial awareness and the ability to identify business opportunities, and training of students to set up and manage a business (Harrington and Maysami 2015; Matricano 2020).

Business schools offer a variety of entrepreneurship education courses such as Introduction to Entrepreneurship, Small Business Management and Business Planning. Discipline specific types of courses include Entrepreneurship and Agribusiness, Rural Entrepreneurship, Entrepreneurship for Engineers, Microfinance and Entrepreneurship etc. (Chimucheka 2014).

3.14 ENTREPRENEURSHIP EDUCATION METHODS

Entrepreneurship pedagogy is the study of the methods and styles of teaching entrepreneurship, and is influenced by the setting in which it occurs (e.g. schools, organisations) and the need it is seeking to address (e.g. youth empowerment, capacity building) (Bagheri and Lope Pihie 2013). A good pedagogy manifests the knowledge and learning expectations, and involves appropriate evaluation methods (Jones and Iredale 2010; Boi 2018).

Appropriate pedagogical methods for teaching entrepreneurship include case studies, guest lecturers (especially successful entrepreneurs), assignments, company visits, computer simulations, interviews with entrepreneurs, and student entrepreneurship clubs (Chimucheka 2014; Comber 2018).

Pedagogy is informed by learning mode. Traditional learning involves teaching from theories and principles as the starting point then expecting the students to apply these in concrete situations. Entrepreneurial learning starts with questions posed by

students regarding actual situations and problems then draws out general theories and principles from that data and experience (Akinbami 2015).

Most entrepreneurship education programmes are based on the traditional pedagogical approach with less attention paid to practical application (Saeed, Muffatto and Yousafzai 2014). This means that students find it difficult to understand the experience of being an entrepreneur, which is a colossal waste of government money and institutional time (Pruett 2012; Comber 2018). Furthermore, this conventional approach does not require the lecturer to have experience of entrepreneurship themselves, which is unsatisfactory (Claudia 2013; Fayolle and Gailly 2015). In this regard, Akinbami (2015) and Amini, Arasti and Bagheri (2018) advise that the entrepreneurship educator's competency should be upgraded through continuous learning and practical orientated business sabbaticals in order to gain more experience which will improve the effectiveness of their teaching. According to Florea and Florea (2013) and Silveyra, Herrero and Pérez (2021), experiential learning is a more appropriate pedagogical approach for entrepreneurship education because it is experience-based.

3.15 ENTREPRENEURSHIP CURRICULA IN PILs IN SA

The idea of curriculum is hardly new, but the way we understand and theorize it has altered over the years and there remains considerable dispute as to meaning. It has its origin in the running / chariot tracks of Greece. The word curriculum according to Kerr originated from a Latin word "currere: meaning "the course to be run". This implies a track, a set of obstacles that an individual is to overcome, something that has a beginning and an end, and something that one aims at completing. Educational institutions have established "courses of study" through which individuals are to pass. Successful completion of such "course" warrants certification of competence. These courses are referred to as constituting a curriculum. The concept of curriculum as a term in educational discourse has been used in a wide variety of ways because educationists view it in different ways. An entrepreneurship curriculum contains information on how students can identify and shape opportunities, understand business concepts, develop operational plans, fund and launch ventures, and manage and grow new enterprises (Fulgence 2015; Iwu *et al.* 2019).

There are an increasing number of academic courses being offered in institutions of higher education in South Africa as core or elective subjects (Robb, Valerio and 2014; Solomon, Alabduljader and Ramani 2019).

The SA government is constantly promoting an entrepreneurial culture in schools, colleges and universities with the goal of creating an entrepreneurial and innovative society by introducing initiatives like the Youth Empowerment Scheme and the Youth Development Fund to encourage and empower youth with entrepreneurial and survival skills (Herrington *et al.* 2010; Iwu *et al.* 2019). However, there are still some challenges in implementing entrepreneurship education in PILs since there is a lack of resources to enhance entrepreneurship education (Jones and Iredale 2010; Bauman and Lucy 2019). Effective entrepreneurship education entails a relationship between the goals, the audience, the content, the method and finally the assessment that will be used (Ismail, Sawang and Zolin 2018: 168).

In the South African context these five issues are not treated as a whole and are addressed individually Chimucheka 2014; Rauch and Hulsink (2015). Furthermore, Tehseen *et al*. (2019) stipulated that assessment still focused mainly on tests and written exams and that the teaching of the entrepreneurial module in fact did not stimulate students to be creators of jobs, but rather encouraged them to seek employment with a stable income. Ustav and Venesaar (2018) found that the lack of adequate training and resources hampered the implementation and development of entrepreneurship. It was suggested that training for entrepreneurship teaching staff, the provision of resources and closer co-operation between government and service providers would assist in the improvement of the provision of entrepreneurship education (Waghid 2019). Thus, as a discipline, entrepreneurship education always tries to instil some skill so that students can play a role of catalyst for socio-economical change. It is argued that an entrepreneurship mind-set requires a number of entrepreneurial competences:

(i) “Initiative-taking ability.

(ii) Communicating in settings that are different.

(iii) Finding and utilizing possibilities.

(iv) Ability to sell ideas.

(v) Ability to take risks and responsibilities.

(vi) Ability to realize ideas.

(vii) Creation of products/services that are of value for others".

Bauman and Lucy (2019) found six personality characteristics that are used to explain the entrepreneurial profile of students studying entrepreneurship. These are the need for achievement, locus of control, propensity to take risks, ambiguity tolerance, innovativeness and self-confidence.

3.16 CURRICULUM MAPPING TO EMBED GRADUATE CAPABILITIES

"Higher education is not just about teaching discipline-based knowledge, but also involves preparing students to be able to engage successfully with wider society beyond the university" (Ismail, Sawang and Zolin 2018: 169). In this regard, the Durban University of Technology has developed their 'Design for Learning' programme which has identified particular graduate capabilities and requires all faculties to explicitly embed these in their curricula (Barrie, Hughes and Smith 2008). These broader characteristics include those within the affective terrain (e.g. curiosity, global awareness, etc.), the cognitive terrain (e.g. knowledge about electricity, being able to analyse a problem and work out a solution) and practical skills (such as 'critical thinking', 'speaking', etc.), these graduate capabilities are desirable from the point of view of business, government and education (CELT 2014).

Entrepreneurship education is about the skills that can be taught and the characteristics that can be engendered in students in order to help them develop new and innovative plans (Barrie, Hughes and Smith 2008). Accordingly, Jones and Iredale (2010) cite four types of knowledge that are useful for entrepreneurs:

- "Business general knowledge;
- Venture general knowledge;
- Opportunity-specific knowledge; and
- Venture-specific knowledge".

The authors claim that opportunity-specific knowledge and venture-specific knowledge are the most central for entrepreneurial success. In summary, entrepreneurship education should foster opportunity perception and evaluation, the marshalling and

commitment of resources to pursue the opportunity, and the creation and operating of a business venture to implement the opportunity (Akhuemonkhan, Raimi and Sofoluwe 2013).

3.17 ASSESSMENT OF ENTREPRENEURSHIP EDUCATION

Mustapha and Selvaraju (2015) and Ramchander (2019: 4) state that assessment provides information on programmes not just individual students, providing information that can be aggregated across sections of a single course and is meaningful across courses. Assessment enables educators to assess whether the curriculum is coherent and whether students do indeed now have the knowledge, skills and values that graduates should possess. The following questions should be asked when assessing a curriculum: What should a graduate of a programme know, be able to do and value? Have graduates acquired this learning? What are the contributions of the programme to student growth? How can student learning be improved? (Jones and Iredale 2010)

There are two approaches to teaching, namely traditional methods in which knowledge is passed passively to learners by means of lectures, and experiential approaches during which knowledge is constructed by learners in the process of doing (e.g. internships, role-playing etc.) (Bagheri and Lope Pihie 2013; Waghid 2019). Bauman and Lucy (2019: 6) and Herrington *et al.* (2010), argue that there is no universal pedagogical recipe to teach entrepreneurship. The choice of methods and modalities depends primarily on the objectives, contents and constraints imposed by the institutional context. Learning by doing, which is often praised by teachers in the field, is well suited to some pedagogical situations, while it may be particularly inappropriate in others. The motto here is to be cautious, and all the more so as little research has been conducted on the assessment of entrepreneurship teaching (Fayolle and Gailly 2008; Ustav and Venesaar 2018). It remains to be proved that one pedagogical approach is better than another, which provides interesting challenges. To choose a better mix of the pedagogical approaches, it requires a deeper understanding of the theory of learning.

✓ **Teachers' role in entrepreneurship education**

Entrepreneurship is intuitive by nature so requires more hands-on experience therefore the teachers need to draw on their own creativity and innovativeness in designing appropriate approaches (Mustapha and Selvaraju 2015).

✓ **Teacher as a trainer in entrepreneurship education**

Gordon and Bursuc (2018: 125) state that teachers also need to be trainers because they teach people the skills they need for their job. Stokaitė (2013) classifies training strategies into four different styles: doctor, expert, coach and counsellor. The first two styles are suitable for teaching the theoretical aspects of entrepreneurship, while the last two are suitable for teaching the experiential aspects.

✓ **Participation in outreach activities**

Entrepreneurship educators need to teach students but also interact with the public, entrepreneurs and other stakeholders. They need to be role models by engaging in entrepreneurial activities so that they can gain relevant experience in the field (Stokaitė 2013; Gordon and Bursuc 2018: 126).

✓ **Creating an entrepreneurial learning environment**

An entrepreneurial learning environment is one in which students' academic performance and real project performance are linked. This can be through simulating a context which mimics a real situation faced by entrepreneurs thereby allowing students to find out "on the job" what works and does not work (Cassim, Soni and Karodia 2014; Elmuti, Khoury and Omran 2012).

✓ **Assessing the outcomes of entrepreneurship at the classroom level**

Outcomes can be reflected in a change in behaviour and attitude at the individual level. Therefore, the outcomes of an entrepreneurship education course can include start-ups by graduates, academic performance in exams, attitudes and intentions to act and contributions to society (Saeed, Muffatto and Yousafzai 2014; Fidalgo-Blanco *et al.* 2018).

3.18 LEARNING PROCESS AND TEACHING METHODS FOR ENTREPRENEURSHIP EDUCATION

Elmuti, Khoury and Omran (2012) observe that South African PILs are still using traditional methods of teaching, for example lectures, hand-outs, materials and video presentations. Current thinking is that effective learning methods should involve students practising hands-on learning Robb, Valerio and Parton (2014), based on an understanding of how individuals and groups learn (Nag and Das 2015; Fidalgo-Blanco *et al.* 2018). Basic entrepreneurial competencies are more likely to be developed and practised and developed when students take ownership of their learning and therefore participate in setting their learning goals and tasks (Breslow *et al.* 2013; Bauman and Lucy 2019).

3.19 STRATEGIC TEACHING IN ENTREPRENEURSHIP EDUCATION

3.19.1 Strategic teaching in entrepreneurship education

Strategic teaching is a way of making decisions about a module, an individual class or an entire curriculum. This involves identifying and analysing the key variables in the teaching situation. including: the characteristics of the learners, the learning objectives and the instructional preferences of the teacher (Jones and Iredale 2010; Robb, Valerio and Parton 2014; Fidalgo-Blanco et al. 2018). This process provides for informed decision-making regarding module content, structure, methods of assessment and other key elements. Jones and Iredale (2010) identified eight themes to empower students with new strategies and technologies namely:

- “Employing active learning alternatives in the classroom;
- Producing on-line alternatives to lectures;
- Acquiring real-time data through remote means;
- Creating learning communities with alumni/mentor involvement;
- Using problem-based learning to impart lifelong lessons;
- Enhancing media literacy and communication skills;
- Providing opportunities for international education; and
- Developing new methodologies for the assessment of educational innovation.”

Thesse authors argue that each of the themes listed above can be combined to produce a synergy of effort. Furthermore, combining assessment data from one project with data from other projects in the same group can reveal what is innovative and worth exporting to other courses.

The strategic teaching approach helps educators/lecturers to make decisions on what topics to include and what to leave out; the order in which those topics will be presented; which pedagogical methods to use (e.g. lecture, discussion, hands-on experiments, group work, presentations, practicals, portfolios, oral presentations, written assignments, field trips); appropriate means of assessing the students; materials and technology to employ; and how to get feedback (Healey, O'Connor and Broadfoot 2010; Gordon and Bursuc 2018).

3.19.2 The importance of strategic teaching analysis

According to Jones and Iredale (2010), undertaking a strategic teaching analysis involves identifying and analysing key variables related to the course and making decisions based upon that analysis. This informs decisions regarding how the class should be organised and taught, and increases the likelihood that the course objectives will be met.

3.19.3 Strategic teaching analysis steps

The first step involves analysing three key elements in the learning environment: the characteristics of the students, the objectives of the course and the qualities of the educators/lecturers. Robb, Valerio and Parton (2014) illustrate this approach by using the example of wanting students to gain the ability to work with others to solve a complex problem (course objective), but if the students do not have basic teamwork skills (characteristics of students), they will require training before accomplishing the objective. If the educator is not comfortable teaching teamwork skills because they are not familiar with active learning approaches (qualities of the educator), then the educator can get a guest lecturer to teach those skills (Breslow *et al.* 2013; Gordon and Bursuc 2018).

According to Akhuemonkhan, Raimi and Sofoluwe (2013), the final step in a strategic analysis approach is to decide on the type of assessment method to use to get feedback on the learning:

- "How will you get feedback on your instruction?
- On course content and organisation?
- On the performance of teaching assistants?
- Most importantly, how will one determine if the students are attaining the knowledge and skills that are required?
- Finally, how will one use the various types of feedback that are gathered to refine and improve the course?"

3.19.4 Strategic teaching in context

Every course sits within a constellation of social systems: the department, the university, the discipline, the academic community, industries, and the community at large. The reality is that these systems also influence what is taught, when it is taught, and how it is taught. For example, a teacher might decide to have students work in teams because industry representatives have provided feedback saying that graduates do not have adequate teamwork skills (Breslow *et al.* 2013; Ustav and Venesaar 2018).

3.19.5 Strategic teaching framework

Strategic teaching makes sure that students are actively involved in the learning content (Breslow *et al.* 2013; Waghid 2019).

Robb, Valerio and Parton (2014) propose five important features of a strategic teaching framework:

- ✓ **"Focus on the standards and outcome:** the outcomes are stated to the students so that they know what is expected of them to deliver their end-results;
- ✓ **Chunk content material and observe students' discussions:** All content is "chunked" or broken down into smaller pieces so that students have time to engage in peer group discussion and thereafter with the educator;
- ✓ **Plan daily lessons in a before, during and after format:** all lessons consist of the introductory strategy, followed by the developmental strategy and then the

cumulating strategy. These lesson phases foster appropriate pacing and are an opportunity for continuous formative assessment to drive further instructions;

- ✓ **Employ explicit instructions:** the direct models part of every lesson taught. It is not always necessary for educators to apply all their sequences in one lesson. The level of explicitness depends on the level of content required by the students; and
- ✓ **Foster student engagement via the components of literacy (reading, writing, speaking and investigation):** lessons are strategic when all the students participate".

3.20 CRITICAL CROSS-FIELD OUTCOMES

According to De Boer and Van den Berg (2001), critical cross-field outcomes (CCFOs) refer to the essential, fundamental or generic outcomes which every qualification and all students should aspire to achieve. CCFOs are the knowledge and abilities that are to be achieved in any phase of one's life. Critical outcomes (COs) are particular skills that help learners develop into competent, creative, responsible and thinking citizens. The COs below are critical for the transformation and growth of South African society and support all learning areas and activities (Jones and Iredale 2010).

- ✓ Identify and solve problems in which responses display critical and creative thinking resulting in responsible decisions;
- ✓ Work efficiently as a member of a team, group, organisation and/or community;
- ✓ Organise and handle oneself and one's activities responsibly and successfully;
- ✓ Gather, analyse, organise and critically investigate information;
- ✓ Communicate effectively using visual, mathematical and language skills in oral and/or written form;
- ✓ Use science and technology effectively and decisively, exhibiting responsibility towards the environment and others' health; and
- ✓ Demonstrate an appreciation of the world as a collection of connected systems by acknowledging that problems requiring problem-solving do not exist in isolation.

3.21 SOUTH AFRICA'S STRATEGY FOR ENTREPRENEURSHIP EDUCATION

Since the birth of democracy in 1994 the South African government has recognised the need to provide a suitable environment for the creation and growth of small enterprises, starting with the National White Paper on Small Business published in

March 1995 (Spencer, Riddle and Knewstubb 2012; Waghid 2019). The Department of Finance (at about the same time) implemented the Growth, Employment and Redistribution (GEAR) strategy, a macroeconomic policy aimed at strengthening economic development, redistributing socio-economic opportunities and improving employment (Ladzani 2010; Fidalgo-Blanco *et al.* 2018). South Africa's more recent strategy to promote entrepreneurship by the Department of Trade and Industry is the Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises (DTI 2016; Weinberger *et al.* (2018). The strategy focuses on improving access to small business support and information, strengthening small business advocacy, delivering effective service and monitoring the impact of the strategy (DTI 2016; Ramchander 2019: 3).

3.22 GOVERNMENT SUPPORT FOR ENTREPRENEURSHIP EDUCATION

The 2020 State of the Nation Address Ramaphosa (2020) placed great stress on entrepreneurial awareness, education and training. The development and growth of entrepreneurs is recognised as a source of future employment in the country. According to South African President Cyril Ramaphosa (2020), "the government is keen to encourage educational programmes that focus on raising awareness and understanding of the entrepreneurial sector and that help individuals to identify employment opportunities in the SMMEs". The business intervention is crucial at various stages of its development from a range of support, mentoring and training. The establishment and growth of entrepreneurship and the high failure rate of new businesses can be improved by the government promoting entrepreneurship education programmes that upgrade the capacity of SMMEs (Robb, Valerio and Parton 2014). This will be in line with many African governments policy initiatives intended to raise skills levels through entrepreneurship education (Akhuemonkhan, Raimi and Sofoluwe 2013; Robb, Valerio and Parton 2014; Cho and Honorati 2014; Mashau, Fields and Nyawo 2019).

3.23 IDEAL APPROACHES TO ENTREPRENEURSHIP EDUCATION

In higher education institutions, entrepreneurship education based on successful entrepreneurial role models may promote education for sustainable development

(Song & Kee 2013). Santos, Neumeyer and Morris (2019) state that in entrepreneurship education programmes, exposure to successful entrepreneurial models could be a significant factor for stimulating students' confidence in their ability to start a business and for improving their attitudes towards entrepreneurship**.** Consequently, the motivation for behaviour selection (the decision to behave or act in a certain way) is determined by the desirability of the outcome (what is to be the expected result of that selected behaviour) (Jabeen *et al.* 2017).

Thus, as discussed above, the Expectancy Theory provides a framework for understanding why and how people choose to be entrepreneurs. an individual's motivation to become self-employed is based on the subjective probability that his or her efforts will be followed by a specific outcome and the attractiveness of that outcome. Fayolle and Gailly (2015) verified that the attraction of being self-employed for a given person depends on his/her perception that it will lead to desirable outcomes. In the body of theory that studies the role of motivation in the formation of entrepreneurial intentions, one line of research uses the self-determination theory to explain the motivational processes involved in an entrepreneurial behaviour. Self-determination theory posits that people tend to move toward activities that satisfy their inner resources of development and optimal functioning.

3.24 WEAKNESSES OF ENTREPRENEURSHIP EDUCATION IN SOUTH AFRICA

The failure of entrepreneurship education programmes remains unanswered if it is associated with some students who have decided to launch and pursue a business venture. It is important to know the intentions of a nascent entrepreneur to start up the business ventures persistently if experts and policy makers' attentions are drawn on how to arouse interest in starting a business (Bauman and Lucy 2019). To realize the graduates as young entrepreneurs, the government should also create policies that can support entrepreneurship nuanced social conditions other than entrepreneurial education by universities. Besides that, policies are made because the development of entrepreneurship education has significant progress globally (Littlewood and Holt 2018). Policymakers are not involved in comprehensively research institutions to conduct research in entrepreneurship.

3.25 CONCLUSION

This chapter has provided an overview of the research on entrepreneurship education and of the contextual factors affecting its effectiveness, while highlighting early and recent debates in this field. The contributions of prior research studies anchored in theoretical contributions from the disciplines of psychology and economics have been recognised in this literature review. Definitions of key concepts were operationalised and myths, stereotypes and misconceptions that affect entrepreneurship and entrepreneurship education were explained.

Numerous entrepreneurship policies were reviewed to determine if PILs are adjusting accordingly for better teaching and learning. The literature indicates that there is a mismatch between policy and practice as most graduates still opt for employment by others instead of self-employment. Although significant strides have been made promoting entrepreneurship education in PILs, there has not been much research within the South African context. The curricula discussed above indicate that PILs in KZN, including universities, very seldom specifically require students to undertake activities which are the most recommended in the literature for developing an entrepreneurial mind-set. This indicate weaknesses and gaps in how entrepreneurship education is currently offered in government funded educational institutions in South African. This is highlighted by the lack of exposer of students to experimental learning which has a significant influence on learners' entrepreneurship intention.

The empirical data from the study by Musetsho and Luthoko (2017: 13), demonstrated that the "entrepreneurial intention and attributes that students had acquired is as a result of the entrepreneurship education they were taught. They felt that they were equipped with the necessary skills and knowledge by preparing them to be prospective entrepreneurs. Furthermore, an analysis of students' recommendations shows they wanted the curriculum content to be increased and include practical aspects such as field excursions and other immersive commitments in its teaching or delivery". The research questions posed in Chapter One, therefore, remain unanswered. Therefore, it remains necessary to conduct primary research to establish the framework of entrepreneurship education among students in KwaZulu-Natal.

The next chapter will discuss the research methodology that was applied for this mixed methods study and its research purpose and design, before introducing the quantitative research questions and qualitative research propositions guiding this research. The chapter also provides an overview of the data collection methods and analysis used to determine the outcomes of this research.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 INTRODUCTION

The starting point for this research began with a comprehensive review of prevailing articles, books, and conference papers on entrepreneurship education both globaly and in South Africa. It was vital to understand the effectiveness of entrepreneurship education curricula and its modules in developing an entrepreneurial mindset in students in public institutions of learning. The realisation that entrepreneurship education has potential to conribute to the development of country's economy paved the way for embarking on this research project. Furthermore, developments in SA point to greater willingness on the part of the PILs to incorporate entrepreneurship as one of the graduate attributes covered in the curriculum. This study is therefore designed to evaluate the perceptions of entrepreneurship education curricula held by both students and teaching staff in PILs.

While the current research engages in research from a social science perspective it overlaps closely with research in education. Research in entrepreneurship education and its implementation is crucial in addressing business start-up failuere, unemployment, quality of education and entrepreneurial skills. These factors impacton the development on business growth and development of the economy in the country. This study represent a combination of appproaches where primary data and secondary data are collected through various techniques .

Chu and Ke (2017) state that to extract meaning from the data is called research methodology. For this reason, the methodology used for evaluating the effectiveness of entrepreneurship education curricula and its modules in PILs in KZN considered the data to be collected for the resolution of the aim and objectives of this study.

This chapter describes the research plan and the empirical techniques that have been used in this study. The chapter defines the method followed during the investigation and emphasises the scope and limitations of the research design. This study entails both quantitative as well as qualitative approaches. These approaches will be discussed in relation to this research study. The data collecting technique used in this study was a questionnaire which consists of open-ended questions as well as close-ended questions. A detailed description of the questionnaire and its development will

be discussed. This chapter describes the research design which encompasses the reliability and validity of the research, reasons for selecting the participants for the research, collecting and analysing of data, the pilot study and the selection of the participants as well as the ethics applicable to the study.

4.2 RESEARCH QUESTIONS AND OBJECTIVES OF THE STUDY

This study evaluates the effectiveness of entrepreneurship education curriculum and its modules in PILs.

4.2.1 Research questions

As per the objectives discussed in Chapter 1, the study investigated the critical questions relating to the effectiveness of entrepreneurship education curricula in PILs.

The critical questions that reinforce the research proposition were:

- What is the perception of PILs students about entrepreneurship education curricula and modules offered in public institutions of learning in terms of promoting entrepreneurship competencies?
- What is the perception of teaching staff about the benefits and effectiveness of the content of entrepreneurship education in PILs?
- What competencies does entrepreneurship education in PILs promote?
- To what extent do public institutions of learning support and promote entrepreneurial activity on campuses?

4.2.2 Objectives of the study

The objectives of the study in relation to the research questions were:

- To ascertain the PILs students' perception of the entrepreneurship education curricula offered in public institutions of learning in promoting entrepreneurial competencies.
- To ascertain the perceptions of teaching staff regarding the benefits and effectiveness of entrepreneurship education in PILs.
- To assess the nature of the competencies that entrepreneurship education promotes in PILs.

- To explore and examine the extent to which public institutions of learning support and promote entrepreneurial activity on campuses.

4.3 LOCATION OF THE STUDY

The study examines the effectiveness of entrepreneurship education in purposely selected PILs in KZN. The reason for this, is that it would not be feasible for the researcher to conduct the study in the entire education sector in SA, due to time constraints, cost and the inability of the researcher to survey and obtain the actual results.

4.4 RESEARCH DESIGN

A research design describes the research instruments and methods used to collect and analyse the data in order to answer the research questions (Ojeifo 2013; Chimucheka 2014; Ramchander 2019; Zikmund and Babin 2007). According to Reio and Werner (2017), the main features of a research design are:

- The design is always based on the research questions.
- The design is activity and time-based.
- The design guides the selection of sources and types of information.
- The design is a framework for specifying the relationships among the study variables.
- The design outlines procedures for every research activity. Thus, the design provides answers for questions, such as what techniques will be used to gather data? What kind of sampling will be used? How will time and cost constraints be dealt with?"

Research methods in the social sciences are characterised by two basic philosophical traditions, that is phenomenological and positivist, which find expression in qualitative and quantitative methods (Flick 2009). A qualitative approach reflects a historical, or observation approach that attempts to search deeper understanding of difficult situations (Dawson *et al.* 2017). It is often exploratory in nature, more holistic and emergent, with specific focus, design, measurement instruments, and interpretations developing and possible changing along the way (Guetterman *et al.* 2019). Qualitative

researchers operate under the assumption that reality is not easily divided into discrete, measurable variables (Creswell and Plano Clark 2018).

According to Grant *et al.* (2017) researchers are often described as the research instrument because the bulk of the data collection is dependent on their personal involvement (e.g., through interviews and observation) in the setting. Rather than a large sample with the intent of making generalisation, qualitative researchers tend to select a few participants who can shed the light on the phenomenon under investigation. Both verbal data (that is, interviews, comment, documents, field notes) and non-verbal data maybe collected (Flick 2009). It therefore denotes the type of inquiry in which the characteristics or the properties of the phenomenon being examined provide better understanding and explanation. A data collection method is selected that will optimize access to this information, while the analytical instrument is largely the researcher who works with the data in different ways in order to uncover hidden meanings.

The primary data collection method on the evaluation of entrepreneurship education curricula and its modules in cultivation of entrepreneurship mind-set in students is the indicative theoretical drive (survey) since the purpose of the study was to evaluate, finding the information and suggest. The quantitative approach, rooted in the positivism and used in the natural and universal truths through objective inquiry, explanations and predictions that are able to generalise to other persons and places. Sometimes referred to as positivistic empiricism, it suggests that the same approach to studying and explaining physical reality can be used in the social science (Creswell and Clark 2018).

This study employed a descriptive and analytical purposive approach, it used a mixed methods approach combining qualitative and quantitative methods for data collection by using two set of questionnaires (standardised questionnaires for students, and the other for teachers), focused group interviews were conducted with both students and teaching staff in order to prompt more discussions. The chosen research topic is also likely to stimulate much debate as there is very little empirical comprehensive literature thereon. Although a positivistic philosophy is more aligned with quantitative data collection methods and analysis, a combination of both methods can be used. Mixed method approach is more appropriate when one data source is insufficient to explain

or generalise the results and where the whole research objective is best attended to with several stages or tasks (Bryman and Bell 2011). Creswell and Plano Clark (2018) state that both quantitative and qualitative data can be utilised to support or expand and deepen the description. The cross-sectional approach was deemed an appropriate research strategy for this study.

4.5 RESEARCH APPROACH

The methodological approach used is the cross-sectional method. It was the most appropriate, taking into consideration the time and the resource constraints attached to the study. Cross sectional design is concerned with the collection of data on more than one case at a single time for the collection of quantitative data (in this case) and usually with two or more variables in order to detect a pattern of association (Bryman & Bell 2011). This was achieved by way of a self-administered electronic questionnaire format on the PILs in KZN. Surveys in questionnaire format are best suited to a quantitative research. The advantages are that there is reduced artificial influence in day to day activities and the disadvantage may be that this method lacks random sampling and often leans towards convenience or purpose sampling (Kumar 2019). Another disadvantage is that internal validity is often difficult to prove (Guetterman *et al.* 2019). A quantitative paradigm was selected which took the form of a Likert scale questionnaire. Although positivism has been criticised for its reductionist attitude towards the nature of human and social interaction, it fulfils the important requirement of exploration (Flick 2009). This study incorporated both qualitative and quantitative approaches which can be defined as a mixed methodology.

Mixed method is designed to be applied when research strategies are used that are not normally described as wholly quantitative in nature, but in effect combines both approaches (Guetterman *et al.* 2019). A convergent parallel-mixed method design was used, consisting of two distinct strands, that is qualitative strand and quantitative strand. Sampling for qualitative (text) data and quantitative (numeric) data occurred separately. The two data set were then analysed individually and independently of each other using qualitative and quantitative analytic techniques. The adoption of this strategy increases the scope and comprehensiveness of the study by aiding in the interpretation of data in the core study and providing explanation for any unexpected supporting results. Reio and Werner (2017) note that the choice of a research design

depends on the nature, the setting, and the possible limitations of the research that the researcher wishes to conduct. The research was inclined to descriptive analysis as the intention was to assess whether the entrepreneurship education curriculum offered in public institutions of learning promoted business start-ups, thereby ascertaining the extent to which PILs actively support and encourage entrepreneurial activity on campuses. Therefore, a mixed method was relevant here as this method allowed for collection of a variety of opinions and perceptions and experiences associated with the topic under investigation.

As more researchers have considered the use of mixed methods, writings have moved away from debates about epistemological incompatibilities and now focus on the (potential) value of increased understanding that comes from combining qualitative and quantitative approaches (Reio and Werner 2017). In fact, Creswell and Plano Clark (2018) believe that viewing mixed method research as merely combining qualitative and quantitative research methods, is failing to realise the full potential of the methodology. In other words, qualitative and quantitative research methods should be combined at all stages of the research process, including formulating the problem, reviewing the literature, designing the research analysis data and drawing inferences for a study to be different from a multimethod one as discussed later. The following definitions provide a reasoning begging point for considering mixed method research design:

Mixed methods designs are those that include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words), where neither type of method is inherently linked to any particular inquiry paradigm (Bryman and Bell 2011). It includes the use of more than one method of collection, analysis, interpretation and reporting of data; it is a mix between the qualitative and quantitative approaches (Creswell and Creswell 2018). According to Clark (2017), a mixed method study involves the collection or analysis of both quantitative and/ or qualitative data in a single study in which data is collected concurrently or sequentially, and involves the integration of data at one or more stages in the process of research.

Whilst this approach can answer research questions that the other methodologies cannot, it also provides better inferences and an opportunity for presenting a greater range of divergent views (Reio and Werner 2017). A major advantage of mixed method

research is that it enables the researcher to simultaneously answer confirmatory and exploratory questions and therefore verify and generate theory in the same study (Creswell and Clark 2018).

4.6 RESEARCH PHILOSOPHY ADOPTED FOR THIS STUDY

According to Reio and Werner (2017), research philosophy relates to the development of knowledge and the nature of that knowledge. Guetterman *et al.* (2019) states that a research philosophy is defined by its epistemology, which concerns the way knowledge is built and by an ontology, which refers to how the researcher perceives reality. Flick (2009) defined research philosophy as the basic belief system or world view that guides the investigation, not only in choices of the method but in ontologically and epistemologically fundamental ways. In general, research philosophy is linked to what a researcher views as reality and what he/she thinks constitutes knowledge.

The pragmatic research philosophy was deemed appropriate for this study. Instead of rigidly sticking to one philosophical doctrine such as the positivist philosophy which is more aligned to quantitative methods or the interpretive paradigm which is premised on qualitative research methods, pragmatism lies in between positivism and interpretivism which enables the use of both qualitative and quantitative methods (Creswell and Clark 2018). While it was contended that there is an objective reality out there to be studied, captured and understood, it was also important to try to understand the viewpoint of the research subjects and their interpretation of the world around them. As such, pragmatism was considered to be the most ideal philosophy because it provided a set of assumptions that support the mixed methods approach. The positivist approach allowed the use of only observable phenomena to provide credible data and focus on causality and law-like generalisations thereby reducing the phenomena to their simplest elements whereas interpretivism enabled the collection of qualitative subjective data to provide context to the phenomena under investigation. According to Dawson *et al.* (2017), no single method, theory, or observer can capture all that is relevant or important in reality, therefore, the use of a pragmatic research philosophy allowed for the triangulation of the research methodology and data

collection methods thereby minimising the fundamental weaknesses and methodological biases inherent in each method. The triangulation of research methods enabled the researcher to acquire specific facts about a particular situation while simultaneously elevating these to the level of shared meaning. As such, the convergence of qualitative and quantitative methods served to increase the probability of generalising the findings since data was gathered from different sources and by different methods

4.7 QUESTIONNAIRE DEVELOPMENT

The questionnaire was developed by the researcher after a review of the relevant literature with questions and variables to be explored arising therefrom. The questionnaire was structured into sections comprising: demographic information, assessment of whether an entrepreneurship education curriculum promotes business start-ups, perceptions of respondents regarding the benefits of entrepreneurship education, graduate attributes and competencies needed in entrepreneurship education, and the role of public institutions in promoting entrepreneurship education.

Quantitative data was collected via a 5-point Likert scale questionnaire. In the Likert scale questions respondents were provided with five options to select from, based on whether they agreed or disagreed with a statement or question. Qualitative data was collected via eight structured interview questions which probed respondents for more detailed information, based on their knowledge of the subject matter. The researcher began with the deductive thinking approach (literature review and theories) and then engaged in an inductive approach with testing reality by gathering data using both qualitative and quantitative approaches. The literature reviewed revealed paucity in prior studies on this topic. The aim of the study was to gain a better insight and understanding of the sentiments of the effectiveness of entrepreneurship education in public institutions of learning.

The questionnaire was constructed in English as all respondents were proficient in English. It was first checked by an English language specialist before the final draft was confirmed. The questionnaire was evaluated by a statistician before the pre-test was conducted. A research assistant was engaged who underwent training on the topic and the primary objectives of the research survey with a workshop being

conducted over 3 working days. The research assistant was a master's degree student who was familiar with all the PILs in KZN.

4.7.1 Structure of the questionnaire

The structure of the questionnaire considered the research aim and objectives of the study. Considering this it was evident that, at several points, answers would be limited to a small range: for example, whether the entrepreneurship curriculum in the institution is designed to equip students with the skills and competencies needed to start their own businesses. The researcher outlined a range of well-defined possible answers to the interview questions, which the respondent could relate to in order to get good feedback. Other aspects of the questionnaire could not be contained in this way and would require respondents to comment and provide a fuller explanation. Consequently, a range of question types is necessary to meet the objectives of the study and the nature of each type of information required. Barden and McDonald (2017) differentiate between two types of questions, namely open and closed questions.

4.7.1.1 Closed-Questions (Forced Choice)

The advantages of closed-questions, or Likert scale questions, includes that they can be pre-coded and responses can be easily tabulated, saving time and money. These questions are also less time-consuming for the respondent to complete (Reilly and Jones 2017). The disadvantages of closed-questions are that they force the respondent to choose between answers provided by the researcher. To overcome this limitation, a general response category can be added, allowing the respondent to amplify a fixed-choice answer or explain some other variant. Based upon the analysis of the literature and with the research question in mind, the researcher drafted closed-questions in advance with a wide range of foreseeable answers on entrepreneurship education in PILs.

4.7.1.2 The interviews (Focused group)

The researcher decided that the interview guide approach should be. The researcher built in interview questions to enable respondents to give their views or meaningful data relevant to the topic. Interview questions were used to gauge the range of other

options on entrepreneurship education support and practices available in PILs which the researcher could not predict. Participants for focus group discussions were selected from final year students and teaching staff in School of Business and Administration. Accordingly, considering the very busy schedule of teaching staff and final year students in PILs in South Africa, the focused group interviews were conducted with 10 students and 3 teaching staff from each institution, which were also based on the same question within the designed questionnaires.

The interview schedule was used as a script where questions were read out and the answers recorded down on paper. Neither the wording nor sequence of the questions on the interview schedule was varied, thereby ensuring consistency across participants. This helped the researcher guard against bias or leading the respondents. questions were repeated only when the respondent requested repetition or when the answer clearly indicated misunderstanding. Dawson *et al.* (2017) explain that focus group interview enables the researcher to follow up any particularly interesting avenues that emerge in the interview, and it is especially suitable where one is particularly interested in complexity or process, or where an issue is controversial or personal. This allowed the researcher to clarify ambiguous answers and when appropriate to seek follow-up information. Interviews were conducted in a traditional interview setting in which the researcher asked questions of a single individual in a quiet, private setting conducive to thinking about and answering questions Teaching staffs were interviewed in the departmental boardroom, whilst for students' free classrooms were used.

4.8 PILOT STUDY

A pilot survey tests the reliability of a questionnaire. Such a study can help detect possible flaws such as lack of clarity regarding wording, how long the questionnaire takes, how long before the questionnaire is returned, response rate, etc. (Welman, Kruger and Mitchell 2005; Wilson 2016a). This step is particularly important when research utilises a self-completed questionnaire (Zikmund and Babin 2007; Chu and Ke 2017). The pilot study was undertaken by 10 participants using a purposive sampling method drawn from five PILs in KZN. Participants were first contacted by email and telephone to inform them about the study, enabling them to answer any questions, and to gain their participation. Questionnaires were delivered personally.

These respondents were excluded from the final sample. The findings of the pilot study were scrutinised to make sure that the questionnaire was filled in correctly and that any flaws were corrected.

4.9 STUDY POPULATION

Population refers to the total group of people or all elements about which information is needed (Welman, Kruger and Mitchell 2005). The study focused on effectiveness of entrepreneurship education in the PILs in Kwa-Zula Natal. The study only covered 2 Universities, 2 University of Technology, 6 TVETs, and 3 secondary schools that were choses purposively using purposive sampling method. A sample frame can be described as a list of members of the population of interest that is eligible for inclusion in a sample (Proctor 2000:455). When sampling, it is very important that researchers select respondents who are representative of all the elements (the total group of people) from whom the information is needed (Reilly and Jones 2017: 186). Shannonhouse, Barden and McDonald (2017) emphasise that it is crucial to define the population properly and precisely because failure to do so can lead to failure in solving the actual research problem. According to Reilly and Jones (2017: 186), population needs to be defined in terms of the elements, units and time.

The target population was all final year students and teachers/academics involved in business studies at schools and tertiary PILs in KZN province. All universities and University of Technologies in KZN were included in this study, selected TVETs and Secondary Schools were also selected as the representatives since they both offer common curriculum (Table 4.1).

Table 4.1: Public institutions of learning in KZN included in the study

Universities	University of Technologies	TVET College	Secondary Schools
• University of Kwa-Zulu Natal -17/20 respondents (out of 20 questionnaires, only 17 were returned back). • University of Zululand 15/20 respondents.	• Durban University of Technology -19/20 respondents. • Mangosuthu University of Technology – 18/20 respondents.	• Coastal TVET College – 17/20 respondents. • Elangeni TVET College – 17/20 respondents. • Majuba TVET College – 17/20 respondents. • Thekwini TVET –College – 17/20 respondents. • Umfolozi TVET College – 17/20 respondents. • Umgungundlovu TVET College – 16/20 respondents.	• Hillgrove Secondary school – 18/20 respondents. • Riverdene Secondary School – 18/20 respondents. • Road-hut Secondary School – 17/20 respondents.

4.9.1 Sampling method

Probability and non-probability sampling are the two major sampling techniques in research. This study espoused the non-probability sampling method. In non-probability sampling, the probability of each case is selected from the total population is not known and it provides a range of alternative techniques to select samples based on the researcher's subjective judgement (Shorten and Smith 2017; Reio and Werner 2017). Convenience sampling and purposive sampling were used in this study. Convenience/haphazard sampling involves the selection of cases based on their availability for the study (Dawson *et al.* 2017). It is a type of non-probability sampling also known as grab/opportunity or accidental sampling which involves the sample being drawn from that part of the population which is close to hand, which is readily available and convenient. Convenience sampling was used in selecting PILs, teaching staff and final year students who took part in the study. The method was used because it is a relatively inexpensive way of getting a sufficient number of respondents and is a fast way of selecting respondents.

On the other hand, purposive/judgemental sampling involves the selection of cases that judged to represent similar characteristics (Wilson 2016b; Shannonhouse, Barden and McDonald 2017). This technique was utilised because it allows researchers to use their own discretion to select those units they regard as being typical to the population. The teaching staff and final year students in PILs under study were the essential

respondents for the researcher. The researcher used his discretion and judgement to choose the respondents who had information that could help in the study. He also had to select only those who were willing to participate and several institutions declined as they were unaccustomed to research and were suspicious that this would entail a critical investigation. Those institutions who agreed had been persuaded by careful explanations as to the nature of research and its positive objective of seeking improvement in the systems being investigated.

A total of 223 returned (that is, 136 final year students and 87 teachers in public institutions of learning) giving an 85.1 percent response rate; 5.1 percent above the expected response based on the pilot survey, which yielded an 80 percent response. According to Sekaran and Bougie (2016), an 80 percent response rate is good to claim representativeness of response to the sample. The participants were drawn from three schools, six TVET colleges, and all of the four universities of technology and universities operating as PILs in KZN.

4.9.2 Sample size

According to Sekaran and Bougie (2016), a sample is a subset of a wider group of individuals who take part in an investigation. Sampling is done because of financial and time constraints and sometimes it might be impractical to survey the whole population (Saunders *et al*. 2009). Kumar (2011) states that sampling is a process of selecting a few things or beings from a bigger group to become the basis for estimating or predicting the prevalence of an unknown piece of information, situation or outcome regarding the bigger group. In research terms, a sample is a group of people, objects or items that the researcher is interested in. The sample should be representative of the population to ensure that the researcher can generalise the findings from the research sample to the population as a whole.

The primary purpose of sampling is therefore to select some elements of a population so that conclusions can be drawn about the entire population. The use of correct sampling methods grants researchers the ability to minimise research costs, conduct research more efficiently (speed), have greater flexibility while providing for greater accuracy. The sample selected is a representative of the entire population since it maintains the same characteristics with the population. The questionnaire was pre-

tested on a small sample of respondents before it was used in an attempt to test its validity. Thus, a pilot study was done in preparation for the complete study in order to determine whether or not the questionnaire actually measures what it is supposed to measure, given the context of the study.

The research surveys were conducted with 20 respondents from each participating PIL. Clark (2017) maintain that 20 is the smallest sample number that can be used for parametric statistics and would follow a normal distribution curve. Therefore, a sample of 20 was chosen from each site of the study to make a total of 256. A total of 256 questionnaires were distributed but only 223 responses were received. According to Sekaran and Bougie (2016), 108 participants can deliver an acceptable scientific conclusion on the findings of the study conducted where the number was 150. Therefore, the number of 223 respondents for this study are acceptable. This number was made up of with 87 teachers and academics and 136 final year students in the department of Entrepreneurial Studies and/or Business Studies in the PILs in KZN.

4.10 DATA COLLECTION

The researcher and research assistant visited all the research sites to distribute questionnaires to the prospective participants i.e. teaching staff and final year students in all the departments of Entrepreneurial Studies and/or Business Studies at the selected tertiary PILs and schools in KZN.

The questionnaires (See Appendix 2 and 3) were personally delivered to all respondents with an information letter and consent form (Appendix 1). In some cases, pre-appointments were made before the questionnaire was delivered in order to outline the purpose of the study. When the questionnaires were distributed provisions were made for the collection of the completed questionnaires. The time for the collection of completed questionnaires was not fixed, with some respondents completing it within two days, while others took a week or longer. The research assistant dealt with questionnaire administration. The research assistant followed up and assisted where clarifications were desired, in the absence of the chief researcher. This approach made it possible for the questionnaire to be collected within an acceptable period. However, travelling costs between the areas were very high, due to the fact that questionnaires were personally delivered.

Follow-up inquiries were conducted where necessary, to ensure clarity regarding the response to the structured interview questions and to ensure that in-depth information was obtained (Dawson *et al.* 2017).

Some of the respondents were not keen to provide information perceived to be sensitive for their institutions. This challenge was carefully addressed by the research assistant in face-to-face meetings and the respondents were assured that names will not appear in the thesis and / or in any subsequent publications. Another issue encountered was that some respondents wanted to know what material benefit they would obtain from participation, but they were informed that no such benefits were offered, and participation was voluntary.

The collection of data for this research study took place between March 2018 and September 2018. It must be explained that data collection took longer than expected because there was a poor response rate at first as most of the respondents were reluctant to participant due to the sensitivity of the study. However, due to perseverance and numerous reminders to participants, a good response rate of 85.1% was achieved.

4.11 DATA ANALYSIS

Once data have been captured and stored in the format of a dataset, it can be used for analysis (Clark 2017). A high-quality dataset will be of limited use if the captured data cannot be analysed effectively. There are various options, such as primary data analysis techniques, that can be used when it comes to data analysis (Wilson 2016d).

Data analysis involves sorting, collating and coding, as well as tabulation or organisation of the collected data, in order to derive meaning from it (Reio and Werner 2017). Two qualified statisticians were used to analyse data, one for quantitative and the other for qualitative. Data gathered was analysed using SPSS 25.0 for quantitative data. The SPSS 25.0 was used to generate graphs, cross-tabulations and tables for descriptive analysis (Wilson 2016e). In this study, data analysis was an ongoing activity, occurring simultaneously as qualitative data was being gathered. This enabled the researcher to identify themes and categories that called for further probing and other, specific attention; since qualitative data gathering, through interview questions, aims at exhaustively exploring information. Data analysis in interview questions

usually takes the form of thematic analysis, discourse analysis and content analysis. Thematic analysis is the process of segmenting and categorising data for the purpose of identifying relevant patterns for data interpretation. Thematic analysis requires the researcher to be meticulous with the raw data in order to enhance data description, obtain individualised meanings from the data, identify and explain relationships between the various aspects of the data (Mathews and Ross 2010: 373). The constant comparative method is described as the process of continuously going through data by comparing its elements to enhance data interpretation (Gary 2016: 204). The constant comparative method has been advocated as effective in identifying themes in a study.

Frequency analysis (e.g. the number of times a particular response occurred) was followed by the screening of variables in order to identify the influence of the dependent variables of the study (Wilson 2016e; Reio and Werner 2017). Bivariate analysis (cross-tabulations) tested relationships using inferential statistical tests. Data was presented by means of bar graphs and tables, to illustrate the association between variables (Chu and Ke 2017). Thematic analysis was used for the qualitative data.

4.11.1 Frequencies

Frequencies are used to ascertain the number of times a particular response to a question occurs and to check the coding of data (Dawson *et al.* 2017). If the responses do not equal the sample total (Nind and Todd 2018) then the data has not been captured correctly.

Correlation is a statistical technique that can show whether, and how strongly, pairs of variables are related (Clark 2017), with +5 and -5 representing the strength of the relationship between two ranked or quantifiable variables (Comber 2018). In this study the correlation between the use of entrepreneurship education and its implementation, along with factors that pose challenges to the entrepreneurial success, were measured.

4.11.2 Descriptive statistics

Chu and Ke (2017) indicate that descriptive statistics are distinguished from inferential statistics, in that descriptive statistics seek to quantitatively summarise a data set (Dawson *et al.* 2017). In this study, descriptive statistics are presented along with more formal analyses so as to provide an overall sense of the data being analysed.

4.11.3 Qualitative analysis

Qualitative analysis was by means of thematic analysis. Thematic analysis enabled the researcher to obtain rich, detailed and complex accounts of the experiences of respondents (Reilly and Jones 2017: 191) regarding the phenomenon of entrepreneurial education and how it was practised, cultivated and how PIL teachers and students were motivated to assume entrepreneurial roles within campuses. According to Neuman (2014: 208),

> researchers who conduct qualitative studies analyse by organising data into categories based on themes, concepts, or similar features. While doing this, they may also develop new concepts, formulate conceptual definitions, and examine the relationships among concepts. Eventually, these researchers will link concepts to each other in terms of a sequence, as oppositional sets, or as sets of similar categories that are interwoven into theoretical statements.

NVIVO 10 software was used to analyse the qualitative data mainly by helping to uncover trends. Words with similar meanings were identified and displayed by means of word clouds and tree maps. Cluster analysis revealed the main themes and sub-themes. Emerging themes became the categories or codes for analysis. The data analyst consulted was an external, unbiased, and objective person who worked closely with the researcher to identify the prevalence of overall themes, sub-themes, similar themes and excerpts from the data that captured important information relevant to the overall research questions.

4.12 DELIMITATIONS/SCOPE OF THE STUDY

The main delimitation is that only three Government High Schools and six TVET Colleges were included along with all four Universities in KwaZulu-Natal. Students who are not doing final year in the Department of Management and Entrepreneurial

Studies / or Commercial Department were excluded from the study. Furthermore, the study was delimited to evaluate the effective of entrepreneurship education in final year students. Finally, the study sample 256 participants with the assumption that the results would be reflective of the general situation of students and teaching staff in Government educational institutions, as the syllabus followed in both high schools and TVET colleges is prescribed country-wide and experiences of respondents at these institutions are likely to be fairly similar. Respondents from each of the four universities were included as universities have greater freedom to select their own curricula and these experiences would have been varied.

4.13 LIMITATIONS OF THE STUDY

Due to the way in which the sample was selected (purposive sampling), and the lack of time and/or unwillingness by respondents to complete the questionnaires, the sample is not fully representative. 85% of those who agreed to participate finally completed the survey and took part in the individual interviews. This study focused both on educators and students in PILs in Kwa-Zulu Natal. The study to focused only on final year students and teaching staff in the commercial stream or management department in KZN. Both lecturers and high school teachers were included in the same questionnaire, while it is acknowledged that the experiences of the high school teachers would have been different, and ideally a separate questionnaire should have been designed for that group, while the sub-group of school learners should ideally have been analysed separately from the bulk of the students' responses.

Graduates were not included and nor were successful or unsuccessful entrepreneurs within the community, which restricted the breadth of respondents whose experience would have been valuable. Also, there was no control group of students who were not involved in entrepreneurial education courses.

The sampling method chosen for this study can result in selection bias as only those willing to take part are included. The method does not therefore allow for statistically accurate representation of the population. In addition, while qualified statisticians were employed in the analysis of the data, some more advanced statistical techniques could have strengthened their analysis.

While the results cannot be formally generalised to other institutions throughout South Africa there is a strong probability that they will be of interest and applicable to other government high schools and TVET colleges which all follow the same national curriculum. While universities have wider freedom in setting curricula, all are subject to the same resource constraints, so that other universities in other provinces will also find the findings of interest.

4.14 VALIDITY AND RELIABILITY/TRUSTWORTHINESS

4.14.1 Validity

Validation is the process of gathering evidence to validate (or not) a particular hypothesis or set of research questions, and validity is the degree to which and tool such as a questionnaire measures what it is intended to measure (Dawson *et al.* 2017).

The questionnaire used in this study was pre-tested in a pilot study in order to establish its validity, by means of the following questions:

- Is the research instrument appropriate for achieving the research objectives?
- Does the research actually analyse the impact of entrepreneurship education and assess whether the entrepreneurship education curricula offered in PILs promote business start-ups?

The types of validity considered in this study are presented below.

4.14.2 Content (or external) validity

The gold standard for establishing content validity is triangulation, defined as a mishmash of methodologies in the study of the same phenomenon (Reio and Werner 2017). This study used a mixed method research design which incorporates triangulation as an essential component. As stated by (Wilson 2016e), triangulation has its origins in attempts to validate research findings by generating and comparing different types of data, and different respondents' perspectives, on the topic under investigation.

Data can be triangulated by comparing data obtained via a questionnaire to data obtained via observation, structured interviews and expert as well as respondent

reviews of the data. This comparison minimises the risk that a survey captures assumptions regarding a construct, rather than perception of the construct by respondents (issues relating to the entrepreneurship education).

4.14.3 Construct validity

Construct validity describes not only the consistency of the instrument contents but also whether the instrument measured what it is intended to. For this purpose, the validity of the instrument, which is described as establishment of a suitable connection between the research objective(s) and the questions used in the questionnaire, as demonstrated by statistical analysis, were ensured (Reio and Werner 2017). The data collected from the PILs via the questionnaires were compared with the variables in the objectives to establish correlation and consistency.

4.14.4 Face validity

Face validity indicates that the right items were included in the instrument (Reio and Werner 2017). A statistician assisted with face validation before the questionnaires were distributed to the respondents. A pilot study ensured that wording of the questions was correct, that the content of the questions related to the research questions, and to check question length and the overall structure of the questionnaire.

4.14.5 Reliability

The term “reliability” infers that the instruments used in the study (including the researcher) consistently or repeatedly obtain the same results (Chu and Ke 2017). As stated by Comber (2018) a test can be reliable but not valid but a test cannot be valid without being reliable. Reliability is, therefore, derived from validity. The study enhanced reliability by carefully piloting the questionnaire and then adopted a fairly large sample of 223 respondents (that is, 136 final year students and 87 teaching staff) of the 256-teaching staff and final year students in PILs in KZN.

Instruments are regarded as being reliable when they provide similar and accurate responses upon administration of the test on several occasions. Cronbach’s Alpha test measures reliability of survey responses, with 0.70 and above being regarded as a

suitable reliability value (Reio and Werner 2017). Conbach's alpha tests in this study resulted in reliability values ranging from 0.796 to 0.903 (see section 5.3).

To ensure reliability, the instrument was edited and proof read by the supervisor as well as a research assistant in another organisation and was pre-tested to ensure problems do not occur when the respondents answer the questions, or with the recording of the collected data. A pre-test ensures the validity and reliability of the data. Preliminary analysis was conducted to ensure that the questionnaire was properly understood by the respondents; hence, possible errors were corrected prior to conducting the main survey. A follow-up interview was performed on a test basis to further ascertain the overall consistency of the answers to the questionnaire.

The questionnaire was simply and precisely constructed so that it was not too lengthy, to ensure that respondents did not find it daunting. The results were triangulated to ensure that complete, comparative and relevant information was gathered so as to minimise bias and to check for accuracy and reliability (Dawson *et al.* 2017).

4.15 ETHICAL CONSIDERATIONS

Studies conducted by students at the Durban University of Technology which involve human subjects, are subject to ethical review and need permission from the Institutional Research and Innovation Committee before proceeding, which was granted (Appendix 4). Potential participants received an information letter (Appendix 1) which explained that the research would not result in physical or psychological harm but psychological support services would be available if needed. The information letter made it clear that confidentiality would be maintained throughout the research process from data collection to publication as well as data storage, and that participation was voluntary and participants could withdraw at any time without needing to provide an explanation. Participants were required to sign a consent form before admission to the study (Appendix 1).

Potential student participants had to be a registered final-year student (that is, final year in Tertiary Institution and Grade 12 in Secondary School) in PILs in Kwa-Zulu Natal.

4.16 CONCLUSION

This chapter outlined the data collection tools and data analyse in this study. The study also adopted content reviews and a field research approach as its data gathering and analysis. Data were collected from final year students and teaching staff in the PILs from a sampling population of 256 respondents. The purposive sampling method was mainly used to select participants for the study. Questionnaires were distributed to final year students and teaching staff in selected PILs in KZN. In addition, the validity and reliability of the research instruments are discussed, as well how they were tested. The data collection procedures and response rates were discussed as well in this chapter. Lastly, the methods of data analysis for each instrument were discussed, including discussion of statistical analysis that were conducted for each data set. The following chapter presents and interprets the results that developed form teaching staff perspective.

CHAPTER 5: STATEMENT OF FINDINGS, INTERPRETATION AND DISCUSSION OF THE DATA

5.1 INTRODUCTION

This chapter presents the results and discusses the findings related to the data obtained from this study. Questionnaires were used as the primary data collection tool to collect data from the selected respondents (that is, teachers and students). The data collected from the responses were analysed with SPSS version 25.0. The first part of the chapter presents the descriptive statistics in the form of graphs, cross-tabulations and other figures related to the quantitative data that was collected. Inferential techniques including the use of correlations and chi square test values were interpreted using p-values. The second part of the chapter presents and analyses the qualitative data, using the NVivo statistical package. The literature surveyed forms the context for presentation of the findings, and the theoretical frameworks are applied to the results as appropriate.

5.2 QUANTITATIVE DATA – TEACHING STAFF

The quantitative section of the questionnaire (Appendix 2) consisted of 47 items, divided into 6 questions that explored various themes as illustrated in Table 5.1. A total of 100 questionnaires were distributed to teaching staff in public institutions of learning in KZN. This was done so as to get responses from cross-section of teaching staff within each PILs. A total of 87 questionnaires (87% response rate) were returned and processed for data analysis.

Table 5.1: Sectional description of questionnaires

A	Biographical data
B1	Assessment of Whether an Entrepreneurship Education Curriculum Promotes Business Start-Up
B2	Investigating the Perceptions of Educators About the Benefits Of Entrepreneurship Education
B3	Investigating the Key Skills that Entrepreneurship Education Promotes
B4	Ascertaining the Role of Public Institutions in Promoting Entrepreneurship Education
5	Open-ended questions

A Likert-scale format was used for the closed-ended, quantitative questions. The respondents were asked to select their responses for the close-ended questions, while

they provided comments on the open-ended questions. This was done to ascertain consistency and to obtain additional information on aspects of the implementation of related issues from a broad perspective.

The questionnaires were personally administered. An information letter and consent form (Appendix 1) was provided to each potential participant in order to provide the background to the study and ethical considerations. Participants were enrolled once they had signed the consent form. The covering letter with each questionnaire provided instructions for respondents to complete the questionnaires. The site visit allowed for an opportunity to answer any questions and provide any clarifications. A collection date was scheduled with the respondents. The advantage of personal administration of the questionnaires was that it offered the administrators the opportunity to seek co-operation from the respondents and ensured that the completed questionnaires were collected within a reasonable time. The relationships between variables of the study were tested using cross-tabulation. Each variable in the questionnaire was also tested for reliability.

5.2.1 Reliability statistics

Reliability refers to the consistency of research measures and validity to the accuracy of such measures (Wilson 2016c; Shannonhouse, Barden and McDonald 2017). Reliability is measured by repeating measurements several times on the same subjects (Kumar 2019). A reliability coefficient (Cronbach's alpha score) of 0.70 or higher is considered "acceptable" (May, Hunter and Jason 2017). Table 5.2 shows the Cronbach's alpha score for all the items that made up the questionnaire.

Table 5.2: Cronbach's alpha analysis

		N of Items	Cronbach's Alpha
B1	Assessment of Whether an Entrepreneurship Education Curriculum Promotes Business Start-Up	8	0.796
B2	Investigating the Perceptions of Educators About the Benefits of Entrepreneurship Education	8	0.804
B3	Investigating the Key Skills that Entrepreneurship Education Promotes	7	0.846
B4	Ascertaining the Role of Public Institutions in Promoting Entrepreneurship Education	8	0.903

As can be seen from Table 5.2, the reliability scores for all the items were higher than the recommended Cronbach's alpha value, indicating a high degree of acceptable, consistent scoring for these items. It is evident that there was internal consistency and high correlation amongst all of the items in the questionnaire. Thus, if one carried out the same survey on another sample the results would probably be similar.

5.2.2 Factor analysis

Factor analysis was conducted on group variables in the questionnaire under each study objective-related theme. According to Reilly and Jones (2017), the aim of factor analysis is data reduction and data summarisation (Reilly and Jones 2017). While the statistician was comfortable with the analysis it is acknowledged that the sample is smaller than would normally be subjected to factor analysis.

Section B of this study questionnaire had four sub-themes based on the objectives of the study, with eight questions per sub-theme. On its own any one question by itself would be an inadequate measure of possible responses related to each sub-theme, but when several questions are grouped together they are likely to provide a better measure of the sub-theme and the related objective (Reilly and Jones 2017).

Factor analysis is used to determine whether the questions in each theme do, in fact, measure the same thing. If so, they can then be combined to create a new variable, or factor score variable, that contains a score for each respondent in relation to theme (Shannonhouse, Barden and McDonald 2017).

The principal component technique was applied using a rotation matrix method to ascertain the combined effect of the most relevant variables of this research and to put them into a common score.

Kaiser-Meyer-Olkin (KMO) and Bartlett's Test was conducted first in order to determine the suitability of factor analysis. The KMO Measure of Sampling Adequacy should be greater than 0.50 and Bartlett's Test of Sphericity less than 0.05 (May, Hunter and Jason 2017) the conditions are satisfied, factor analysis can proceed.

Factor analysis was done only for the Likert-scale items. Certain components were divided into finer components. This is explained in the rotated component matrix, as illustrated by the summarised result of this analysis (Table 5.3).

Table 5.3: KMO and Bartlett's Test

		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity		
			Approx. Chi-Square	Df	Sig.
B1	Assessment of Whether an Entrepreneurship Education Curriculum Promotes Business Start-Up	0.807	198.684	28	0.000
B2	Investigating the Perceptions of Educators About the Benefits of Entrepreneurship Education	0.731	223.178	28	0.000
B3	Investigating the Key Skills that Entrepreneurship Education Promotes	0.797	249.237	21	0.000
B4	Ascertaining the Role of Public Institutions in Promoting Entrepreneurship Education	0.869	406.298	28	0.000

As is evident from Table 5.3, all the conditions were satisfied for factor analysis. The values of each sub-theme exceeded the threshold value with Sig. 0.000 respectively, indicating that the sampling and hence the clustering under each sub-theme were statistically significant in measuring the same thing.

In this study, “assessment of whether an entrepreneurship education curriculum promotes business start-up” had a 0.807 KMO measure of sampling adequacy. The results (BTS = 198.684; sig. = 0.000) indicate that the data was appropriate for the purpose of factor analysis. This means that this sub-theme and its component variables collectively had a positive impact on the effectiveness of entrepreneurship education.

Thus, teachers in PILs perceived that entrepreneurship education was beneficial. The results (BTS = 225.601; sig. 0.000) show that the data was appropriate for the purpose of factor analysis. The results of the KMO measure of sampling adequacy was 0.821, which showed that there were sufficient items for each of the factors. The two tests supported the appropriateness of the principal component analysis technique.

The results (BTS = 203.653; sig. = 0.000) indicate that the data was appropriate for the purpose of factor analysis. The result of the KMO measure of sampling adequacy was 0.695. The results indicate that there were enough items for each of the factors. The two tests supported the appropriateness of the principal component analysis technique. All of the conditions were satisfied for factor analysis. The findings reveal

that there are attributes and key skills needed in entrepreneurship education in PILs in order to produce entrepreneurially minded graduates. The results are in line with the findings by Reilly and Jones (2017) that entrepreneurship education is an important avenue for the development of an entrepreneurial mind-set and skills amongst young people which can benefit society as a whole and not just their business ventures. The sub-theme "ascertaining the role of public institutions in promoting entrepreneurship education" had a KMO result of 0.869 indicating the strong significance of the sub-theme and its component variables to the study. The results (BTS = 406.298; sig. = 0.000) indicate that the data was appropriate for the purpose of factor analysis, which means that PILs have a positive impact on promoting the effectiveness of entrepreneurship education.

Rotated Component Matrix tests were conducted for sub-themes and their component variables (Table 5.4 and Table 5.5).

Table 5.4: Rotated component matrix[a] – B1

B1	Component	
	1	2
The higher the level of education of an individual the greater the possibility of starting a venture that progresses past the start-up stage	-0.064	0.843
Effective entrepreneurship education offers students access to skills and knowledge needed to start an entrepreneurial venture	0.510	0.566
The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start up their own businesses	0.696	0.121
As part of the curriculum offered by the institution, the entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses	0.590	0.291
In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business	0.849	0.034
Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses	0.799	0.147
Entrepreneurship education can alleviate the fear of failure in starting new businesses	0.541	0.345
It is believed that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses	0.387	0.655

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.
a. Rotation converged in 3 iterations.

As shown in Table 5.4, the statements or factors loaded perfectly along a single component. The findings indicated that the un-rotated factor had loadings close to those of the true factor (Component 1). However, after rotation, factor splitting took place for some of the variables. The statement "effective entrepreneurship education

offers students access to skills and knowledge needed to start an entrepreneurial venture" could be split into sub-themes since the respondents identified certain aspects of the themes as belonging to other sub-sections. The main theme and sub-theme were:

- **Main theme:** Effective entrepreneurship education cultivates entrepreneurial mind-set; and
- **Sub-theme:** Effective entrepreneurship education has a significant impact on the entrepreneurial intention of students.

The dimensions aligned perfectly and no factors overlapped. This means that the questions precisely measured what they set out to measure, implying that respondents interpreted the question correctly and were able to distinguish what the questions were measuring.

Table 5.5: Rotated component matrix[a] – B2

B2	Component	
	1	2
Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole	-0.026	0.834
Entrepreneurship education improves economic literacy.	0.173	0.852
Entrepreneurship education helps students to consider self-employment as a valid graduate career option	0.389	0.619
Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development	0.450	0.547
Entrepreneurship education contributes to decreasing unemployment in the country	0.632	0.349
Entrepreneurship education determines individual entrepreneurial interests	0.769	-0.061
Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	0.726	0.313
Entrepreneurship education increases the number of graduate start-up businesses	0.685	0.147

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.
a. Rotation converged in 3 iterations.

As shown in Table 5.5, the statements or factors loaded heavily along a single component. The findings indicate that the un-rotated factor had loadings close to those of the true factor (Component 1). However, after rotation, factor splitting took place for some of the variables. The statement "entrepreneurship education determines individual entrepreneurial interests" could be split into sub-themes since the

respondents identified certain aspects of the themes as belonging to other sub-sections. The main theme and sub-theme were:

- **Main theme:** Entrepreneurship education cultivates an entrepreneurial mindset
- **Sub-theme:** Entrepreneurship education motivates students to partake in business activities.

The dimensions aligned perfectly and no factors overlapped. This means that the questions precisely measured what they set out to measure, implying that respondents interpreted the question correctly and were able to distinguish what the questions were measuring.

Component matrix tests were conducted for sub-themes and their component variables (Table 5.6 and Table 5.7).

Table 5.6: Component matrix[a] – B3

B3	Component
	1
The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy	0.546
Graduates gain the skills to take calculated risks through entrepreneurship education	0.788
Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner	0.733
Entrepreneurship education equips students to think strategically	0.778
Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources	0.755
Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment	0.763
Entrepreneurship education teaches students the importance of social interaction as a skill for a successful entrepreneur	0.721

Extraction Method: Principal Component Analysis.

As shown in Table 5.6, the statements or factors load perfectly along a single component. The findings indicate that the first un-rotated factor had loadings close to those of the true factor (Component 1). However, after rotation, factor splitting took place for some of the variables. The statement "entrepreneurship education imparts the skills to take calculated risks" could be split into sub-themes since the respondents identified certain aspects of the themes as belonging to other sub-sections. The main theme and sub-theme were:

- **Main theme**: Entrepreneurship education enhances students' willingness to create a new venture

- **Sub-theme:** Entrepreneurship education enhances students' skills to identify new opportunities and skills to take business risks.

In most instances it was just one statement that aligned differently. For the most part, the sections seemed to consistently measure what they set out to measure. The reliability scores for the different categories for this research indicate a high degree of acceptable, consistent and stable scoring, confirming the reliability of the questionnaire. Reilly and Jones (2017) noted that a score of 0.7 is an acceptable reliability coefficient. The results indicate that the scales were reliable.

Table 5.7: Component Matrix[a] – B4

B4	Component
	1
The institution offers support to students in order to start up their own businesses, by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance	0.593
The institution provides training and development programmes to promote business start-up	0.798
The institution collaborates with entrepreneurship experts to promote entrepreneurship education	0.823
The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	0.839
The institution organises career talks during convocation day	0.785
The institution takes students for visits to industries to gain more knowledge about the subject	0.780
The institution practically orients students to outreach programmes	0.750
The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning	0.810

Extraction Method: Principal Component Analysis. A. 1 components extracted.

As portrayed in table 5.7, the respondents' scoring patterns are loaded heavily along a single component. This implies that the statements that constituted these sections perfectly measured what they set to measure.

It is noted that the variables that constituted Section B1 and B2 loaded along 2 components (sub-themes). This means that respondents identified different trends within the section. Within the section, the splits are colour coded.

The tables and figures that follow represent the quantitative findings of the study. These and their interpretations are presented in the order of the two sections of the survey instrument (Appendix 2).

5.2.3 Section A: Demographic data of instructors

This section presents the demographic data of the respondents, namely, age, gender, type of PIL, number of years of experience teaching in a public institution of learning.

5.2.3.1 Gender and age

Table 5.8 shows the gender distribution by age.

Table 5.8: Gender distribution by age

			Gender		Total
			Male	Female	
How old are you?	20 – 30	Count	10	11	21
		% within How old are you?	47.6%	52.4%	100.0%
		% within Gender	27.8%	21.6%	24.1%
		% of Total	11.5%	12.6%	24.1%
	31 – 40	Count	14	14	28
		% within How old are you?	50.0%	50.0%	100.0%
		% within Gender	38.9%	27.5%	32.2%
		% of Total	16.1%	16.1%	32.2%
	41 – 50	Count	5	19	24
		% within How old are you?	20.8%	79.2%	100.0%
		% within Gender	13.9%	37.3%	27.6%
		% of Total	5.7%	21.8%	27.6%
	> 50	Count	7	7	14
		% within How old are you?	50.0%	50.0%	100.0%
		% within Gender	19.4%	13.7%	16.1%
		% of Total	8.0%	8.0%	16.1%
Total		Count	36	51	87
		% within How old are you?	41.4%	58.6%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	41.4%	58.6%	100.0%

Age group was distributed into the following categories: 20-30, 31-40, 41-50 and above 50 years. The distribution shows that 52.4% of the respondents between the ages of 20-30 were females, while 47.6% were males. In the age category, 31-40 years, findings reveal that 50% of respondents were male, and the other 50% were female. In the age group 41-50, the results indicate that 79.2% of respondents were

male, while only a low 20.8% were female. The age group 50 years and above shows that 50% of respondents were male and 50% were female. The findings indicate that there is no difference in the sample composition by gender (p = 0.108) and age (p = 0.186).

5.2.3.2 Type of institution

The analysis presents the school level at which teachers in PILs teach (Figure 5.1).

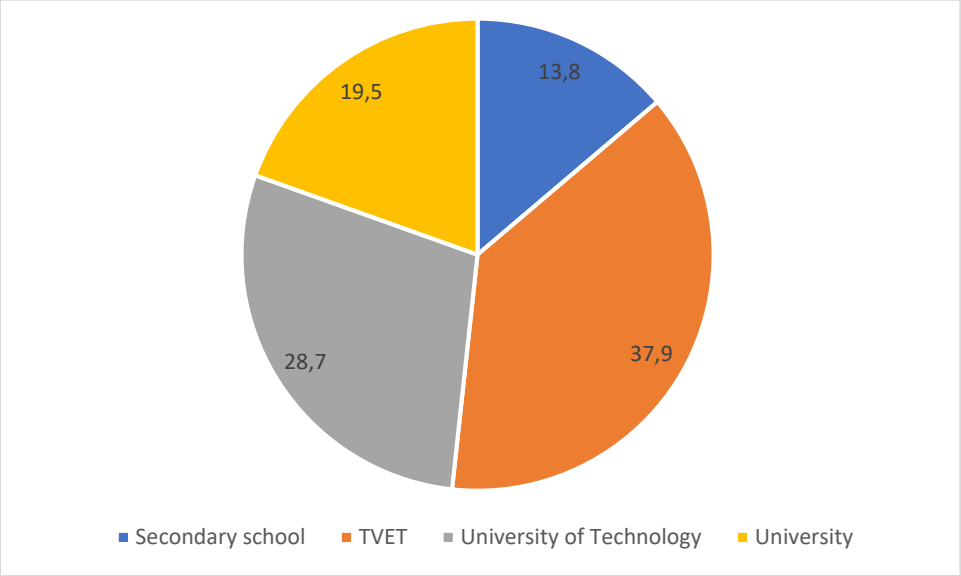


Figure 5.1: At what school level do you teach

Figure 5.1 illustrates a significant difference (p = 0.008) in where respondents taught. It can be seen from the graph that the highest group of respondents (37.9%) were from traditional universities, followed by Universities of Technology (28.7%), TVET Colleges (19.5%), and secondary schools (13.8%).

The reporting period was analysed to confirm the rigour of reporting that teachers from PILs are subjected to. The results are presented in the table below.

5.2.3.3 Teaching experience

The reporting period was analysed to confirm the rigour of reporting that teachers from PILs are subjected to. The results are presented in the Table 5.9.

Table 5.9: For how long have you been teaching?

N	Minimum	Maximum	Mean	Std. Deviation
87	1.00	39.00	9.8908	8.10628

The variable listed in the above table has a high degree of dispersion (Waghid, 2019) from the mean SD = 8. A total of 87 teaching staff from PILs interviewed indicated the number of years they have been teaching.

5.2.3.4 Period of engagement in entrepreneurship education

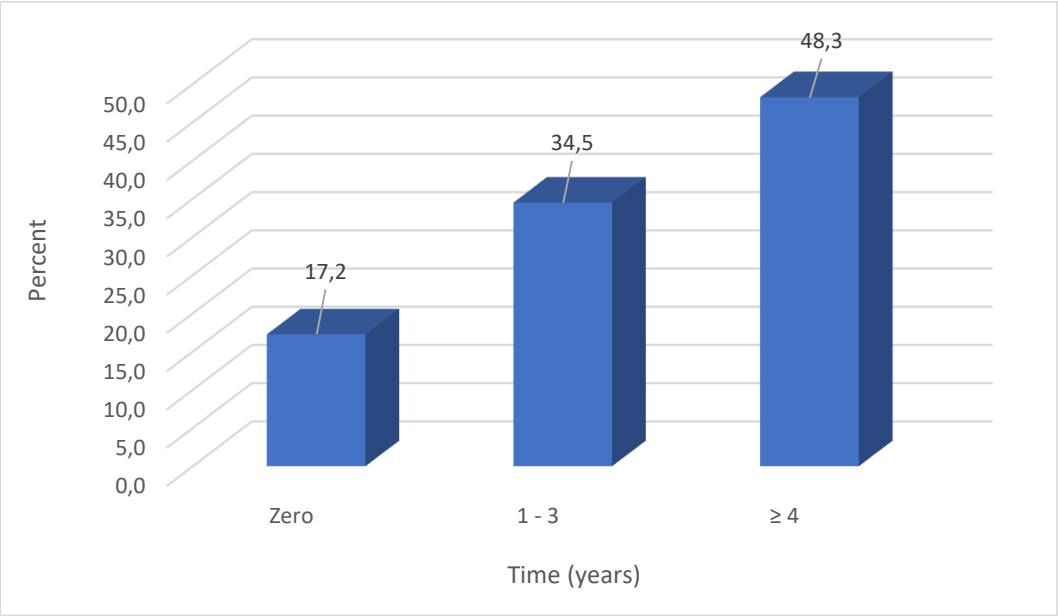


Figure 5.2: How long have you been engaged in entrepreneurial / entrepreneurship education?

Figure 5.2 indicates that a majority of respondents (48.3%) have been engaged in entrepreneurship education for more than four years; 34.5% for three years or less, while 17.2% have never been engaged with entrepreneurship education. The findings reveal that there is a significant difference regarding involvement time (p = 0.002). The result shows that not all teachers who are teaching entrepreneurship are entrepreneurs or have any appropriate training

5.2.3.5 Teacher training in entrepreneurial or entrepreneurship education received

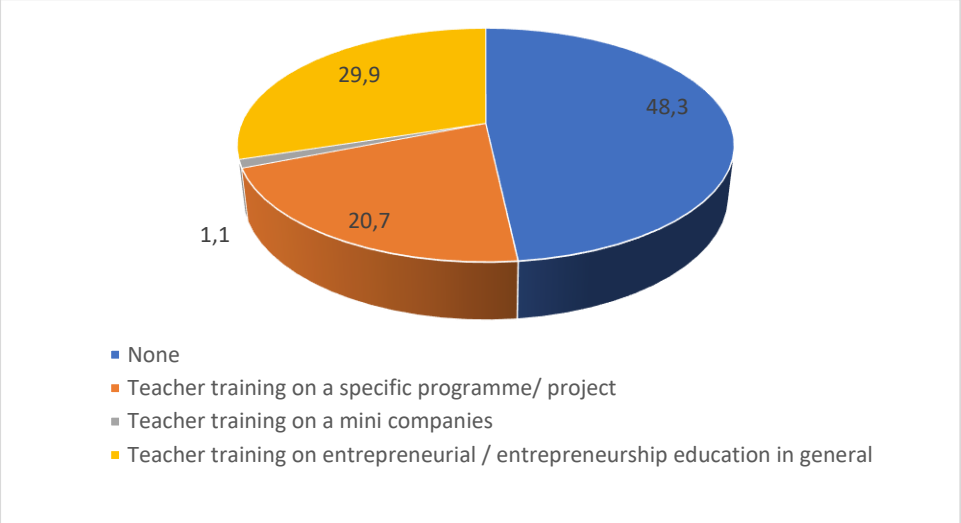


Figure 5.3: What kind of teacher training in entrepreneurial or entrepreneurship education have you received?

The results shown in Figure 5.3 indicate that a majority of respondents (48.3%) have never received any form of training for entrepreneurship education; 29.9% have received teacher training in entrepreneurship education in general; 20.7% of teaching staff in PILs have been trained for a specific entrepreneurial programme; and 1.1% have been trained in small companies. The findings reveal that nearly half of the respondents indicated they had no training ($p < 0.001$).

5.2.3.6 Time (in percentage) spent on entrepreneurship education every week

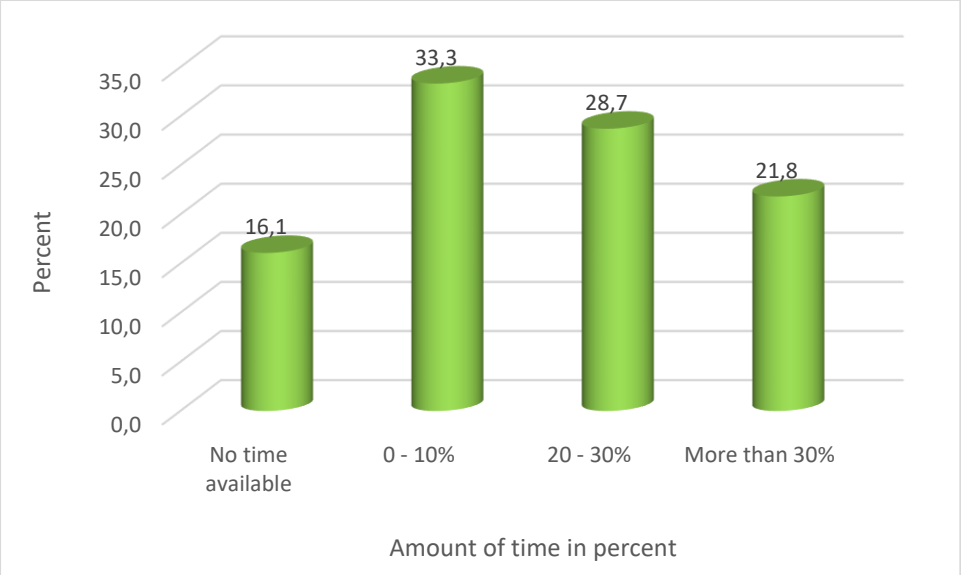


Figure 5.4: Can you indicate how much time (in percentage) you spend on entrepreneurship education every week?

The results in Figure 5.4 show that 33.3% of the respondents spent between 0% and 10% of their time on teaching and learning in entrepreneurship education; 28.7% spent between 20% and 30% 21% spent more than 30% while 16.1% stated that they do not spend time on entrepreneurship education. The findings reveal that there was no significant difference per option ($p = 0.110$).

5.2.4 Section B Descriptive statistics

The following section analyses the scoring patterns of the respondents per variable per sub-section.

The results are first presented using summarised percentages for the variables that constitute each sub-section.

Results are then further analysed according to the importance of the statements.

5.2.4.1 Question 1: Assessment of whether an entrepreneurship education curriculum promotes business start-ups

Table 5.10: Summery of scoring patterns – Question 1

		AGREE				NEUTRAL		DISAGREE				
		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
1.1 The higher the level of education of an individual the greater the possibility of starting a venture that progresses past the start-up stage	B1.1	21	24.1 %	33	37.9 %	17	19.5 %	11	12.6 %	5	5.7%	0.000
1.2 Effective entrepreneurship education offers students access to skills and knowledge needed to start an entrepreneurial venture	B1.2	32	36.8 %	44	50.6 %	9	10.3 %	0	0.0%	2	2.3%	0.000
1.3 The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start up their own businesses	B1.3	20	23.0 %	44	50.6 %	18	20.7 %	4	4.6%	1	1.1%	0.000
1.4 As part of the curriculum offered by the institution, the entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses	B1.4	18	20.7 %	40	46.0 %	21	24.1 %	7	8.0%	1	1.1%	0.000
1.5 In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business	B1.5	14	16.1 %	49	56.3 %	18	20.7 %	5	5.7%	1	1.1%	0.000
1.6 Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals	B1.6	23	26.4 %	47	54.0 %	13	14.9 %	3	3.4%	1	1.1%	0.000

who are able to take risks and create new businesses												
1.7 Entrepreneurship education can alleviate the fear of failure in starting new businesses	B1.7	12	13.8 %	48	55.2 %	23	26.4 %	2	2.3%	2	2.3%	0.000
1.8 It is believed that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses	B1.8	31	35.6 %	45	51.7 %	10	11.5 %	0	0.0%	1	1.1%	0.000

The results of Question 1 are presented in Table 5.10 above and the analysis is presented below.

- **THE HIGHER THE LEVEL OF EDUCATION OF AN INDIVIDUAL, THE GREATER THE POSSIBILITY OF STARTING A VENTURE THAT PROGRESSES PAST THE START-UP STAGE**

As depicted in Table 5.10 above, the Fisher's Exact Test with a p-value = 0.000 revealed significant differences in the scoring patterns of the respondents in respect to the statement at $p < 0.01$. It can be observed that 62% of respondents were in agreement (strongly agreed 24.1%; agreed 37.9%), 19.5% were neutral, and 18.3% disagreed (disagree 12.6%; strongly disagree 5.7%). These findings are supported by a Chi-square test conducted to evaluate the possibility of starting a venture that progresses past the start-up stage. The result reveals that (x^2 = 25,931; df = 4; P = 0,000), indicating that the more student entrepreneurs are knowledgeable about entrepreneurship, the more that new business failure rates will decrease. The findings are aligned with (Asghar *et al.*) contention that entrepreneurship education facilitates the attainment of entrepreneurial knowledge, skills, attitudes and behaviours.

- **EFFECTIVE ENTREPRENEURSHIP EDUCATION OFFERS STUDENTS ACCESS TO THE SKILLS AND KNOWLEDGE NEEDED TO START AN ENTREPRENEURIAL VENTURE**

The majority of respondents (87.4%) were in agreement with the statement (agreed = 50.6%; strongly agreed = 36.8%), 10.3% were neutral, and 4.3% disagreed (disagree = 2; strongly disagree = 2.3). The results reveal that (x^2 = 53; df = 3; P = 0.000), which means that there is a correlation between entreptreneurship education and the skills needed for business start-up. Iwu *et al.* (2019: 2) contend that entrepreneurship education promotes entrepreneurial knowledge, skills, attitudes and behaviours, and Farny *et al.* contend that graduates of such programmes are are ablew to acquire creative and innovative skills and be able to identify opportunities and create new businesses.

- **THE ENTREPRENEURSHIP EDUCATION CURRICULUM IN THE INSTITUTION IS DESIGNED TO EQUIP STUDENTS WITH THE SKILLS NEEDED TO START UP THEIR OWN BUSINESSES**

A total of 73.6% (agree = 50.6%; strongly agree = 23%) of respondents agreed with the statement that the entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start up their own business, 20.7% were neutral, and 5.7% disagreed (strongly diasgree = 4.6%; disagree =1.1%). The findings reveal that the majority of teachers believe that the existing entrepreneurship curriculum equips students with enough skills to start-up their own ventures. The findings are in agreement with the statement by Bauman and Lucy (2019: 2) that entrepreneurship education can train particular skills and improve the chances of performing the related behaviour. The findings are supported by a Chi-square test that was conducted to determine if the entrepreneurship education curriculum in PILs equips students with the skills needed to start-up their own ventures. The results reveal that (x^2 = 66.851; df = 4; P = 0.000) for this variable, indicating that a majority of teachers believe that the curriculum they have is capable of producing entrepreneurial graduates.

- **AS PART OF THE CURRICULUM OFFERED BY THE INSTITUTION, THE ENTREPRENEURSHIP PROGRAMMES INCLUDE PRACTICAL ELEMENTS AIMED AT ENCOURAGING THE CREATION OF NEW BUSINESSES**

According to Table 5.10, 66.7% (agree = 46%; strongly disagree = 20.7%) of the respondents were in agreement with the statement that entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses as part of the curriculum offered in PILs, 24.1% were neutral and 9.1% disagreed (disagree = 8%; strongly disagree =1.1%). Regarding the entrepreneurship curriculum offered by PILs, the Chi-square test is (x^2 = 51.793; df = 4; P = 0.000) in the scoring patterns amongst the respondents. The results differ from Ismail, Sawang and Zolin (2018: 178) who stated that “education in South Africa is designed to produce job-seekers rather than producing job creaters”.

- **IN THE INSTITUTION, THE ENTREPRENEURSHIP EDUCATION CURRICULUM IS PLANNED TO STIMULATE LEARNER INTEREST IN STARTING AND OWN BUSINESS**

The findings reveal that 72.4% (strongly agree = 56.3%; agree = 16.1%) of the total respondents agreed with the position that in the institution the entrepreneurship education curriculum is planned to stimulate learner interest in starting and owning a business, 20.7% were neutral, and 6.8% disagreed (disagree 5.7%; strongly disagree = 1.1%). The result reveals a positive correlation with a Chi-square value of $x^2 = 82.368$ and a degree of freedom of df = 4.

- **ENTREPRENEURSHIP EDUCATION CAN ALLEVIATE THE FEAR OF FAILURE IN STARTING NEW BUSINESSES**

A total of 69% of respondents (strongly agree = 55.2%; agree 13.8%) agreed with the statement that entrepreneurship education can alleviate the fear of failure in starting new businesses, 26.4% were neutral, and 4.6% disagreed (diasgree = 2.3%; strongly disagree = 2.3%). With regard to the statement “entrepreneurship education offered in public inctitutions of learning alleviating the fear of failure”, the Chi-square test is ($x^2 = 84.552$; df = 4; P = 0.000) in the scoring patterns. The results indicate that entrepreneurship education can promote an understanding of business, its purposes, structure and relationship with the rest of society, which is consistent with the findings of (Santhosha Shetty and Siddiq 2015).

- **IT IS BELIEVED THAT ENTREPRENEURSHIP EDUCATION CAN BE A PLATFORM FOR ADDRESSING UNEMPLOYMENT IN COMMUNITIES THROUGH THE CREATION OF NEW BUSINESSES**

A majority of 87.3% (agree = 51.7%; strongly agree = 35.6%) of respondents agreed with the notion that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses, 11.5% were neutral, and 1.1% disagreed (strongly disagreed = 0.0%; disagreed = 1.1%). With regard to the statement the Chi-square test is ($x^2 = 54.931$; df = 3; P = 0.000) in the scoring patterns.

Overall, it can be observed that all statements show significant high levels of agreement while other levels of agreement are lower, but are still greater then the level of disagreement.

5.2.4.2 Question 2: Investigating the perceptions of educators about the benefits of entrepreneurship education

Table 5.11: Summary of scoring patterns – Question 2

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
2.1 Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole	B2.1	31	35.6%	42	48.3%	13	14.9%	1	1.1%	0	0.0%	0.000
2.2 Entrepreneurship education improves economic literacy.	B2.2	23	26.4%	44	50.6%	19	21.8%	1	1.1%	0	0.0%	0.000
2.3 Entrepreneurship education helps students to consider self-employment as a valid graduate career option	B2.3	30	34.5%	44	50.6%	13	14.9%	0	0.0%	0	0.0%	0.000
2.4 Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development	B2.4	29	33.3%	48	55.2%	10	11.5%	0	0.0%	0	0.0%	0.000
2.5 Entrepreneurship education contributes to decreasing unemployment in the country	B2.5	27	31.0%	35	40.2%	23	26.4%	1	1.1%	1	1.1%	0.000
2.6 Entrepreneurship education determines individual entrepreneurial interests	B2.6	27	31.0%	48	55.2%	12	13.8%	0	0.0%	0	0.0%	0.000
2.7 Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	B2.7	17	19.5%	60	69.0%	10	11.5%	0	0.0%	0	0.0%	0.000
2.8 Entrepreneurship education increases the number of graduate start-up businesses	B2.8	18	20.7%	46	52.9%	20	23.0%	3	3.4%	0	0.0%	0.000

The results of Question 2 are presented in Table 5.11 above and the analysis is presented below.

- **ENTREPRENEURSHIP EDUCATION ENHANCES KNOWLEDGE ABOUT THE ROLE OF ENTREPRENEURSHIP IN SOCIETY AS A WHOLE**

Table 5.11 shows that the majority of respondents (83.9%) (agree = 48.8%; strongly agree = 35.6%) were in agreement with the statement that entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole, 14.9% were neutral and 1.1% disagreed (disagree = 1.1%; strongly disagree = 0.0%). With reference to the statement “entrepreneurship education enhances knowledge about the role of entrepreneurship education in society as a whole”, the Chi-square test is significant at $p < 0.05$, with a Chi-square value of $x^2 = 46.103$ and a degree of freedom of df = 4.

- **ENTREPRENEURSHIP EDUCATION IMPROVES ECONOMIC LITERACY**

A total of 77% (agree = 50.6%; strongly agree = 26.4%) agreed with the notion that entrepreneurship education improves economic literacy, 21.8% were neutral, and 1.1% disagreed (disagree = 1.1%; disagree =0.0%). Regarding this statement, the Chi-square test is ($x^2 = 42.977$; df = 3; P = 0.000) in the scoring patterns amongst the respondents.

- **ENTREPRENEURSHIP EDUCATION HELPS STUDENTS TO CONSIDER SELF-EMPLOYMENT AS A VALID GRADUATE CAREER OPTION**

The results reveal that 85.1% (agree = 50.6%; strongly agree = 34.5%) of respondents agreed that entrepreneurship education helps students to consider self-employment as a valid graduate career option, while 14.9% were neutral. With reference to the statement “entrepreneurship education helps students to consider self-employment as a valid graduate career option”, the Chi-square Test is significant at $p < 0.05$ with a Chi-square test at ($x^2 = 16.621$; df = 2; P = 0.000).

- **ENTREPRENEURSHIP EDUCATION SEEKS TO PREPARE STUDENTS TO BE RESPONSIBLE ENTERPRISING INDIVIDUALS WHO BECOME ENTREPRENEURIAL THINKERS AND CONTRIBUTE TO SUSTAINABLE ECONOMIC DEVELOPMENT**

A total of 88.5% of respondents (55.2%; strongly agreed = 33.3) agreed that entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who become entrepreneurial thinkers and contribute to sustainable economic development, while 11.5% were neutral. With reference to the statement "entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development", the Chi-square Test is significant at $p < 0.05$ with a Chi-square test is ($x2 = 24.897$; $df = 2$; $P = 0.000$).

- **ENTREPRENEURSHIP EDUCATION DETERMINES INDIVIDUAL ENTREPRENEURIAL INTERESTS**

It can be observed from Table 5.11 that a total of 86.2% of the respondents (agree = 55.2%; strongly agree =31%) agreed with the statement that entrepreneurship education determines individual entrepreneurial interests and 13.8% were neutral. The result shows that ($x^2 = 22.552$; $df = 2$; $P = 0{,}000$), which indicates that indeed entrepreneurship education determines individual entrepreneurial interests.

- **ENTREPRENEURSHIP EDUCATION FOSTERS THE CREATION OF NEW ENTREPRENEURS WHO COULD START NEW VENTURES**

According to Table 5.11, the majority (88.5%) of respondents feel that entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures (agreed = 69%; strongly agree = 19.5%), while 11.5% neither agreed nor disagreed with the statement. The result shows that ($X^2 = 50.552$; $df = 2$; $P = 0.000$).

5.2.4.3 Question 3: Investigating the key skills that entrepreneurship education promotes

Table 5.12: Summery of scoring patterns – Question 3

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
3.1 The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy	B3.1	11	12.6 %	38	43.7%	28	32.2 %	10	11.5 %	0	0.0%	0.000
3.2 Graduates gain the skills to take calculated risks through entrepreneurship education	B3.2	17	19.5 %	44	50.6%	23	26.4 %	3	3.4%	0	0.0%	0.000
3.3 Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner	B3.3	23	26.4 %	49	56.3%	14	16.1 %	1	1.1%	0	0.0%	0.000
3.4 Entrepreneurship education equips students to think strategically	B3.4	26	29.9 %	48	55.2%	12	13.8 %	1	1.1%	0	0.0%	0.000
3.5 Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources	B3.5	20	23.0 %	47	54.0%	19	21.8 %	1	1.1%	0	0.0%	0.000
3.6 Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment	B3.6	16	18.4 %	55	63.2%	15	17.2 %	1	1.1%	0	0.0%	0.000
3.7 Entrepreneurship education teaches students the importance of social interaction as a skill for a successful entrepreneur	B3.7	22	25.3 %	48	55.2%	15	17.2 %	2	2.3%	0	0.0%	0.000

The results of Question 3 are presented in Table 5.12 above and analysis is presented below.

- **THE INSTITUTION PROVIDES ENTREPRENEURSHIP EDUCATION THAT TEACHES GRADUATES BUSINESS SKILLS THROUGH INTERNSHIP OPPORTUNITIES AT BUSINESSES IN THE LOCAL ECONOMY**

Table 5.12 shows that 56.3% of total respondents agreed (agree = 43.7%; strongly agree =12.6%) that the institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy; 32.2% were neutral, and 11.5% disagreed. With reference to the statement "the institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy", the Chi-square Test is significant at $p < 0.05$ with a Chi-square test of ($x^2 = 25.598$; df = 3; P = 0.000).

- **SKILLS PROVIDED THROUGH ENTREPRENEURSHIP EDUCATION PLAY A CRUCIAL ROLE IN GRADUATES DEVELOPING THE ABILITY TO THINK IN A CREATIVE AND CRITICAL MANNER**

A total of 75.8% of respondents agreed (agree = 56.3%; strongly agree = 19.5) that skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner; 16.1% were neutral, and 1.1% disagreed. The Chi-square test is ($X^2 = 56.77$; df = 3; P = 0.000) for this variable. The result indicates that entrepreneurship education plays a role in developing entrepreneurially minded entrepreneur students.

- **GRADUATES ARE ENABLED THROUGH ENTREPRENEURSHIP EDUCATION TO PURSUE OPPORTUNITIES BY COMING UP WITH NEW IDEAS AND MARSHALLING NEEDED RESOURCES**

A total of 77% of respondents agreed (agree = 54%; strongly agree = 23%) with the notion that graduates are enabled through entrepreneurship education to pursue opportunities by coming up with new ideas and marshalling needed resources, 21.8% were neutral, and 1.1% disagreed. With reference to the statement "graduates are enabled through entrepreneurship education to pursue opportunities by coming up

with new ideas and marshalling needed resources", the Chi-square Test is significant at $p < 0.05$ with a Chi-square test of ($x2 = 49.598$; $df = 3$; $P = 0.000$).

- **ENTREPRENEURSHIP EDUCATION AFFORDS GRADUATES THE ABILITY TO CREATE AND MANAGE A NEW VENTURE IN A SOCIALLY RESPONSIVE MANNER, CHANGING STUDENTS' VIEWS TOWARDS SELF-EMPLOYMENT**

A total of 81.4% agreed (agree = 63.2%; strongly agree = 19.4%) that entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment, 17.2 % were neutral, and 1.1% disagreed. With reference to the statement "entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment", the Chi-square Test is significant at $p < 0.05$ with a Chi-square test of ($x^2 74.241$; $df = 3$; $P = 0.000$).

- **ENTREPRENEURSHIP EDUCATION TEACHES STUDENTS THE IMPORTANCE OF SOCIAL INTERACTION AS A SKILL FOR A SUCCESSFUL ENTREPRENEUR**

A total of 80.5% of respondents agreed (agree = 55.2%; strongly agree =25.3%) that entrepreneurship education teaches students the importance of social interaction as a skill for successful entrepreneurship; 17.2% were neutral, and 2.3% disagreed. The Chi-square test is ($x^2 = 51.713$; $df = 3$; $p = 0{,}000$) for this variable. The result indicates that entrepreneurship education teaches students the importance of social interaction as a skill for successful entrepreneurship.

5.2.4.4 Question 4: Ascertaining the role of public institutions in promoting entrepreneurship education

Table 5.13: Summery of scoring patterns – Question 4

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
4.1 The institution offers support to students in order to start up their own businesses, by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance	B4.1	14	16.1 %	33	37.9 %	27	31.0 %	10	11.5 %	3	3.4%	0.000
4.2 The institution provides training and development programmes to promote business start-up	B4.2	10	11.5 %	39	44.8 %	24	27.6 %	11	12.6 %	3	3.4%	0.000
4.3 The institution collaborates with entrepreneurship experts to promote entrepreneurship education	B4.3	10	11.5 %	38	43.7 %	27	31.0 %	10	11.5 %	2	2.3%	0.000
4.4 The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	B4.4	14	16.1 %	28	32.2 %	29	33.3 %	15	17.2 %	1	1.1%	0.000
4.5 The institution organises career talks during convocation day	B4.5	13	14.9 %	32	36.8 %	30	34.5 %	8	9.2%	4	4.6%	0.000
4.6 The institution takes students for visits to industries to gain more knowledge about the subject	B4.6	14	16.1 %	30	34.5 %	28	32.2 %	14	16.1 %	1	1.1%	0.000
4.7 The institution practically orients students to outreach programmes	B4.7	13	14.9 %	45	51.7 %	19	21.8 %	9	10.3 %	1	1.1%	0.000
4.8 The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning	B4.8	14	16.1 %	30	34.5 %	28	32.2 %	11	12.6 %	4	4.6%	0.000

The results of Question 4 are presented in Table 5.13 above and the analysis is presented below.

- **THE INSTITUTION OFFERS SUPPORT TO STUDENTS IN ORDER TO START UP THEIR OWN BUSINESSES, BY ASSISTING THEM IN COMPILING A BUSINESS PLAN, WITH SPECIALIST ADVICE FROM BUSINESS MENTORS AND FINANCIAL ASSISTANCE**

It is shown in Table 5.13, 54% agreed (agree = 37.9%; strongly agree = 16.1%) that the institution offers support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance, 31% were neutral, and 14.9% disagreed (disagree = 11.5%; strongly disagree = 3.4%). The Chi-square test ($x^2 = 35.011$; df = 4; p= 0.000) reveals that PILs offer students support in order to start their own businesses.

- **THE INSTITUTION PROVIDES TRAINING AND DEVELOPMENT PROGRAMMES TO PROMOTE BUSINESS START-UPS**

The results reveal that only 56.3% of respondents agreed (agree = 44.8%; strongly agree = 11.5%) that the institution provides training and development programmes to promote business start-up, 27.6% neither agreed nor disagreed with the statement, while 16% disagreed. The Chi-square test is ($x^2 = 48.736$; df = 4; P = 0.000) for this variable, so the result indicates that PILs do provide training for development programmes to promote business start-ups. It can be noted that the level of agreement is not high for this statement which could possibly mean that training programmes are not well supported, but respondents do not want to be too negative about their institutions and curricula.

- **THE INSTITUTION COLLABORATES WITH ENTREPRENEURSHIP EXPERTS TO PROMOTE ENTREPRENEURSHIP EDUCATION**

A total of 55.2% of the respondents agreed (agree 43.7%; strongly agreed =11.5%) with the statement that the institution collaborates with entrepreneurship experts to promote entrepreneurship education, 31% were neutral, and 13.8% (agree =11.5%; disagree =2.3%) disagreed. With reference to the statement “the institution collaborates with entrepreneurship experts to promote entrepreneurship education”, the Chi-square test is significant at $p < 0.05$ with a Chi-square result of ($x^2$49.609; df =

4; P = 0.000). It can be noted that most respondents neither agree nor disagree about the above statement. This means that not all (maybe not many) PILs collaborate with entrepreneurship experts. Entrepreneurship education cannot be effective through traditional lecturing about entrepreneurship with students mostly in passive roles: listening, reading and memorising. Students need to be involved, almost drawn into the entrepreneurship field, sensing what it is like to be confronted with the uncertainties and difficulties entrepreneurs constantly are facing. So, in order for entrepreneurship education to be effective, alternative teaching methods and learning models should be applied, challenging the dominant teaching models in PILs. When stating that there seem to be no shortcuts, entrepreneurship education can only be effective through learning-by-doing or direct observation.

THE INSTITUTION INVITES ENTREPRENEURS AND PRACTITIONERS FROM DIFFERENT ORGANISATIONS TO SHARE THEIR EXPERIENCE WITH STUDENTS

Table 5.12 shows that 48.3% of respondents agreed (agree = 32.2%; strongly agree = 16.1%) that the institution invites entrepreneurs and practitioners from different organisations to share their experience with students, 33.3% were neutral, and 18.3% (disagree 17.2%; strongly disagree = 1.1%) disagreed. With reference to the statement “the institution invites entrepreneurs and practitioners from different organisations to share their experience with students”, the Chi-square test is significant at $p < 0.05$ with a Chi-square result is ($x^2$30.644; df = 4; P = 0.000).

It can be noted that the neutral response is fairly high for a majority of statements under this sub-theme. Seemingly, this is because teachers are not quite sure about the role of PILs in promoting entrepreneurship education and / or they do not want to be negative about their curriculum.

5.2.5 Cross-tabulation of Section A with Section B

The traditional approach to reporting a result requires a statement of statistical significance. A p-value is generated from a test statistic. A significant result is indicated with "$p < 0.05$" (Table 5.14).

Table 5.14: Pearson Chi-Square Tests

		Gender	How old are you?	At what school level do you teach?	How long have you been engaged in entrepreneurial / entrepreneurship education?	What kind of teacher training in entrepreneurial or entrepreneurship education have you received?	Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?
The higher the level of education of an individual the greater the possibility of starting a venture that progresses past the start-up stage	Chi-square	2,875	13,156	29,117	6,362	25,276	9,634
	Df	4	12	12	8	12	12
	Sig.	0,579	0,358	.004*	0,607	.014*	0,648
Effective entrepreneurship education offers students access to skills and knowledge needed to start an entrepreneurial venture	Chi-square	5,861	10,910	9,318	9,119	4,033	10,241
	Df	3	9	9	6	9	9
	Sig.	0,119	0,282	0,408	0,167	0,909	0,331
The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start up their own businesses	Chi-square	4,156	14,252	20,861	11,919	10,749	22,721
	Df	4	12	12	8	12	12
	Sig.	0,385	0,285	0,052	0,155	0,551	.030*
As part of the curriculum offered by the institution, the entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses	Chi-square	1,760	10,135	10,628	8,692	10,428	17,081
	Df	4	12	12	8	12	12
	Sig.	0,78	0,604	0,561	0,369	0,578	0,147
In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business	Chi-square	6,744	16,755	29,159	6,780	5,913	5,957
	Df	4	12	12	8	12	12
	Sig.	0,15	0,159	.004*	0,561	0,92	0,918

Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses	Chi-square	8,277	14,399	12,469	11,292	12,087	14,647
	Df	4	12	12	8	12	12
	Sig.	0,082	0,276	0,409	0,186	0,439	0,261
Entrepreneurship education can alleviate the fear of failure in starting new businesses	Chi-square	4,937	36,292	17,878	15,827	4,945	8,534
	Df	4	12	12	8	12	12
	Sig.	0,294	.000*	0,119	.045*	0,96	0,742
It is believed that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses	Chi-square	2,169	6,934	20,708	5,893	13,854	9,043
	Df	3	9	9	6	9	9
	Sig.	0,538	0,644	.014*	0,435	0,128	0,433
Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole	Chi-square	12,523	21,084	3,822	23,050	9,461	18,976
	Df	3	9	9	6	9	9
	Sig.	.006*	.012*	0,923	.001*	0,396	.025*
Entrepreneurship education improves economic literacy.	Chi-square	0,817	7,496	2,944	14,055	8,724	14,163
	Df	3	9	9	6	9	9
	Sig.	0,845	0,586	0,966	.029*	0,463	0,117
Entrepreneurship education helps students to consider self-employment as a valid graduate career option	Chi-square	2,589	3,142	5,212	10,604	6,436	2,918
	Df	2	6	6	4	6	6
	Sig.	0,274	0,791	0,517	.031*	0,376	0,819
Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and	Chi-square	0,986	8,839	12,661	11,714	5,242	7,763
	Df	2	6	6	4	6	6
	Sig.	0,611	0,183	.049*	.020*	0,513	0,256

contribute to sustainable economic development							
Entrepreneurship education contributes to decreasing unemployment in the country	Chi-square	6,454	11,938	10,999	12,527	8,119	9,638
	Df	4	12	12	8	12	12
	Sig.	0,168	0,451	0,529	0,129	0,776	0,648
Entrepreneurship education determines individual entrepreneurial interests	Chi-square	0,436	5,268	3,256	1,758	12,214	3,709
	Df	2	6	6	4	6	6
	Sig.	0,804	0,51	0,776	0,78	0,057	0,716
Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	Chi-square	1,405	5,055	2,745	8,304	1,466	12,334
	Df	2	6	6	4	6	6
	Sig.	0,495	0,537	0,84	0,081	0,962	0,055
Entrepreneurship education increases the number of graduate start-up businesses	Chi-square	6,424	12,874	8,358	7,606	7,601	12,394
	Df	3	9	9	6	9	9
	Sig.	0,093	0,168	0,499	0,268	0,575	0,192
The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy	Chi-square	1,542	8,563	7,175	9,404	9,579	12,392
	Df	3	9	9	6	9	9
	Sig.	0,673	0,479	0,619	0,152	0,386	0,192
Graduates gain the skills to take calculated risks through entrepreneurship education	Chi-square	1,096	6,621	17,039	8,619	7,985	2,350
	Df	3	9	9	6	9	9
	Sig.	0,778	0,676	.048*	0,196	0,536	0,985
Skills provided through entrepreneurship education play a crucial role in graduates	Chi-square	1,886	6,806	15,729	14,070	11,321	21,186
	Df	3	9	9	6	9	9

developing the ability to think in a creative and critical manner	Sig.	0,596	0,657	0,073	.029*	0,254	.012*
Entrepreneurship education equips students to think strategically	Chi-square	2,732	6,124	11,441	10,789	5,619	9,598
	Df	3	9	9	6	9	9
	Sig.	0,435	0,727	0,247	0,095	0,777	0,384
Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources	Chi-square	3,353	9,476	5,729	14,114	6,133	7,459
	Df	3	9	9	6	9	9
	Sig.	0,34	0,395	0,767	.028*	0,727	0,589
Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment	Chi-square	4,230	7,303	7,424	14,270	12,737	17,622
	Df	3	9	9	6	9	9
	Sig.	0,238	0,606	0,593	.027*	0,175	.040*
Entrepreneurship education teaches students the importance of social interaction as a skill for a successful entrepreneur	Chi-square	3,860	4,773	9,203	12,661	9,396	8,802
	Df	3	9	9	6	9	9
	Sig.	0,277	0,854	0,419	.049*	0,402	0,456
The institution offers support to students in order to start up their own businesses, by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance	Chi-square	7,037	12,076	10,135	10,403	14,175	17,636
	Df	4	12	12	8	12	12
	Sig.	0,134	0,44	0,604	0,238	0,29	0,127
The institution provides training and development programmes to promote business start-up	Chi-square	7,647	11,792	13,158	9,710	11,807	9,128
	Df	4	12	12	8	12	12
	Sig.	0,105	0,463	0,358	0,286	0,461	0,692

The institution collaborates with entrepreneurship experts to promote entrepreneurship education	Chi-square	9,446	12,932	9,282	11,320	14,913	9,016
	Df	4	12	12	8	12	12
	Sig.	0,051	0,374	0,679	0,184	0,246	0,702
The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	Chi-square	4,151	15,862	11,119	8,379	9,478	9,676
	Df	4	12	12	8	12	12
	Sig.	0,386	0,198	0,519	0,397	0,662	0,644
The institution organises career talks during convocation day	Chi-square	5,572	14,636	11,063	10,507	6,254	10,835
	Df	4	12	12	8	12	12
	Sig.	0,233	0,262	0,524	0,231	0,903	0,543
The institution takes students for visits to industries to gain more knowledge about the subject	Chi-square	2,036	15,586	10,266	12,890	8,952	17,173
	Df	4	12	12	8	12	12
	Sig.	0,729	0,211	0,593	0,116	0,707	0,143
The institution practically orients students to outreach programmes	Chi-square	4,709	11,421	26,340	9,955	10,615	20,259
	Df	4	12	12	8	12	12
	Sig.	0,318	0,493	.010*	0,268	0,562	0,062
The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning	Chi-square	13,172	27,441	16,190	7,022	10,264	8,860
	Df	4	12	12	8	12	12
	Sig.	.010*	.007*	0,183	0,534	0,593	0,715

5.2.5.1 Assessment of whether an entrepreneurship education curriculum promotes business start-ups

The p-value between “the higher the level of education of an individual, the greater the possibility of starting a venture that progresses past the start-up stage” and “at what school level do you teach?” is 0.004*. This means that there is a significant relationship between variables. Therefore, the school level at which the teacher is teaching plays a significant role in increasing the possibility that a start-up venture will progress past the start-up stage.

The p-value of the statement “the higher the level of education of an individual, the greater the possibility of starting a venture that progresses past the start-up stage” and gender is 0.057; while age is 0.358. “How long have you been engaged in entrepreneurship education?” is 0.607 and “Can you indicate how much time you spend on entrepreneurship education every week?” is 0.648. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables.

The results further reveal that between “The higher the level of education of an individual, the greater the possibility of starting a venture that progresses past the start-up stage” and “What kind of teacher training in entrepreneurial education have you received?” the p-value is 0.014*. These values are less than the significance value of 0.05, which means that there is a significant relationship between these variables. The findings reveal that teacher training in entrepreneurship education has an impact in determining the that an individual being taught by that teacher will progress past the start-up stage.

The p-value between “The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start up their own businesses” and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” is 0.030*. This value is less than the conventional significance value of 0.05, which means that there is a statistically significant relationship between these variables.

The findings reveal that the p-value between “In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business” and “At what school level do you teach?” is 0.004*. The results indicate a significant relationship between variables. This means that the level of school at which the respondent teaches has the entrepreneurship curricula does stimulate learner interest in starting their businesses.

The p-value between the statement “Entrepreneurship education can alleviate the fear of failure in starting new businesses” and “gender” is 0.294; “At what school level do you teach?” is 0.119; “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” is 0.96; and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” is 0.742. All these p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between the variables. However, the p-value of the statement entrepreneurship education can alleviate the fear of failure in starting new businesses” and “how old are you?” is 0.000*; and “how long have you been engaged in entrepreneurial / entrepreneurship education?” is 0.045*. These values are less than the conventional significance value of 0.05, which means that there is a statistically significant relationship between these variables.

5.2.5.2 Perceptions of educators on the benefits of entrepreneurship education

The p-value for the statement “Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole” and “gender” is 0.006*; “How old are you?” is 0.012*; “How long have you been engaged in entrepreneurship education?” is 0.001*; and “Can you indicate how much time you spent on entrepreneurship education every week?” is 0.025*. This means that there is a significant relationship between variables. However, the p-value between the statement “Can you indicate how much time you spent on entrepreneurship education every week?” and “at what school level do you teach?” is 0.923; while “What kind of teacher training in entrepreneurship education have you received?” is 0.396. This implies that there is no statistically significant relationship between variables since these p-values are greater than the conventionally accepted significance level of 0.05.

The results indicate that there is no statistically significant relationship between “gender” with a p-value of 0.845; “How old are you?” with a p-value of 0.585; “At what school level do you teach?”; “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” with a p-value of 0.463; and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” with a p-value of 0.117. The findings indicate that there is no statistically significant relationship between these variables. The values for these variables are more than the conventional significance value of 0.05. However, the p-value for the statement “Entrepreneurship education improves economic literacy” and “How long have you been engaged in entrepreneurial / entrepreneurship education?” is 0.029, so the variables are significantly related.

The p-value for the statement “Entrepreneurship education helps students to consider self-employment as a valid graduate career option” and “gender” is 0.274; “How old are you?” is 0.791; “what school level do you teach?” is 0.517; “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” with a p-value of 0.376; and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” has a p-value of 0.819. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables. However, the p-value for the statement “Entrepreneurship education helps students to consider self-employment as a valid graduate career option” and “How long have you been engaged in entrepreneurial / entrepreneurship education?” is 0.031. This is less than the significance value of 0.05, which means that there is a significant relationship between these variables. The findings indicate that the number of years that one has have engaged in entrepreneurship education is a determining factor in helping students to consider entrepreneurship as a valid career option.

The p-value for “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who become entrepreneurial thinkers and contribute to sustainable economic development” and “At what school level do you teach?” is 0.049* and “How long have you been engaged in entrepreneurial / entrepreneurship education?” is 0.020*. This is less than the significance value of 0.05, which means that there is a significant relationship between these variables.

The p-value for the statement “Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures” and “gender” is 0.495; “How old are you?” is 0.537; “At what school level do you teach?” is 0.84; “How long have you been engaged in entrepreneurial / entrepreneurship education?” has a p-value of 0.081; “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” has a p-value of 0.962; and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” has a p-value of 0.055. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables. The results mean that the creation of new businesses is not based on gender, age, etc.

5.2.5.3 Investigating the key skills that entrepreneurship education promotes

The p-value for the statement “Graduates gain the skills to take calculated risks through entrepreneurship education” and “At what school level do you teach?” is 0,048*. This is less than the significance value of 0.05, which means that there is a significant relationship between these variables. The findings indicate that the teaching staff affirmed the stipulated statements.

The p-value of the statement “Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner” and “How long have you been engaged in entrepreneurial / entrepreneurship education?” is 0.029* and “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” is 0.012*. These values are less than the conventional significance value of 0.05, which means that there is a statistically significant relationship between these variables.

The p-value for the statement “Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students’ views towards self-employment” and “gender” is 0.238; “How old are you?” is 0.606, “At what school level do you teach?” is 0.593; “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” is 0.175. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables. The p-value for the statement “Entrepreneurship education

affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment" and "How long have you been engaged in entrepreneurial / entrepreneurship education?" is 0.027*; "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" has a p-value of 0.040*. This value is less than the conventional significance value of 0.05, which implies a statistically significant relationship between these variables.

5.2.5.4 Ascertaining the role of public institutions in promoting entrepreneurship education

The results indicate that there is no statistically significant relationship between "gender" with a p-value of 0.134, "How old are you?" with a p-value of 0.0.44, "At what school level do you teach?" with a p-value of 0.604, "How long have you been engaged in entrepreneurial / entrepreneurship education?" with a p-value of 0.238, "What kind of teacher training in entrepreneurial or entrepreneurship education have you received?" with a p-value of 0.29 and "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" with a p-value of 0.127. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables.

The p-value between the statement "The institution orients students to outreach programmes" and "gender" is 0.318, "How old are you?" is 0.493, "How long have you been engaged in entrepreneurial / entrepreneurship education?" is 0.268, "What kind of teacher training in entrepreneurial or entrepreneurship education have you received?" is 0.562 and "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" is 0.062. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables. However, the p-value between the statement "The institution orients students to outreach programmes" and "At what school level do you teach?" is 0.010. This value is less than the conventional significance value of 0.05, which means that there is a statistically significant relationship between these variables.

The results indicate that there is a statistically significant relationship between the statement “The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning” and “gender”, with a p-value of 0.010* and “How old are you?” with a p-value of 0.007*. This value is less than the conventional significance value of 0.05, which means that there is a statistically significant relationship between these variables. However, the results indicate that there is no statistically significant relationship between the statement “The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning” and “At what school level do you teach?” with a p-value of 0.183, “How long have you been engaged in entrepreneurial / entrepreneurship education?” with a p-value of 0.534, “What kind of teacher training in entrepreneurial or entrepreneurship education have you received?” with a p-value of 0.593 and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” with a p-value of 0.715. All the p-values are above 0.05. Since these p-values are greater than the conventionally accepted significance level of 0.05, there is no statistically significant relationship between these variables.

5.2.6 PEARSON’S CORRELATION COEFFICIENT

Correlation is a tool used to investigate the relationship between two quantitative, continuous variables (May, Hunter and Jason 2017). According to (Ahmad and Buchanan 2015), The “r” in Pearson’s correlation coefficient is a measure of the degree of the association between two variables (Plano Clark (2017) ranging between -1.0 to +1.0. The closer values are to ±1, the stronger the relationship is and whether the direction of correlation is positive or negative. The closer the value is to 0, the weaker the relationship Plano Clark (2017). The strength of the correlation based on the absolute value of r_s is 0.00-0.19, Very weak; 0.20- 0.39, Weak; 0.40-0.59, Medium; 0.60-0.79, Strong; and 0.80-1.0, Very strong (Dawson 2009).

5.2.6.1 Assessment of whether an entrepreneurship education curriculum promotes business start-up

There is a significant positive correlation between “Effective entrepreneurship education offers students access to the skills and knowledge needed to start an entrepreneurial venture” and “The higher the level of education of an individual, the greater the possibility of starting a venture that progresses past the start-up stage” at

a correlation coefficient value of 0.272*. The results indicate a weak positive correlation between these variables. The result implies that at higher levels of education, there is a greater possibility that entrepreneurship education does offer students access to the skills and knowledge needed to enable them to progress past the start-up stage. The converse is true that the more ventures graduates start that progress past the start-up stage, the more likely entrepreneurship education is effective.

The correlation value between “The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start up their own businesses” and “Effective entrepreneurship education offers students access to the skills and knowledge needed to start an entrepreneurial venture” is 0.377** which is a weak positive correlation.

There is a significant positive correlation between “As part of the curriculum offered by the institution, the entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses” and “effective entrepreneurship education offers students access to the skills and knowledge needed to start an entrepreneurial venture” at a correlation value of 0.320**. The result is suggestive of a weak positive correlation between these variables.

The results indicate a significant positive correlation between “As part of the curriculum offered by the institution, the entrepreneurship programmes includes practical elements aimed at encouraging the creation of new businesses” and “the entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start up their own businesses” at a correlation value of 0.297**, which is a weak positive correlation The finding reveals that the entrepreneurship curricula offered by PILs do offer practical components that equip students with the skills needed to start up their own businesses. The results concur with Reio and Werner (2017) found that the skills and knowledge required to begin and grow an entrepreneurial enterprise can be found through entrepreneurship education.

There is a significant positive correlation between “In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business” and “Effective entrepreneurship education offers students

access to the skills and knowledge needed to start an entrepreneurial venture" at a correlation value of 0.281**, which is a weak positive correlation.

The results indicate a significant positive correlation between "Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses" and "Effective entrepreneurship education offers students access to the skills and knowledge needed to start an entrepreneurial venture" at a correlation value of 0.407**, which is medium positive correlation.

There is a significant positive correlation between "Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses" and "In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business" a correlation value of 0.582**, which is a medium positive correlation.

5.2.6.2 Investigating the perceptions of educators about the benefits of entrepreneurship education

The results reveal a significant positive correlation between "Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole" and "Effective entrepreneurship education offers students access to the skills and knowledge needed to start an entrepreneurial venture" at a correlation value of 0.334**, which is a weak positive correlation. This result proves that entrepreneurship education does enhance knowledge about entrepreneurship and also provides that skills and knowledge needed to start an entrepreneurial venture.

There is a significant positive correlation between "Entrepreneurship education improves economic literacy" and "Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole" at a correlation value of 0.602**, which is a strong positive correlation.

There is a significant positive correlation between "Entrepreneurship education helps students to consider self-employment as a valid graduate career option" and "Entrepreneurship education improves economic literacy" at correlation value of 0.505, which is a medium positive correlation.

The results indicate a significant positive correlation between “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development” and “Entrepreneurship education helps students to consider self-employment as a valid graduate career option” at a correlation value of 0.568**, which is a medium positive correlation The result proves that entrepreneurship education is a determining factor for self-employment and venture creation.

There is a significant positive correlation between “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who become entrepreneurial thinkers and contribute to sustainable economic development” and “Entrepreneurship education can alleviate the fear of failure in starting new businesses” at a correlation value of .253**, which is a weak positive correlation.

There is a significant positive correlation between “Entrepreneurship education determines individual entrepreneurial interests” and “Entrepreneurship education contributes to decreasing unemployment in the country” at a correlation value of 0.435**, which is a medium positive correlation.

The results indicate a significant correlation between “Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures” and “Entrepreneurship education improves economic literacy” at a significance value of 0.419**, which is a medium positive correlation.

The results indicate a significant correlation between “Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures” and “Entrepreneurship education contributes to decreasing unemployment in the country” at a significance value of 0.468**, which is a medium positive correlation.

The results indicate a significant correlation between “Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures” and “Entrepreneurship education determines individual entrepreneurial interests” at a significance value of 0.491**, which is a medium positive correlation.

5.2.6.3 Investigating the key skills that entrepreneurship education promotes

There is a significant positive correlation between “The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy” and “The higher the level of education of an individual, the greater the possibility of starting a venture that progresses past the start-up stage” at a correlation value of 0.268*, which is a weak positive correlation.

There is a significant positive correlation between “The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy” and “Entrepreneurship education increases the number of graduate start-up businesses” at a correlation value of 0.452**, which is a medium positive correlation.

The results show a significant correlation between “Graduates gain the skills to take calculated risks through entrepreneurship education” and “The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy” at a correlation coefficient value of 0.582**, which is a medium positive correlation.

There is a significant positive correlation between the “Skills provided through entrepreneurship education plays a crucial role in graduates developing the ability to think in a creative and critical manner” and “Graduates gain the skills to take calculated risks through entrepreneurship education” at a correlation coefficient value of 0.582**, which is a medium positive correlation.

The results indicate a significant positive correlation between the “Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner” and “Entrepreneurship education determines individual entrepreneurial interests” at a correlation coefficient value of 0.481**, which is a medium positive correlation.

The results indicate a significant positive correlation between the “Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner” and “Effective entrepreneurship education offers students access to the skills and knowledge needed to start an

entrepreneurial venture” at a coefficient correlation value of 0.395**, which is a weak positive correlation.

There is a significant positive correlation between “Entrepreneurship education equips students to think strategically” and “Effective entrepreneurship education offers students access to the skills and knowledge needed to start an entrepreneurial venture” at a coefficient correlation value of 0.512**, which is a medium positive correlation. This means that teachers in PILs consider entrepreneurship education as a determining factor of the skills and knowledge needed in entrepreneurial venture creation.

There is a significant positive correlation between “Entrepreneurship education equips students to think strategically” and “Entrepreneurship education helps students to consider self-employment as a valid graduate career option” at a correlation coefficient value of 0.524**, which is a medium positive correlation. This means that teachers in PILs consider entrepreneurship education can help students to consider self-employment.

There is a significant positive correlation between “Entrepreneurship education equips students to think strategically” and “Graduates gain the skills to take calculated risks through entrepreneurship education” at a correlation coefficient value of 0.555**, which is a medium positive correlation. This means that teachers in PILs consider entrepreneurship education to be influential in graduates being able to take calculated risks.

There is a significant positive correlation between “Entrepreneurship education equips students to think strategically” and the “Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner” at a correlation coefficient value of 0.539**, which is a medium positive correlation. This means that teachers in PILs consider entrepreneurship education as contributing to graduates developing the ability to think in a creative and critical manner.

5.2.6.4 Ascertaining the role of public institutions of learning in promoting entrepreneurship education

The finding indicates a significant positive correlation between “The institution offers support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance” and “Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsible manner, changing students’ views towards self-employment” at a significance value of 0.358**, which is a weak positive correlation.

The finding indicates that there is a significant positive correlation between “The institution provides training and development programmes to promote business start-up” and “The institution offers support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance” at a significance value of 0.549**, which is a medium positive correlation.

There is a significant correlation between “The institution collaborates with entrepreneurship experts to promote entrepreneurship education” and “Graduates gain the skills to take calculated risks through entrepreneurship education” at a coefficient correlation value of 0.494**, which is a medium positive correlation.

There is a significant correlation between “The institution collaborates with entrepreneurship experts to promote entrepreneurship education” and “The institution provides training and development programmes to promote business start-ups” at a coefficient correlation value of 0.752**, which is a strong positive correlation.

The result indicates a positive correlation value between “The institution invites entrepreneurs and practitioners from different organisations to share their experience with students” and ‘The institution collaborates with entrepreneurship experts to promote entrepreneurship education” at a coefficient value of 0.517**, which is a medium positive correlation.

The result indicates a positive correlation value between “The institution invites entrepreneurs and practitioners from different organisations to share their experience with students” and “The institution invites entrepreneurs and practitioners from

different organisations to share their experience with students” at a coefficient value of 0.641**, which is a strong positive correlation.

The result indicates a positive correlation value between “The institution practically orients students to outreach programmes” and “The institution takes students for visits to industries to gain more knowledge about the subject” at a coefficient value of 0.571**, which is a medium positive correlation.

The result indicates a positive correlation value between “The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning” and “The institution invites entrepreneurs and practitioners from different organisations to share their experience with students” at a coefficient value of 0.571**, which is a medium positive correlation.

The results show that PILs offer support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance. These institutions also provide training and development programmes to promote business start-ups.

Bivariate correlation was also performed on the (ordinal) data.

5.2.7 Section summary

This section has provided a thorough explanation of how the data obtained in this study was analysed. Frequencies were used to describe the demographics of this study, as well as portraying the scoring patterns of the respondents regarding the variables. Furthermore, inferential statistics were conducted to test the objectives of this study and the findings were explained with relevant literature. The main findings of this study include the effectiveness of entrepreneurship education in PILs and its impact in producing entrepreneurially minded graduates; the perception educators have concerning entrepreneurship education.

The next section provides the thematic qualitative analysis for this research study.

5.3 QUALITATIVE DATA ANALYSIS

Open-ended question responses (qualitative data) were analysed by means of thematic analysis. Thematic analysis helps to identify, analyse and report patterns (themes) within data which then can become categories or codes for use in the analytic process (Chimucheka 2014: 404). These themes help identify meanings within the data so as to accomplish the aim of the study.

5.3.1 Identifying themes in coded data

The inductive process, Thematic analysis is an inductive process leading to identification of themes and sub-themes (Reilly and Jones 2017: 191). The software tool NVivo 10 was used to analyse the data. This tool uncovered trends and word frequencies, illustrating these by means of word trees and cluster analyses.

5.3.2 Word frequency analysis

Word frequency highlights frequently used words so as to create a graphical representation with approximately 1000 words in alphabetic sequence and different font sizes (May, Hunter and Jason 2017: 109). frequently occurring words from the data set are in Larger fonts illustrate higher frequency of words, not importance (Reilly and Jones 2017). Figure 5.5 displays the primary word cloud (word frequency analysis) arising from this study.

Figure 5.5: Word frequency analysis of qualitative data as per NVivo 10

The main words identified in the above word cloud include “business”, “entrepreneurship”, “students”, “practical”, “managing”, “skills”, “ideas”, “plans” “entrepreneur” and “start”.

5.3.3 Cluster analysis

Another form of graphical representation of data is cluster analysis in the form of bubble diagrams (Shannonhouse, Barden and McDonald 2017). This type of representation identifies frequency of words but can also help with identification of similarities and differences. High frequencies are represented by large bubbles, and colours show how the words are related. Closeness of clusters shows similarity (Shannonhouse, Barden and McDonald 2017) Figure 5.6 shows the cluster analysis diagram arising from this study.

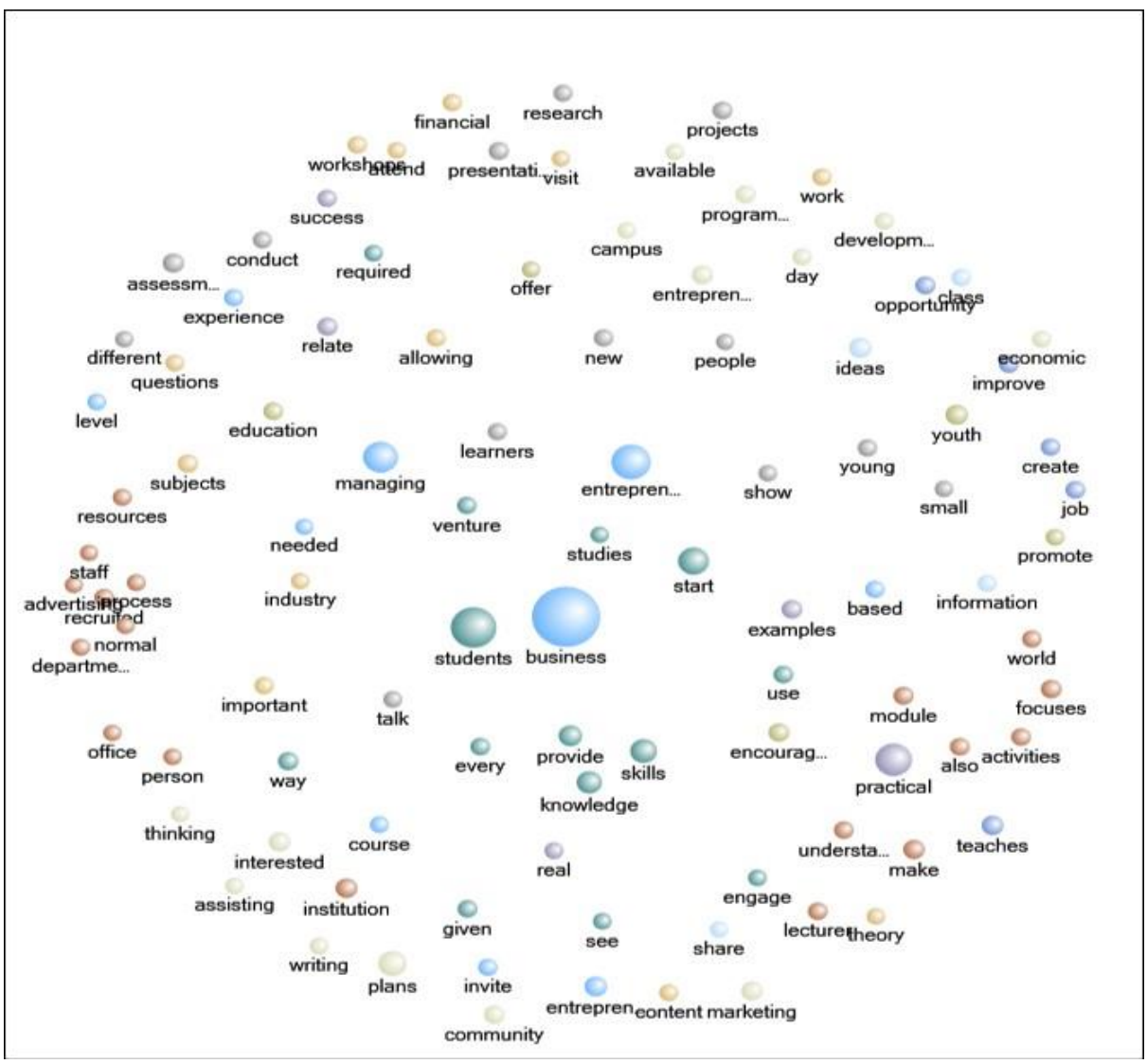


Figure 5.6: Cluster analysis diagram as per NVivo 10

5.3.4 Tree maps

Tree maps is also frequency related, with larger blocks indicating the most frequently used words, and what they are connected to thereby indicating relationships (May, Hunter and Jason 2017: 109). Figure 5.7 shows the tree map diagram arising from analysis of the data gathered in this study.

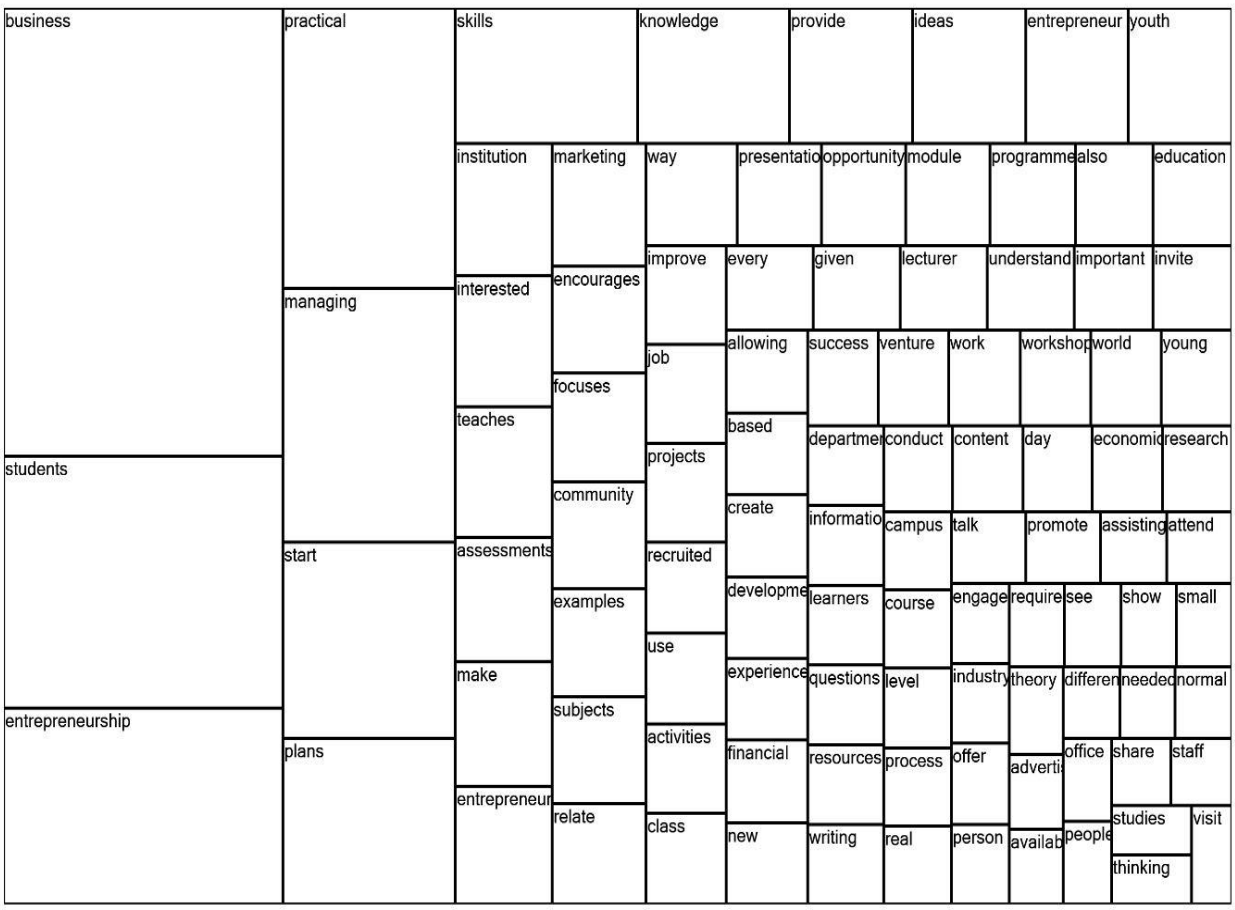


Figure 5.7: Tree map all diagram as per NVivo 10

The analysis was divided into two sections: Teachers and Students, with each section consisting of its own primary themes and sub-themes. The Teacher sections, and its themes and sub-themes are unpacked in 5.4 below. The Student sections, and its themes and sub-themes are unpacked in 5.6 below.

5.4 QUALITATIVE DATA – TEACHING STAFF

This section focuses on the interview questions posed in the questionnaire with the 117 selected respondents in this research. It aims to evaluate the effectiveness of entrepreneurship education in both final year students and teaching staff in PILs in

KwaZulu-Natal, and the deeper understanding and perception of entrepreneurship education in developing entrepreneurship mind-set in students, and also to get a future landscape in the context of PILs students in South Africa. The use of interviews permitted the researcher to probe the interviewees to access in-depth information. In this progression the actual lived experience, including emotions, memories and desires were illuminated. Information captured during this actual experience, assisted in assessing the impacts on past, present and future decisions. The qualitative data presented below was gathered after surveys to final year students and teaching staff in PILs in KwaZulu-Natal in the form of open-ended questions were administered. The data generated was taken when talking to the respondents by writing down the key words of what they wanted to express. During this process, no real name of the respondents was taken because most of the institutions were reluctant of disclosing their information to outsiders.

The following sections will explain and analyse the information collected from the respondents. This section focused on teachers' perceptions of entrepreneurship education and was informed by four primary themes which emerged from the thematic analysis explained above, namely:

1. Role of entrepreneurial education.
2. Entrepreneurial difference and distinction.
3. Evaluation and measurement.
4. Staff recruitment.

Table 5.15 lists the core themes and subthemes with a short description of each them. The themes a described in more detail from 5.4.1 onwards, illustrated by excerpts from respondents using their own words.

Table 5.15: Core themes that emerged from the data

THEMES	SUBTHEMES	DESCRIPTION
1. Role of the entrepreneurial education	• Promoting pathways to business start-up • Planning the curriculum to transform SA youths into entrepreneurs	This theme examines the concepts of entrepreneurship education and its role in promoting a pathway to business start-up while also transforming SA youths into entrepreneurs
2. Entrepreneurship differences and distinction	• Entrepreneurship education being different and distinctive at institutions • Distinctive features of entrepreneurial lesson content • Making entrepreneurship modules more entrepreneurial • Important and distinguishing subjects	This primary theme dives deep into the factors that contribute to making entrepreneurial education distinctive and unique
3. Evaluation and Measurement	• Learner analysis in lesson content • Teacher evaluation of own entrepreneurship characteristics	This primary theme examined the various evaluation methods in terms of learner analysis in relation to lesson content, as well as teacher evaluation of their own entrepreneurship characteristics.
4. Staff recruitment	• HR recruitment processes and policies This primary theme examined the various evaluation methods in terms of learner analysis in relation to lesson content, as well as teacher evaluation of their own entrepreneurship characteristics. • Qualification and specialisation • Experience	Staff recruitment is of importance because in order to teach future business leaders, the teachers themselves need to be competent, knowledgeable and experienced

For the purpose of establishing factors that are of relevance to PILs within the context of KZN, each theme will be discussed with regard to their relevance to the research questions. Furthermore, in the second part of the theme commonality of responses from both categories of participants (part 1 and part 2) will be contrasted and discussed in detail, with the ultimate aim of establishing the standpoint of both teaching staff and students in PILs.

5.4.1 Theme 1: Role of entrepreneurial cation

This theme examines the key concepts of entrepreneurship education and its role is promoting pathways to business start-up while also transforming SA youths into entrepreneurs.

5.4.1.1 Promoting pathways to business start-up

This subtheme theme looked at how entrepreneurial education promotes a trajectory to business start-up.

- **Skills and knowledge development**

The overriding theme that emerged from the primary data focused mainly on entrepreneurship skills and knowledge development in PILs. This was also a highly ranked sub-theme in relation to promoting pathways to business as it emphasised the skills and knowledge aspect of entrepreneurial education. Such knowledge and skills were identified as the following:

✓ **Start and sustain a business**

This was a highly ranked factor, whereby skills and knowledge focused on the aspect of how to start and sustain a business. PILs do promote entrepreneurship for students.

Teacher respondent TVET-T3 stated that:

> *We educate our students about the importance of starting your own business. We instil an entrepreneurial mindset in them in order to encourage the importance of self-employment.*

Teacher respondent TVET-T7 indicated that in TVET Colleges support business start-ups stating that:

> *It promotes pathways by giving learners skills about starting their business and offer the knowledge needed to start entrepreneurial venture. However, we still have a long way to try and change the perception students have about self-employment. A majority of students still believe in being employed rather than being their own boss.*

Teacher respondent UNIV-T1 added that:

It encourages them to start small businesses on campus. We do have students who really believe in entrepreneurship and who are innovative, but the issue of space on campus limits their ideas. If we can get business start-up support needs, we could do better if we had more resources and support…

Teacher respondent UOT-T1 stressed that:

Entrepreneurship equips students with the relevant skills on how to start and sustain their businesses. In our institution, we promote business start-ups and we encourage students to participate in entrepreneurial activities.

The results are in line with findings by May, Hunter and Jason (2017: 109) who found that "entrepreneurship education involves fostering creative skills that can be applied to support innovation. Become a successful entrepreneur requires a set of technical skills are required to become a successful entrepreneur, but so are opportunities, capabilities and resources. In addition, leadership abilities are required so as to be able to conduct business and teams efficiently (Ismail, Sawang and Zolin 2018: 172). Skills development is perceived by Bauman and Lucy (2019: 3) as a "strategic management tool to cope with the current business environment mainly because of the market that has changed from one of mass production to one of customisation, whereby quality, price and speed of delivery are emphasised".

✓ **Business plan**

Relating to the above, another highly ranked factor was the skills and knowledge given to students to create their business plans.

Respondent TVET-T3 stated that:

We teach them how to draft a business plan. This is a basic aspect of entrepreneurship and it is compulsory for all our first-years.

Respondent TVET-T9 stressed that:

The institution teaches learners how to venture into business and develop a business plan.

Respondent UNIV-T6 stated that:

We educate our students on how to draw up business plans. The knowledge of a business plan is vital if you are an entrepreneur.

Respondent UNIV-T9 also reflected the importance of the business plan:

We make them draft business plans.

The results showed that teachers were positive about the effort they put into entrepreneurship education. At the outset teachers, were confident about their abilities to instil entrepreneurial skills in students. A business plan is a very important strategic tool for entrepreneurs. Gordon and Bursuc (2018: 135) stated that business plan helps entrepreneurs to concentrate on the specific steps necessary to make business ideas flourish, and it also helps to attain both the short-term and long-term business objectives.

5.4.1.2 Corporate space

Tapping into the corporate space served as a strategy to create/open more job opportunities.

- ✓ **Leadership**

Leadership skills were an important component. Teacher respondent UNIV-T5:

We teach students to organise and be able to lead a team.

According to Gordon and Bursuc (2018), entrepreneurial leadership involves setting clear goals, creating opportunities, empowering people, promoting mutual awareness, and awareness of the organization, and developing a sound human resource system. Di Fabio, Bucci and Gori (2016) maintain that entrepreneurial leadership is the ability to influence others to manage resources strategically in order to promote opportunity-seeking and advantage-seeking behaviours.

- ✓ **Self-employment**

As asserted by one respondent from the UOT-T1, entrepreneurial education was primarily about promoting the option of self-employed. This is in position with a statement by Santos, Neumeyer and Morris (2019:7) who stated that "entrepreneurship education can have a determinant role in providing fundamental knowledge, skills, and attitudes to low-income individuals who want to start and grow

their own businesses. As a result, entrepreneurship is a path to empower individuals living in poverty to escape adverse conditions and contribute to community improvement, job creation, self-employment, reduction of crime, family stability, and other social returns".

South Africa is one of the most unequal countries in the world Palazzeschi, Bucci and Di Fabio (2018). The Gini co-efficient (which measures the degree of income inequality across countries) scores South Africa with an index of 0.65 (Lindner 2018). Unemployment in South Africa was 29% for the second quarter of (Littlewood and Holt 2018). According to Stats SA, this is as a result of an increase of 455 000 in the number of people who are unemployed and an increase of only 21 000 in employment, with 30.4m people living in abject poverty between 2006 and 2015, according to the Poverty Trends Report (Stats SA 2019)

- ✓ **Real-life exposure**

This was a very highly ranked theme as a logical argument is that a key aspect of entrepreneurship is about its application to real-life settings/economy. Hence the following was found in relation to pathway creation:

- ✓ **Selling items on campus**

Students were encouraged to sell items on campus. This promoted experience and an entrepreneurial spirit.

Teacher respondent TVET-T1 acknowledges the notion of the promotion of an entrepreneurial spirit by stating that:

> *We encourage students to sell some items on campus in order to instil an entrepreneurial spirit within them.*

The result shows that the main purpose of entrepreneurship programmes is to prepare students to start their own businesses and looking into their entrepreneurial intentions. However, a new need has arisen, linking entrepreneurship education to employability. This agrees with Botha and Bignotti (2017) who state that understanding how students learn entrepreneurship or manage development in changing circumstances is the focus and challenge of today's entrepreneurship education.

✓ **Market day**

Relating to the above, “market days” were also held to promote real-life exposure.

Teacher respondent TVET-T4 stressed that:

> *Students could be encouraged to do market day or to partake in entrepreneurial activities on campus in order to develop entrepreneurial mindset in students.*

✓ **Volunteer work**

Volunteer work with existing businesses to gain insight was also encouraged in order to encourage intentions toward entrepreneurship.

Teacher respondent from UOT-T8 said:

> *Students should be encouraged to do volunteer work to gain experience in business.*

The respondents recognised the importance of offering the young adult population entrepreneurship training opportunities, even if they were voluntary, such as in community organisations. All individuals should be exposed to some entrepreneurship training and development through practical exposure because they will then be more likely to start their own businesses and have higher incomes and more satisfaction as a result (Ustav and Venesaar 2018: 170).

✓ **Registering of business**

Students as early as first year level were given opportunities to register a business in entrepreneurship competitions.

Teacher respondent UOT-T8 specified that:

> *In my department, 1st year students were invited to register their companies for an entrepreneurship competition.*

Bauman and Lucy (2019: 6) emphasised the importance of This is an example of how students can engage in authentic entrepreneurial business skills in a practical way, which is how entrepreneurs really learn.

✓ **Excursions- Industry visits**

Excursion to industries allowed for students to learn more about how businesses operate in the real world. Speaking to business owners was invaluable.

Teacher respondent TVET-T10 said:

> *We allow students to visit local business. We do that to give them exposure so they can be motivated and probably see the importance of owning and having our own business.*

Teacher respondent TVET-T5 emphasised the reason for taking students to visit industries:

> *We take students on excursion to industries in order to meet and talk to big business owners about how to start and run a successful business venture.*

The above response was also supported by respondent teacher TVET-T8 who stated that:

> *We allow students to visit businesses in order to instil entrepreneurial behaviour.*

The narratives and stories of the participants in this research point to entrepreneurship education as involving lectures in PILs, but also real-life experience and industry visits. Kubberød, Fosstenløkken and Erstad (2018) point out that entrepreneurial intention is influenced by student's prior entrepreneurial experience and/or exposure to entrepreneurs.

✓ **Guest lectures**

Similar to the above, guest lectures were also an important activity for bringing entrepreneurial experience to the students though stories from real business owners.

Teacher respondent UNIV-T6 stated that:

> *We have guest lectures.*

Guest lecturers in the field of entrepreneurship can be role models of people who have chosen self-employment as their career path, as illustrated by this response from UOT-T10:

We invite people who own small businesses to talk to students. They play an important role in developing the perception of feasibility and desirability of entrepreneurial intentions.

The above responses show that teachers seek to stimulate entrepreneurial intention through prior entrepreneurial exposure (Fayolle and Gailly 2015).

✓ **Syllabus**

The syllabus also played a role, whereby different levels added unique value to pathway creation. The N4, N5 and N6 were iterated by one respondent. This align well with Santos, Neumeyer and Morris (2019) who stress that entrepreneurship education imparts entrepreneurial skills to individuals to enable entrepreneurial intention, opportunity recognition and new venture creation.

The N4 syllabus focuses on drawing up business plans. The N5 focuses on personnel management, while the N6 focuses on key aspects of the vision and mission statement, as well as franchising.

✓ **Too theoretical**

However, two respondents felt that a weakness was that the syllabus was too theoretical, which is an obstacle in the promotion of start-up businesses.

Teacher respondent UNIV-T2 raised concern about the course structuring:

The inherent nature of university education, which is theoretically based, does limit work in promoting start-ups. It is left up to the student to decide on this.

Teacher respondent UNIV-T7 also raised a similar concern. The respondent emphasised that:

We only teach entrepreneurship in a theoretical equation. I believe entrepreneurship education needs to clearly and accurately combine knowledge from both the fields of entrepreneurship and education. This first connection could be useful in addressing several issues: the concept of a teaching model could be usefully applied to the field of entrepreneurship education, along with other education theories, concepts and methods in order to better assess the effects of

entrepreneurship education, thus improving our understanding of the way individuals learn, for instance.

Franco and Haase (2009) discussed entrepreneurship as a learning process concluding that "further research may reveal entirely new dimensions of learning in entrepreneurial contexts and more interdisciplinary, in-depth empirical work is a vital part of this (i.e. entrepreneurial) theory-building process. In parallel, theoretical knowledge teaches the why. Where entrepreneurship education is concerned theory, it helps one to understand why one technique works where another fails. Where entrepreneurship education is concerned theory, it teaches one through experience of others (Fayolle and Gailly 2008; Fayolle 2013).

✓ **Interest and encouragement to start business**

Entrepreneurship education did play a key role in stimulating interest, as well as motivating students to start a business. This entailed building on student desires and passion, while helping them to overcome their fear of failure. This was affirmed by four respondents:

Teacher respondent TVET-T6 highlighted the association between intention and behaviour.

For me, I encourage my students to be more entrepreneurially minded through arising interest of business ownership and eliminating fear of failure.

Teacher respondent UNIV-T8 stated:

I teach my students how to communicate their passion and dreams in an engaging way.

Teacher respondent UOT-T3 also stated that:

Our entrepreneurship course encourages those with the desire to start their businesses.

Teacher respondent UOT-T7 was in line with the above response. He emphasised the factors influencing entrepreneurial intentions by stating that:

We enable all students to work and establish business interests.

The above findings reveal that students need to be encouraged to start their own businesses. Students also need to be assisted with networking support and mentorship support in order to develop entrepreneurial mindset in them. They need to be encouraged to become part and rely upon these ecosystems to launch and grow ventures

- ✓ **Workshops and Events**

Workshops and events played a role in providing out-of-classroom learning. This was in collaboration with stakeholders such as the Department of Business Management and ENACTUS.

Teacher respondent UNIV-T10 suggested that collaborations and/or interaction with stakeholders is a priority:

> *They attend entrepreneurial events.*

Teacher respondent UNIV-T3 stated:

> *We normally have Entrepreneurship Week with the Department of Business Management. Entrepreneurship workshops are usually hosted on an annual basis in collaboration with the ENACTUS Student Chapter.*

The above findings are in line with the findings by Fayolle and Gailly (2015: 85), who revealed that "entrepreneurship education has been recognised as a major channel for sustainable products and processes, and new ventures are being held up as a panacea for many social and environmental concerns. Best practices might call for university entrepreneurship education programmes that engage students to a high degree in learning theoretical aspects of new venture creation and practical aspects of entrepreneurial activities through leading university entrepreneurship projects, activities, seminars, workshops and short courses."

- ✓ **Entrepreneurship office**

One institution has an entrepreneurship office that assists students with any questions on entrepreneurship. This was highlighted by respondent UOT-T2:

> *The institution has an entrepreneurship office that is meant to assist students with all their questions related to entrepreneurship, but the students do not have it as a module.*

Teacher respondent UOT-T4 stated that:

> *Students (those interested) have access to our entrepreneurial office if they need assistance.*

5.4.1.3 Planning the curriculum to transform SA youths into entrepreneurs

This was an important sub-theme as the South African economy needs entrepreneurs. However, students/youth then need to be transitioned or transformed into entrepreneurs. Hence the entrepreneurial curriculum has a key role to play.

Below is reflected a range of factors (ranked hierarchically) in relation to the extent that entrepreneurship education transforms SA youths into entrepreneurs.

- ✓ **Opportunities and options**

This was a main factor as conveyed by four respondents, that the curriculum should provide a variety of business opportunities. Economic development through such opportunities is possible, as well as resource provision.

Teacher respondent TVET-T10 highlighted that they provide students with opportunities to start their small businesses while they are still students:

> *We allow students to start businesses while studying. Our programme instils the behaviour that our students act in an enterprising way while they are still undergraduates.*

Teacher respondent TVET-T6 emphasised:

> *It is planned in the manner that alerts the youth of the business opportunities at their disposal.*

Teacher respondent UNIV-T6 also stressed that students are aware of the contribution that entrepreneurship is making to the country's economy:

> *They are aware of options available for economic development.*

Teacher respondent UOT-T6 highlighted the role of tools and centres for entrepreneurship in PILs by stating that:

> *Resources are made available for them.*

The above responses showed that students are encouraged to engage in activities such as starting micro-businesses or participating in a pre-existing business. These are examples of a student-centred approach which involves experiential learning-by-doing, rather than a teacher-centred approach which uses structured and static learning materials such as notes, PowerPoint slides and textbooks (Tehseen *et al.* 2019).

- ✓ **Self-employment**

The curriculum is geared towards motivating students to become self-employed by starting their own businesses.

Teacher respondent TVET-T1 emphasised the importance of entrepreneurship education in vocation training by stating that:

> *It is planned in such a way that motivates students to believe in self-employment.*

Teacher respondent TVET-T7 postulated that the benefits of entrepreneurship education are not limited to business management:

> *The curriculum in my institution is designed in a way that it teaches our students to become young entrepreneurs, boosting business start-ups, innovative ventures and new jobs.*

Teacher respondent TVET-T9 concurs with the above respondent:

> *The curriculum has changed the mindset of the youth to be employers not employees. It promotes an awareness of self-employment as a career option.*

Teacher respondent UNIV-T7 further asserted that:

> *Entrepreneurship education in university motivates the youth to start their ventures.*

The above responses are in line with Ismail, Sawang and Zolin (2018: 170-171), who proposes that entrepreneurship education should advocate an awareness of self-employment as a career option. This awareness can motivate individuals to equip themselves with the skills, knowledge and experience required for self-employment.

- ✓ **Skills emphasis**

Respondents indicated that the curricula they work with does strongly emphasise skills, whereby relevant skills are given to students in relation to becoming an entrepreneur. Apart from skills, the curricula also build knowledge, attitudes and motivation.

Teacher respondent UNIV-T10 highlighted entrepreneurial competencies by expressing that:

> *Our students have access to the relevant skills, knowledge, values and attitude for business. The aim is to help students access the relevant skills*, *knowledge*, *values and attitudes needed to develop and create their own businesses.*

Teacher respondent UOT-T1 stated that:

> *The curriculum caters for the specific skills needed to be an entrepreneur.*

Teacher respondent UOT-T10 outlined some of the competencies that are often deemed to be entrepreneurial:

> *Knowledge and skills are provided to all youth interested in business.*

The above responses show that the main goal of entrepreneurship education is to develop some level of entrepreneurial competency, i.e. knowledge, skills and attitudes that will influence the willingness and ability to perform entrepreneurial work. This is consistent with literature on competencies in general and entrepreneurial behaviour in particular (Velasco 2013).

- ✓ **Stimulate interest and understanding**

The curricula are designed in such a way as to stimulate thoughts and interests in students to be entrepreneurs. This entailed providing knowledge and being interactive by stimulating students to ask more questions and promoting the understanding of entrepreneurship for students.

A Teacher respondent TVET-T5 used motivation to clarify how they instil entrepreneurial behaviour in students:

It is planned in such a way that immediately stimulates an interest in students, such that they begin to ask more questions related to starting their own new ventures.

A Teacher respondent UNIV-T4 asserted that:

In my institution, we accommodate every young person interested in business when providing skills and knowledge about entrepreneurship.

A Teacher respondent UOT-T9 highlighted the strategies and approach used to teach entrepreneurship:

The curriculum is structured in such a way that students will understand the entrepreneurship programme very well.

The need to stimulate entrepreneurial skills in graduates as a strategy for tackling graduate unemployment has spurred the introduction of entrepreneurship education programmes. In entrepreneurship education programmes, exposure to successful entrepreneurial models could be a significant factor for stimulating students' confidence in their ability to start a business and for improving their attitudes towards entrepreneurship.

- ✓ **Entrepreneurship module across all disciplines**

Two respondents concurred that entrepreneurship was being integrated across most/all modules at the institution. This would in turn stimulate students in all fields to become entrepreneurial.

Teacher respondent UNIV-T1 highlighted that the university was taking entrepreneurship as one of its graduate attributes:

The University is in the process of infusing entrepreneurship modules in all disciplines.

Teacher respondent UOT-T4 stipulated that:

Introduction to Business is done at the first-year level by all the students in Management or Applied Management Sciences. The aim is to ensure that students understand the importance of creating or developing entrepreneurs or business owners in the country.

✓ **All aspects of entrepreneurship**

Relating to the above, the curricula do focus on all aspects of entrepreneurship at different levels.

Teacher respondent TVET-T2 specified the levels at which they focus more on entrepreneurship education:

> *We focus on all aspects of entrepreneurship from the N4 to N6 level.*

✓ **Societal needs**

An important point was raised, whereby accommodating the needs of society was seen as a key aspect. Entrepreneurship is meant to transform society for the better. Furthermore, providing knowledge to the youth of society could promote more societal change.

Teacher respondent UOT-T5 emphasised the importance of entrepreneurship to the country's economic development and the importance of students' development of entrepreneurial capabilities. The respondent stated that:

> *Our entrepreneurship programme is designed to accommodate the needs of the society.*

Teacher respondent UOT-T7 also highlighted that their program:

> *Provides knowledge to the youth.*

The above responses are in line with Phelan and Sharpley (2012: 105) and Tehseen *et al.* (2019) who in their studies stated that in today's society, entrepreneurs play an important role in developing and sustaining economic growth. Instilling entrepreneurial competence through education and training is therefore an attractive prospect for universities at large.

✓ **Community projects**

A unique point was raised, whereby community projects served as a platform for the introduction of entrepreneurial education.

Teacher respondent UNIV-T3 raised another method used to facilitate entrepreneurship:

We facilitate entrepreneurship education through community projects and through external engagement that promotes innovation and entrepreneurship through collaborations and partnerships.

- ✓ **Entrepreneurial visits**

Entrepreneurial visits to the institution allowed for relevant and real-life skills/knowledge to be brought to the student.

Teacher respondent TVET-T10 asserted the importance of experts' inclusion in the field of entrepreneurship:

We invite practitioners and entrepreneurs to visit the institution. Inviting experts in the field could help students in understanding the role that the culture of entrepreneurialism and entrepreneurship education can play in a country's economy.

- ✓ **Industry-based**

The curricula were seen to be more industry-based.

- ✓ **Focus on Entrepreneurial failure**

This was an important point as the curricula also covered how entrepreneurs fail in South Africa. Students need to be aware of this as entrepreneurship comes with its success and failures. This could allow them to be proactive in dealing with such.

- ✓ **Improvement needed**

Some respondents felt that the curriculum they taught needed improvement. This was for the following reasons/factors:

5.4.1.4 Real business practitioners

More entrepreneurs and practitioners should be invited to share their strengths and experiences with the students.

- ✓ **Lack of support**

There was a lack of support mechanisms for students.

Teacher respondent UNIV-T2:

The kinds and levels of support are also not available.

Ncube and Zondo (2018) state that there is no agreement on conditions that enable the creation of instruments and mechanisms at university level to support the growth of entrepreneurial activity and innovation within entrepreneurship education.

✓ **Curriculum premature and out-dated**

Two respondents pointed out that the curriculum was out-dated as well as premature in relation to the transformative objectives of the country. Hence adaptation and improvement were needed.

Teacher respondent TVET-T3 stated that the programme needs to be reviewed:

> *Unfortunately, the programme most TVET colleges use is out-dated. A lot of improvement is needed.*

Teacher respondent UNIV-T2 stated:

> *The current curriculum is not geared for the real transformative objectives of the country. For the youth, a lot of the adaptations are not sufficient.*

5.4.2 Theme 2: Entrepreneurial difference and distinction

This primary theme delves deep into the factors that contribute to making entrepreneurial education distinctive and unique. It was therefore informed by the following key sub-themes:

- Entrepreneurship education being different and distinctive at institutions;
- Making entrepreneurship modules more entrepreneurial;
- Distinctive features of entrepreneurial lesson content; and
- Important and distinguishing subjects.

Each sub-theme is unpacked and evaluated below.

✓ **Entrepreneurship education being different and distinctive at institutions**

These key sub-themes support the primary themes by emphasising an overall view of what makes entrepreneurship education different and distinctive at institutions. The following was found, in hierarchical order:

✓ **Practical aspects**

Practical aspects of entrepreneurial education were the most highly ranked, as supported by seven respondents. The practical component related to giving the student a hands-on approach to business creation and allowing students to relate to the content.

Teacher respondent TVET-T2 asserted that:

> *We offer practical examples that make our business studies more entrepreneurial. The examples motivate students to initiate their small businesses, whether back home or on campus.*

Teacher respondent TVET-T3 emphasised the practicality of a business-related module by asserting that:

> *Again, it is the fact that this is a practical module which students can relate to and they enjoy it.*

Teacher respondent TVET-T8 stated that:

> *The entrepreneurial programme is planned. It includes practical elements which are aimed at encouraging the creation of new business ideas.*

Teacher respondent UNIV-T1 affirmed that:

> *It allows students to do a practical component in the module.*

Teacher respondent UNIV-T9 mentioned that teachers infuse practicality in to the subject:

> *Practical methods are used by the educator. Most educators here are experienced enough and they bring their experience in classes in order to influence students to take entrepreneurship more seriously.*

✓ **Inviting entrepreneurs**

Entrepreneurs are invited from industry to motivate students and give them industry related knowledge as well as their personal journey to entrepreneurship.

Teacher respondent TVET-T2 raised the importance of experienced business owners:

I invite entrepreneurs to campus to motivate our learners towards entrepreneurship.

Teacher respondent TVET-T4 stated that:

EBM lecturers always involve students in motivational talks that are delivered by young business owners.

Teacher respondent UNIV-T6 stated:

We invite entrepreneurs to tell students about the journey of entrepreneurship. Experienced entrepreneurs also provide teachers responsible for developing and delivering an enterprise and entrepreneurship curriculum so that we can help students develop enterprising behaviour.

✓ **Create entrepreneurs rather than job seekers**

Entrepreneurship education focuses on the creation of entrepreneurs, rather than employees or job-seekers. This means that they can create jobs for others.

Teacher respondent UNIV-T7 highlighted the contribution of entrepreneurship education towards economic growth:

It gives students the opportunity to start their own business and contribute to the economy of the country.

Teacher respondent UOT-T1 highlighted the benefit of entrepreneurship education in facilitating the transition for students from higher education into either self-employment or employment by stating that:

Entrepreneurship is embedded in the programme to create entrepreneurs instead of job-seekers. However, some students would prefer to search for salaried jobs after graduation due to several personal reasons.

Teacher respondent UOT-T5 emphasised that:

It excites young minds. It encourages them to be creating jobs, instead of being job seekers.

Exposure to entrepreneurship education helps to build an entrepreneurial culture amongst students. Entrepreneurship education can benefit the country because it needs more job providers rather than just job-seekers Belitski and Heron (2017: 167).

✓ **Stimulate interest and attitude**

Entrepreneurship education is also designed to stimulate interest.

Teacher respondent TVET-T10 stated:

> *It is made to stimulate learner interest in starting their own business.*

Teacher respondent UOT-T3 stated:

> *Most students are interested in business and have a desire to one day own companies. In that case, entrepreneurship education is important.*

Teacher respondent UOT-T7:

> *Attitude to establish own business. Individual interest by students.*

✓ **Allows students to be business minded**

In addition, entrepreneurship education allows students to think like entrepreneurs (be business minded) which requires creativity and innovation. Students were also given opportunities to use this to capitalise on opportunities to start their own business.

Teacher respondent UNIV-T7 mentioned that entrepreneurship education:

> *Gives students the opportunity to start their own business*

Teacher respondent UOT-T4 stated that:

> *By its nature, it requires innovation, creativity, independency, thinking outside the box and wanting to be different. Therefore, our programme focuses on training students in entrepreneurial awareness; builds up the necessary business skills, knowledge and structure; and improves the overall quality of students.*

Teacher respondent UOT-T6:

> *Allows student to be business minded and explore other ideas.*

✓ **Current skills and knowledge**

A very important point was made about entrepreneurship education being focused on the current skills and knowledge needed to start and sustain a business.

Teacher respondent TVET-T5 stated:

> *Students are taught about the things they see every day in businesses.*

Teacher respondent TVET-T7:

> *We provide skills and knowledge about entrepreneurship ventures.*

✓ **Entrepreneurship days**

Entrepreneurship days at one of the TVET institutions also contributed to a distinction when it comes to entrepreneurial education.

✓ **Bridging the gap**

The entrepreneurship office at one of the institutions served to bridge the gap between students and industry.

✓ **Recognition versus results**

One respondent made an interesting point that the entrepreneurship programme received substantial recognition based on the results of the entrepreneurial activities at the institution.

Teacher respondent UNIV-T3 stated:

> *The amount of recognition our programme receives through the results achieved in our entrepreneurial initiatives is vast.*

✓ **Module content**

A high quality of module content was emphasised by one teacher respondent. The respondent stated that

> *Teachers are providing a common quality course content to all students to facilitate a learning process that allows each student to pursue opportunities that are personally relevant.*

Ahmad and Buchanan (2015: 351) assume that adaptations in the learning content and goals will be needed pertaining to differences in, for example, regional and cultural practices, professional and academic background of the students and potential prior industry experience. Hence, educators from different disciplines are welcome to suggest or incorporate other specific learning elements (didactics) that are relevant for their particular study programmes (Nag and Das 2015).

5.4.2.1 Distinctive features of entrepreneurial lesson content

The previous section provided an overall view of entrepreneurship education. This section unpacks it further by delving into the lesson content itself. This sub-theme examined the distinctiveness of entrepreneur lesson content. It was informed by various factors (ranked hierarchically).

- ✓ **Practical application**

Similar to the preceding section, 'Practical application' ranked the highest as it was emphasis by 17 respondents. Hence, practical application brought distinctiveness.

Teacher respondent TVET-T2 emphasised the importance of making the course practical:

> *By using practical examples to equip students with the additional knowledge, attributes and capabilities required to apply these abilities in the context of setting up or initiating a new business.*

Teacher respondent TVET-T6:

> *When we teach, we use practical examples of business with the goal of developing on entrepreneurial spirit.*

Teacher respondent UNIV-T10 specified:

> *We make the subject more practical in order to improve competitiveness in our students.*

Teacher respondent from UOT-T4 postulated:

> *We try to make it as practical as possible so that students can start to view being in an entrepreneur career.*

The practical component was further expanded in the following factors, as some respondents emphasised the practicality. These are ranked in hierarchical order.

- ✓ **Current issues and examples**

This was a highly ranked factor which is logical because students need to be aware of and relate to current business issues and examples. Such issues can also allow students to evaluate business success /failures.

Teacher respondent TVET-T10 mentioned that they make entrepreneurship learning relevant to the real-world through active commitment between education, business and the community, mainly in the enterprise and development of practical entrepreneurial experience:

> *By bringing real-life issues or examples that would show how the business fails or succeed.*

Teacher respondent -T3:

> *By making it practical, something that students can relate to in order to influence entrepreneurial intentions amongst them.*

Teacher respondent TVET-T5:

> *Entrepreneurship curriculum and books provide practical examples of people who have started their own businesses.*

Teacher respondent UOT-T6:

> *I use industry examples to actually help them gain the understanding of how career development works.*

- ✓ **BP defence**

A student gets a first-hand experience of presenting and defending their business plans to potential investors. This builds business rapport.

Teacher respondent UNIV-T1 mentioned the importance of exposing students to experienced entrepreneurs:

> *Students prepare business plans and defend it to the potential investors.*

Teacher respondent UNIV-T4 confirmed to teacher respondent UNIV-T1's point:

By drawing up business plans and presenting them, these help them to be able to communicate their ideas.

- ✓ **Approaching and inviting businesses**

Such initiatives assisted students to gain information and knowledge from realistic business environments.

Teacher respondent UOT-T10 highlighted the importance of involving the entrepreneurs in entrepreneurship education to create the relevant self-awareness of personality and social identity:

We invite guest lecturers who serve as a source of motivation, and for some, they existed as an information hub in helping charter paths into entrepreneurship.

Teacher respondent UOT-T2:

By trying to make it as practical as possible. For example, asking students to go to a company and asking questions related to a topic being done in class.

- ✓ **Partaking in real business**

The student also gets opportunities to participate in real business exposure such as flea markets etc. This also builds rapport.

Teacher respondent TVET-T9 highlighted that:

Because it is tested on practical work, they take part in flea markets, business plans. We do this to show them the importance of education and training to the economy by focusing on a particular value of education and training.

According to Santos, Neumeyer and Morris (2019), entrepreneurship is connected to recognition of small business opportunities, start-up of new business ventures, or running of an enterprise. So, giving student entrepreneurs an idea of some of the issues they may face on their journey success.

✓ **Economic focus**

There was a strong economic focus, which contributed to distinctiveness, based on the following:

✓ **Local economic development**

This was an important point whereby lesson content examined the business in relation to local socio-economic development. This should ideally be the essence of local business.

Teacher from UOT-T3 mentioned the need for entrepreneurs to be socially responsible:

> *Local Economic Development that focuses more on promoting small businesses while addressing Socio-Economic challenges in their local area.*

Teacher respondent UNIV-T6 highlighted that:

> *They are aware of options available for economic development.*

✓ **Economic affairs**

This aspect focused on the current economic affairs of the country relevant to the business trajectory.

✓ **Skills**

Lesson content did provide the necessary skills to students for business start-up and management.

Teacher respondent UOT-T1 stated that certain entrepreneurial mindsets and skills are learnt to give rise to entrepreneurship development:

> *We provide the skills required for start-ups to be a success.*

Teacher respondent UOT-T7 maintained that a skills-based programme encourages the development and practice of entrepreneurial skills by stating that:

> *In our institution we provide students with level of skills and knowledge required to run a productive business.*

The above responses are in line with the statement by (Mustapha and Selvaraju 2015) that entrepreneurial education should concentrate on business skills, technical skills and entrepreneurial skills.

- ✓ **Survival of entrepreneurs**

Lesson content also focused on the survival of entrepreneurs, which is very important as entrepreneurs faced challenges such as competition and other economic and resource challenges.

Teacher respondent TVET-T10 asserted that they provide entrepreneurship competence by stating that they teach students:

> *How they thrive through competition and the abilities to seize opportunities and to plan and manage creative processes that are of financial value.*

Teacher respondent UOT-T1 concurred by stating that:

> *Focusing on how entrepreneurs would survive in the real-world by providing knowledge of context and opportunities, approaches to planning and management, ethical principles and social ethics.*

- ✓ **Employee versus entrepreneur**

An important point was made by one respondent. This related to the foundation of the lessons being supported by the students' drive to be an entrepreneur (reflection on whether they wanted to be an employee or an employer).

Teacher respondent UNIV-T2 mentioned that:

> *The reflection by the student on whether they are on employee or entrepreneur. This is a common thread which forms a necessary basis for lessons.*

- ✓ **Engagement**

Students are given the opportunity to engage with each other in class with relevant learning content, such as EBM.

Teacher respondent TVET-T4:

> *The way students engage in class when unpacking EBM chapters shows that they are developing entrepreneurial spirit.*

✓ **SWOT**

Lesson content involved SWOT analysis (strengths, weakness, opportunities and threats), which is important for business.

5.4.2.2 Making entrepreneurship modules more entrepreneurial

This sub-theme examined the factors that contribute to making the entrepreneurship modules at the institution more entrepreneurial.

✓ **Practical**

This was the most highly ranked factor, whereby 22 respondents believed that modules were very practical.

Teacher respondent TVET-T3 highlighted the practical aspect of the course:

> *Practical aspects and we always make practical examples.*

Teacher respondent TVET-T7:

> *It is because they give practical examples.*

Teacher respondent UNIV-T1:

> *Our module is practical, and we try to make it as practical as possible by making practical examples when we teach.*

Teacher respondent UNIV-T5 emphasised the practicality of the course:

> *More practical and industry-based. We engage industries in order to instil entrepreneurial behaviour and develop an entrepreneurial mindset in our students.*

Teacher respondent UNIV-T7:

> *We expose our students to entrepreneurial practical activities in order to get them motivated.*

Some respondents went further to explain why the modules were practical. This was themed as follows:

- ✓ **Business activities**

Business activities such as creating business plans and market days contributed to making the module more entrepreneurial.

Teacher respondent TVET-T9:

> *Starting of business and formulating business plans are the key activities we use to develop entrepreneurial mindset in students.*

Teacher respondent UOT-T8:

> *I have seen students having market days on campus.*

- ✓ **Mixed with theory**

Mixing practical and theory allowed for putting theoretical knowledge into practice. This was a pragmatic benefit.

Teacher respondent TVET-T4:

> *Because I can put the theoretical content of the syllabus into more practice. I encourage the use of applied projects where I simply involve students in the process of inventing products and/or services to sell in the marketplace, and actually attempt to engage them in the commercial process.*

Teacher respondent UNIV-T9:

> *Practical approach and theory.*

Teacher respondent UOT-T3:

> *Practical and theory exercises, also the content of the module itself.*

- ✓ **Local South African examples**

Local South African examples provided relatable scenarios for students to identify with. This was an important point as each country has its own unique context.

Teacher respondent TVET-T2 revealed the importance of de-colonising the module:

Using practical examples of local South Africans who have achieved success in entrepreneurship.

Teacher respondent UOT-T5 stated that:

It is based on the scenarios that can be identified with.

✓ **Communities**

Working with the communities via programmes such as ENACTUS further allowed for more demonstration of practical entrepreneurship.

Teacher respondent from UNIV-T3 mentioned that:

Students that I work with mostly as part of the ENACTUS programme go to communities to demonstrate the practical aspect and theory of entrepreneurship.

✓ **Research and presentation**

Presenting business ideas gives student the practical experience of selling business ideas after doing their research.

Teacher respondent UNIV-T1 mentioned the use of presenting a proposed business in class:

Practical and presenting business ideas after scanning the environment.

Teacher respondent TVET-T9 highlighted environment analysis:

Students conduct research on a proposed business in order for them to scan the environment.

✓ **Feasibility studies**

Feasibility and market studies allow for students to determine feasibility and market space positioning for their potential business ideas.

Teacher respondent TVET-T9 revealed:

Students conduct a feasibility and market study to determine the viability of the ideas.

✓ **Visiting industry**

Real-world experience provided mandatory and practical knowledge on starting a business.

Teacher respondent UNIV-T4:

> *Students visit different businesses and get more information about starting a business.*

- ✓ **Share ideas**

Students are also encouraged to share business ideas as a means of practical learning.

Teacher respondent TVET-T5 revealed that:

> *Students are encouraged to talk to other students about their small businesses. For example, their salons, Uber businesses, etc.*

Teacher respondent UOT-T10 emphasised:

> *Sharing of ideas in class so that students can learn from each other and get motivated.*

These above responses are in position with the statement raised by Bauman and Lucy (2019: 2) that the entrepreneurial process for an individual begins with their desire to become an entrepreneur and then coming up with an idea for a business, searching for and recognising an appropriate opportunity then taking action is to convert the idea into a venture.

- ✓ **Turning ideas into business**

Allows for students to be creative and think about turning ideas into business by being product creators rather than consumers.

This was conveyed by a teacher respondent from TVET-T10:

> *We teach the students how to turn an idea in to business.*

A Teacher respondent from UOT-T4 emphasised the main attribute of entrepreneurship, which is creative thinking:

> *The notion of getting students to start thinking about being creators of products instead of consumers.*

To develop entrepreneurs, PILs should offer a safe environment conducive to both academic knowledge and hands-on experimentation with business ideas, so that students can apply what they have learnt through implementation of their own ideas.

✓ **Workshops**

Workshops allow for the gaining and sharing of entrepreneurial knowledge and information.

Teacher respondent TVET-T1:

> *Because we encourage and offer our students the opportunity to attend entrepreneurship workshops and entrepreneurship open days.*

Teacher respondent UNIV-T10:

> *Entrepreneurship workshops.*

The above responses are in agreement with the statement made by Bauman and Lucy (2019: 2) that business outreach opportunities such as entrepreneurship days, events, workshops involving knowledge exchange activities between entrepreneurs, scientists and students should be encouraged. Such events can also lead to funding opportunities for students.

✓ **Marketing**

Marketing skills and knowledge allows for students to learn the importance of the market position for their businesses.

Teacher respondent TVET-T10 mentioned the skills needed for student entrepreneurs:

> *We teach them marketing strategies. This is one important skill needed for the success of an entrepreneur.*

Teacher respondent TVET-T8 emphasised the importance of marketing strategy:

> *We educate our students on how to use marketing strategies to promote the business.*

✓ **Profit and funds**

Two respondents made a very important point that highlights how the modules focused on managing funds and profits. This is an important point as business sustainability is based on fund management.

Teacher respondent TVET-T10 stated:

> *We equip our students with the skill needed to determine profit.*

Teacher respondent TVET-T8:

> *Promoting an idea in business as the module defines the ways of managing funds.*

✓ **Role of entrepreneurs**

The modules also focused on the role of the entrepreneur in the business environment.

Teacher respondent UOT-T4 accentuated that:

> *The content is specifically about the business environment, the role of an entrepreneur in the business world.*

✓ **Syllabus content**

One respondent asserted that the module/syllabus content enables students to be in the position of starting their own businesses. This was supported by the fact that relevant tools and techniques were provided/taught to students to operate a business.

Teacher respondent TVET-T6 mentioned that the module is based on venture creation:

> *The content in the syllabus enables students to be in the position of starting their own businesses.*

Teacher respondent UOT-T2 stated that they give tips to help students initiate their businesses:

> *The fact that they give students ways or tools of running a business, ability to do cash flow statement, a marketing plan, etc.*

5.4.2.3 Important and distinguished subjects

The following were seen as the important and distinguished subjects. In Table 5.16 these are in a hierarchical order based on the number of respondents.

Table 5.16: Important and distinguished subjects

Subjects	Respondents
Management related	**Total = 28**
Business management - studies	**10**
Entrepreneurship and business principles and management	**8**
Financial and cost management	**4**
Business law	**3**
Project management	**1**
Sales management	**1**
Strategic management	**1**
Economics and Accounting related	**Total = 6**
Accounting	**3**
Economics	**2**
Wholesale and retail	**1**
All subjects important	**Total = 6**
A Teacher respondent from UNIV-T1stated that: All subjects are important. Teacher respondent UNIV-T2: They are all equally important. Teacher respondent UNIV-T4: All of them are important.	
Marketing/PR/Communication	**Total = 4**
Marketing	**2**
Client-human relations	**1**
Public relations	**1**
Computer related	**1**
Business and information literacy Teacher respondent UNIV-T9: Business and Information Literacy.	**1**
Engineering Teacher respondent UOT-T8: Built and Environmental Engineering.	**1**
Office related Teacher respondent TVET-T3: Office practice related subjects.	**1**
Time and stress management	**1**

As shown in the table, Management-related subjects were the highest ranked based on respondent numbers. Of this, Business Management seems to be the most prominent.

5.4.3 Theme 3: Evaluation and measurement

This primary theme examined the various evaluation methods in terms of learner analysis in relation to lesson content, as well as teacher evaluation of their own entrepreneurship characteristics.

5.4.3.1 Learner analysis in lesson content

This sub-theme relates to how teachers evaluate learners in relation to lesson content and displayed a plethora of sub-themes. These are unpacked in hierarchical order as follows:

- ✓ **Student assessment**

This was the most highly ranked analysis method, as supported by 10 respondents. It entailed continuous assessments, semester assessment, Questionnaires and Subject Evaluation Questionnaires and various other methods of assessments.

Teacher respondent TVET-T10 highlighted that the institution has different ways of conducting learner analysis:

> *We conduct learner analysis through different methods of assessment in order to identify the type of students we have.*

Teacher respondent TVET-T6 also mentioned that:

> *Through different forms of learner assessments that help us in influencing the instructional method and strategies that are suitable for entrepreneurial education.*

Teacher respondent UNIV-T6 highlighted the use of Lecturer Evaluation Questionnaires (LEQs) and Student Evaluation Questionnaires (SEQs): Surprisingly, little research is available concerning the assessment and measurement of entrepreneurship education programmes and courses. Yet, entrepreneurial outcomes and, more generally, the effectiveness of entrepreneurship education are key issues for both policy-makers and educators (Fayolle and Gailly 2015).

Teacher respondent UNIV-T7 mentioned:

> *We use continuous assessments to develop effective learning and work habits.*

Teacher respondent UOT-T1:

Student assessment.

Teacher respondent UOT-T5 detailed that:

After every semester, students are assessed on subject matter.

✓ **Engagement**

Student engagement was a key construct in evaluating learners on lesson content. This was in the form of:

✓ **Question and answers**

Question and answer sessions provided interactivity and showed if students understood the content.

✓ **Participation in class activities**

Class activities allowed for students to apply their minds and share ideas.

Teacher respondent TVET-T8 declared that student engagement is achieved through:

Giving class activities that promote group discussions so that students would be able to work with each other collaboratively.

Teacher respondent UOT-T3 emphasised students' engagement in class:

Through creating a student-centred environment where participation in class activities is concerned, sharing of ideas and information.

✓ **Group Discussions**

Group discussion was emphasised by one respondent.

✓ **Establish interest**

Continuous engagement developed students' interest in the subject matter.

Teacher respondent TVET-T4 highlighted that:

When engaging with students during class, I am able to see if they are interested in business.

✓ **Putting theory into practice**

Giving students the opportunity to put their theoretical knowledge into practice through scenarios and exercises was also a good evaluation method.

Teacher respondent UOT-T4:

> *We teach students the course content (theory) and try to apply that by giving them scenarios (practical) where they can apply theory.*

Teacher respondent UOT-T6 mentioned the use of:

> *Practical exercises and case studies. We try to make entrepreneurship more practical. We encourage students to learn by doing.*

✓ **Designing business plans**

Putting theory into practice was also done via business plans. Students were then evaluated through these.

Teacher respondent *TVET-T5* emphasised that students draw up business plans:

> *Allowing students to design their business plan. In that way, we are able to see if they understood the content or not.*

Teacher respondent TVET-T9:

> *We analyse the learners according to their submitted business plans. As potential or future entrepreneurs, learners must be able to plan wisely in terms of budgeting, as well as be able to show potential investors that they are considering risks by creating a realistic business plan.*

Teacher respondent UNIV-T7 also highlighted this strategic tool for entrepreneurs:

> *We allow students to design business plans. I believe it is vital for students to be able to design business plan since as it is a very important strategic tool for entrepreneurs to provide guidance to run a business.*

Business plans help entrepreneurs to focus on the specific steps necessary to make business ideas succeed, enabling them to achieve both short-term and long-term objectives.

✓ **Feedback and research**

Surveys and other research are conducted with students and their feedback helps in determining an evaluation.

Teacher respondent UNIV-T2:

Qualitatively and usually informally through discussions outside of class. It is often that surveys are conducted.

Teacher respondent UNIV-T4:

Some research.

Teacher respondent UOT-T1:

Feedback.

It can be noted that PILs use research in entrepreneurship education as a tool to materialize the innovative ideas of nascent entrepreneurs. Judging from the responses, it can be concluded that teachers try to identify their audiences, their demographics, prior knowledge, and also allow students to report back the findings of their research. Each of these areas will shape the design decisions and influence the instructional methods and strategies that one implements.

✓ **Critical thinking and self-exploration**

Students are encouraged to apply their minds, based on case studies and the realities of business. This stimulates them to think critically. Furthermore, students are encouraged to explore their own identities in relation to business and talk about their business ambitions.

Teacher respondent UNIV-T8 mentioned the risks involved in entrepreneurship that students needed to be aware of:

I tell them what business is, the risk to take and to be aware of anything that can happen.

Teacher respondent UOT-T2 mentioned the use of personal stories:

By using case studies that force students to think critically when answering the questions.

Teacher respondent TVET-T3 highlighted the inclusion of open talks and discussions in class in order to encourage an entrepreneurial mindset in students.

> *We allow our students to explore themselves and we give them a platform to talk about their aspirations.*

✓ **Lesson evaluations**

Subject and lesson evaluations were also used. The quality assurance department at one university evaluated lesson content via evaluation questions.

Teacher respondent TVET-T1:

> *By issuing subject evaluation questions to our students.*

Teacher respondent UOT-T1:

> *Lesson evaluations.*

Teacher respondent UNIV-T3:

> *Evaluation questions through the quality assurance department. This is basically to evaluate the content offered to students.*

5.4.3.2 Teacher evaluation of own entrepreneurship characteristics

This sub-theme relates to how teachers evaluate their own entrepreneurship characteristics, informed by the following factors. Each is listed and unpacked in a hierarchical order.

5.4.3.3 Business alignment

Some teachers were well aligned to business and this was based on the following.

✓ **New ideas**

Four respondents focused on developing or researching new business ideas or new changes in the business context.

Teacher respondent TVET-T10 stated:

> *We educate our students to be confident in what they do, showing confidence and come up with new business venture.*

Teacher respondent TVET-T2 mentioned innovativeness:

By coming up with new possible business ideas.

Teacher respondent UOT-T4 specified the inclusion of technology in entrepreneurship.

Finding out what big business is bringing. For example, changes in technology.

✓ **Risk taking**

Four respondents emphasised their attitude towards risk taking in business.

Teacher respondent TVET-T8 stated the need for taking a moderate risk:

By being willing to take a calculated risk in investing my knowledge in business.

Teacher respondent UNIV-T1:

Through risk-taking that is well calculated.

Teacher respondent UOT-T1:

Risk-taking.

A Teacher respondent from UOT-T8:

Willingness to take risks (in a personal capacity).

Taking risks is closely linked with entrepreneurship. Countless entrepreneurs had to leave their comfortable salaried jobs to be where they are today. Taking a risk does not mean starting a business and just hoping for the best – it involves careful planning and commitment.

✓ **Own or running a business**

Some teachers were already starting, owning or involved in business, which strengthened their business skills and knowledge.

Teacher respondent TVET-T3 mentioned his experience in entrepreneurship:

I have businesses that I run in my spare time. As a result, I am able to see my strengths and weaknesses.

Teacher from TVET-T7:

By starting small business.

Teacher respondent UNIV-T7:

I have a business, so being exposed to the business world makes my entrepreneurship skills improve.

Teacher respondent UNIV-T5:

Being involved in actual business operations.

✓ **Entrepreneurial interest**

Some teachers showed entrepreneurial interest, which contributed to their business alignment.

Teacher respondent TVET-T10:

By showing interest in having a business.

Teacher respondent UOT-T1:

Interest in starting your own business.

✓ **Reflection**

An interesting point was made by two respondents, regarding business reflection. One respondent took it further by continuously asking the question: "Why am I talking about it and not actually doing it?" This was done to get students to also identify with such or similar instances.

Teacher respondent UNIV-T2:

Constant reflection on why I am talking about it and not actually doing it. At times this is discussed so students understand or comment with their views.

Teacher respondent UOT-T6 mentioned:

Continuous reflection.

5.4.3.4 Measurement entrepreneurial characteristics

Seven respondents measured their characteristics.

✓ **Measurement by the pass rates**

Two respondents measured their entrepreneurship characteristics by how well their students had passed the course.

Teacher respondent TVET-T5:

> *I do it through the number of learners who pass this course (in terms of percentage).*

Teacher respondent UNIV-T5:

> *Pass rate.*

✓ **Surveys**

Surveys were used by some teachers in which students could rate or evaluate them.

Teacher respondent UNIV-T9:

> *Via surveys through students.*

Teacher respondent UOT-T5:

> *Through research.*

Judging from the above responses, it is clear that teachers use various methods to review the impact they have in developing an entrepreneurial mindset in students.

✓ **Measured by initiative success and projects**

The success of business initiatives and projects were also measured as a reflection of teachers' entrepreneurship characteristics.

Teacher respondent UNIV-T3:

> *By the success of the initiatives of the students I work with.*

Teacher respondent UNIV-T6:

> *Through projects.*

Teacher respondent UOT-T10 highlighted:

> *We assign projects to students in order to determine success.*

✓ **Relevance**

Relevance of topics, knowledge, business information and business skills were the focus of three respondents.

Teacher respondent TVET-T6:

> *I try to keep myself abreast with new knowledge and skills on how business functions.*

Teacher respondent UOT-T2:

> *Making sure our topics are still relevant with what is happening in the business world.*

Teacher respondent UOT-T4:

> *By reading up on the latest entrepreneurial information.*

✓ **Planning and organising**

One respondent emphasised their approach to overall planning and organising, which is key to business activities.

Teacher respondent TVET-T9:

> *Plan well for activities, projects, organising and controlling.*

✓ **Communication**

Communication with students allowed for their entrepreneurial traits to surface.

Teacher respondent UOT-T3:

> *Effective communication with students points out entrepreneurial traits.*

5.4.4 Theme 4: Staff recruitment

Staff recruitment is of importance to teach future business leaders. The teachers themselves need to be competent, knowledgeable and experienced.

✓ **HR recruitment process and policies**

A majority of the respondents (18) mentioned that the normal HR process and policy was followed, possibly in conjunction with DHET Policy.

Teacher respondent TVET-T1:

Department of Education recruitment policy.

Teacher respondent TVET-T10:

Through advertising of posts and interviews.

Teacher respondent TVET-T3:

Through the normal recruitment processes, where a post is advertised, and interviews will be conducted.

Teacher respondent TVET-T4:

Through Human Resource Management procedures.

Teacher respondent TVET-T5:

They are recruited through the normal recruiting process.

Teacher respondent TVET-T7:

Through the HR department.

Teacher respondent UNIV-T1:

There are recruitment strategies they follow in the recruiting department.

✓ **Qualifications and specialisation**

Six respondents provided details that qualification and specialisation were mandatory in the teacher recruitment process in their institutions. This included majors in business-related subjects, specialisation in entrepreneurship and even Master's and PhD studies. This is a logical argument as entrepreneurship education does require specialisation within the field, which ideally should be to a high degree.

Teacher respondent TVET-T2:

A post is advertised in the selection process. Candidate qualifications and subjects are scrutinised.

Teacher respondent TVET-T6:

Recruited through assessing the higher level of education and experience.

Teacher respondent TVET-T9:

Through HR, the candidate should have a major in entrepreneurship, business management and sales management.

Teacher respondent UNIV-T5:

Masters and PhD qualification.

Teacher respondent UNIV-T7:

The staff needs to specialise in entrepreneurship.

✓ **Experience**

Five respondents felt that experience was the key. This is an important point as, apart from qualifications, experience is vital. Students need to be aware of what is going on in the real world. Hence teachers having had experience as an entrepreneur was important.

Teacher respondent TVET-T6:

Recruited through assessing the higher level of education and experience.

Teacher respondent UNIV-T10:

Based on their previous experience.

Teacher respondent UNIV-T3:

People who are entrepreneurship specialists. From a corporate environment with managerial and entrepreneurship experience.

Teacher respondent UOT-T8:

Based on experience. It was through interviews, conducted in context of business management.

5.4.5 Section summary

According to the majority of teacher respondents, entrepreneurship education curriculum in PILs is designed in a way that it stimulates an entrepreneurial mind-set in students. However, the result is rather surprising given the high failure rate of start-up businesses. Although the results show that a greater percentage of this sample of respondents agreed with the statement that entrepreneurship education determines

individual entrepreneurial interests (86.2% of the respondents (agree = 55.2%; strongly agree =31%) it is not clear if the teachers/lecturers are ready to cultivate entrepreneurial mind-set in students or if they are required to follow curricula that are adapted to the best ways of achieving this mind-set. The results show that almost half of teacher respondents have never been involved in entrepreneurship training (48.3%). These results suggest that successful entrepreneurship mentors and experts should be included in making entrepreneurship curricula a success. But again, it is doubtful if these institutions do utilize the service of entrepreneur experts fully as results show a low level of agreement from respondents (54%) when asked about whether or not the institutions use entrepreneur mentors to develop entrepreneurial thinking or mindset in students. When asked about this, nearly half of the respondents (46%) were not in agreement with the statement that PILs provide training and development programmes capable of genuinely promoting the success of business start-ups. Since we know that respondents would not want to be negative if possible – one could argue that training and development programmes are not well supported by these institutions.

Indeed, the secondary data in this study confirmed a vigorous connectivity between entrepreneurial mind-set and entrepreneurship education. It can be known that entrepreneurship education positively drives students' entrepreneurial intentions to start businesses through the entrepreneurial mind-set, but to achieve this in practice appears still to be challenging. This study suggests that teaching staff should enhance their competence, particularly related to entrepreneurship, such as gaining hands-on experience, making site visits to successful entrepreneur businesses, attending entrepreneurship webinars, in-housetraining, and certification program. The entrepreneurship curriculum in PILs should also be enhanced so that it can form entrepreneurial competencies and foster student enthusiasm for entrepreneurship. Furthermore, entrepreneurship education in PILs should encourage students to develop creative ideas to become entrepreneurs.

5.4.6 Summary table

Research Questions	Theme and Subthemes	Key Findings
Research Question 1 What is the perception of PILs students about entrepreneurship education curricula and modules offered in public institutions of learning in terms of promoting entrepreneurship competencies?	**Role of Entrepreneurial Education** • Promoting pathway to business start-up • Planning curriculum to transform SA youths into entrepreneurs	It is found that the role of entrepreneurship education is to promote pathways by giving learners skills about starting their business and offer the knowledge needed to start entrepreneurial venture. However, we still have a long way to try and change the perception students have about self-employment. A majority of students still believe in being employed rather than starting their own businesses. The study also found that the curriculum in PILs follows a narrow perspective when they move into the field, focusing at the instrumental skills needed to establish a new firm. Therefore, entrepreneurship programmes tend to contain entrepreneurship education element. That is, orientation and awareness programmes which provide general information and encourage students to consider a career as entrepreneur. Teacher respondents claim that they allow students to start businesses while studying. "Our programme instils the behaviour that our students act in an enterprising way while they are still undergraduates". Less than half of teacher respondents (43%) in PILs agreed that they collaborate with entrepreneurship experts to promote entrepreneurship education.
Research Question 2 What is the perception of teaching staff about the benefits and effectiveness of the content of entrepreneurship education in PILs?	**Entrepreneurial Difference and Distinction** • Making Entrepreneurship modules more entrepreneurial • Entrepreneurship education being different and distinctive at institution • Distinctive features of Entrepreneurial lesson content • Important and distinguishing subjects	From this question, the study found that there is a clear indication that the main aim of entrepreneurship programmes from the respondents' perspective in PILs is to prepare students to start a business, to teach students the general business skills, the role of entrepreneurship in economic development and job creation. Teachers and / or Lecturers are therefore only alerting students to starting their own businesses but not given them opportunity to practically experience entrepreneurship. This in turn result in fewer students taking entrepreneurship as a career option after completion of their studies due to lack of experiencing entrepreneurial activities. The results also reveal that programmes is on business creation rather than the persons behind the businesses. This is because they feel that the programme of entrepreneurship education is too theoretical.

Research Question 3 What are the competencies that entrepreneurship education in PILs promotes?	• **Evaluation and Measurement** • Learner analysis in your lesson content • Putting theory into practice • Critical thinking and self-exploration • Teacher evaluation of own entrepreneurship characteristics	It appears that entrepreneurship education in PILs is not appropriately developed to effectively equip students with much needed competencies that will help students to choose entrepreneurship as a career option. It is apparent that the entrepreneurship curriculum is based mainly on theoretical transfer knowledge rather than experiential learning. The study also notes that there is a high neutral response rate when asked about the level and type of training the Teacher respondents received for teaching in this programme which means that these teachers are not entrepreneurship specialists but qualified teachers sometimes in other fields. The majority of respondents they use different forms of learner assessments that help them in influencing the instructional method and strategies that are suitable for entrepreneurial education. The study found that practical exercises and case studies are most used in PILs to make entrepreneurship more practical and encourage students to learn by doing rather than having entrepreneurship workshops and competition on campus. This was appreciated by the students
Research Question 4 To what extent do public institutions of learning support and promote entrepreneurial activity on campus?	**Staff Recruitment** • Qualifications and specialisation	The study found that students are not restricted from sell small things on campus but the PILs do not have enough resources to provide students with start-ups capital but students who want to sell on campus are not restricted.

5.5 QUANTITATIVE DATA – STUDENTS

This section presents the data collected from the student questionnaire. The data collected was analysed using SPSS version 25.0. The results are presented as descriptive statistics regarding the quantitative data in the form of frequency graphs, cross-tabulations and other figures. Inferential techniques include the use of correlations and chi square test values interpreted using p-values. Qualitative data will be presented after the quantitative data.

In total, 162 questionnaires were despatched to students and 136 were returned, resulting an 84% response rate. Sample size was determined by the extent of precision and level of confidence. According to Sekaran and Bougie (2016), an 84% response rate is good to claim representativeness of response to the sample. While it is acknowledged that this was a relatively small sample, the fact that it involved not only a quantitative element (the survey questionnaire) but also focus group interviews with student respondents, ensured that a depth of insights was gained from this large qualitative element in the research design.

The research instrument consisted of 46 items, with a level of measurement at a nominal or an ordinal level. The questionnaire was divided into six questions which measured various themes (Table 5.17)

Table 5.17: Division of questionnaire

A	Biographical data
B1	Entrepreneurship Education Curriculum promotes Business Start-Up
B2	Perceptions of Students About the Benefits of Entrepreneurship education
B3	Graduate Attributes and Skills Needed in Entrepreneurship Education
B4	The Role of Public Institutions in Promoting Entrepreneurship education
5	Open-ended questions

5.5.1 Reliability statistics

The Cronbach's coefficient alpha test was conducted for each variable of the questionnaire in order to determine the consistency and the reliability of the items. The reliability of the independent variable (turnover intention) and the seven independents variables (institutional characteristics, job satisfaction, organisational commitment, retention strategies, perceived external opportunities, organisational justice and

adjustment) were tested in order to ensure the consistency of the questions. According to Belitski and Heron (2017: 170), a Cronbach's coefficient alpha value less than 0.6 is poor; a reliability value of 0.7 is acceptable; and a reliability value of 0.80 and above is good. The results obtained from the Cronbach's alpha revealed a high reliability of 0.702 on the eight items of the dependent variable "entrepreneurship education curriculum". The eight items of the independent variable "perceptions of students" yielded a high reliability score of 0.776. A high reliability of 0.705 was also recorded on the seven items of the independent variable "graduate attributes and skills needed". Furthermore, the Cronbach alpha of the independent variable "role of public institutions of learning in promoting entrepreneurship education", measured on eight items, revealed a high score of 0.916.

In sum, a total of 31 items of the four variables of this study were subjected to a reliability test. The Cronbach alpha as presented in Table 5.18. Therefore, all 31 items were considered for further analysis.

The two most important aspects of precision are **reliability** and **validity**. Reliability is computed by taking several measurements on the same subjects. A reliability coefficient of 0.70 or higher is considered as "acceptable".

The table below reflects the Cronbach's alpha score for all the items that constituted the questionnaire.

Table 5.18: Results of the Cronbach's alpha

		No. of Items	Cronbach's Alpha
B1	Entrepreneurship Education Curriculum promotes Business Start-Up	8	0.702
B2	Perceptions of Students About the Benefits of Entrepreneurship education	8	0.776
B3	Graduate Attributes and Skills Needed in Entrepreneurship Education	7	0.705
B4	The Role of Public Institutions in Promoting Entrepreneurship education	8	0.916

The reliability scores for all sections exceed the recommended Cronbach's alpha value. This indicates a degree of acceptable, consistent scoring for these sections of the research.

5.5.2 Factor analysis

Table 5.19: KMO and Bartlett's Test

		Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	Bartlett's Test of Sphericity		
			Approx. Chi-Square	df	Sig.
B1	Entrepreneurship Education Curriculum promotes Business Start-Up	0.652	213.938	28	0.000
B2	Perceptions of Students About the Benefits of Entrepreneurship education	0.821	225.601	28	0.000
B3	Graduate Attributes and Skills Needed in Entrepreneurship Education	0.695	203.653	21	0.000
B4	The Role of Public Institutions in Promoting Entrepreneurship education	0.918	649.026	28	0.000

All of the conditions were satisfied for factor analysis, that is to say, that the Kaiser-Meyer-Olkin Measure of sampling adequacy value should be greater than 0.500 and the Bartlett's Test of Sphericity sig. value should be less than 0.05.

Table 5.20: Rotated Component Matrix

Rotated Component Matrix[a]

B1	Component		
	1	2	3
The higher the level of education of an individual the greater the possibility of them starting a venture that progresses past the start-up stage	0.106	0.820	0.262
The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start-up their own businesses	0.641	0.473	0.032
The entrepreneurship programmes offered by the institution have practical elements that are devised to encourage the creation of new businesses	0.081	0.834	-0.195
In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business	0.735	0.253	0.101
An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture	0.649	0.137	0.282
Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses	0.752	-0.340	0.016
Entrepreneurship education can alleviate the fear of failure in starting new businesses	0.072	-0.017	0.796
It is believed that entrepreneurship education is a platform for addressing unemployment in communities, through the creation of new business	0.158	0.042	0.765

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.
a. Rotation converged in 5 iterations.

As can be seen in Table 5.20, the respondents' scoring pattern loaded in three components. All the items were suitable for factor analysis as they were all above 0.5. Four items loaded in the first component. These items assessed the effectiveness of entrepreneurship education with regard to the features of skills needed to start a new business, learner interest in starting a new business, and risks involved in starting a new business. The two loaded items in the second component measured the possibility of starting a business that is sustainable, while the other two loaded items in the third component measured the fear of business failure and ways to address unemployment.

Table 5.21: Component matrix[a]

B2	Component
	1
Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole	0.642
Entrepreneurship education in my institution educates the learners about the benefits of entrepreneurship in the development of the South African economy	0.620
Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option	0.639
Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals, who become entrepreneurial thinkers that contribute to sustainable economic development	0.646
Entrepreneurship education contributes in decreasing the number of unemployed in the country	0.682
Entrepreneurship education determines individual entrepreneurial interests	0.693
Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	0.748
Entrepreneurship education increases the number of graduate start-up businesses	0.577

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

As portrayed in Table 5.21, the respondents' scoring pattern loaded on one component. The eight loaded items are above 0.5 in the component measuring the entrepreneurship education in public institution of learning with regard to its contribution to graduate unemployment and job creation.

Table 5.22: Rotated Component Matrix[a]

B3	Component	
	1	2
The institution provides students with internship opportunities in businesses in the local economy, which teach them business skills	-0.109	0.835
Entrepreneurship education imparts the skills to take calculated risks	0.392	0.654
Entrepreneurship education can play a crucial role in gaining the necessary skills to manage a business and change the views of South Africans towards self-employment	0.550	0.401
Entrepreneurship education provides the ability to pursue opportunities by coming up with new ideas and marshalling needed resources	0.512	0.389
Entrepreneurship education affords ability to create and manage a new venture and the ability to think in a creative and critical manner	0.670	0.135
Entrepreneurship education teaches me to think strategically	0.852	-0.165
Entrepreneurship education teaches that social interaction is an important skill for a successful entrepreneur	0.724	0.223

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalisation.
a. Rotation converged in 3 iterations.

As portrayed in Table 5.22, the respondents' scoring pattern loaded on two components. The four loaded items above 0.5 in the first component measured the satisfaction of students on whether the entrepreneurship education curriculum promotes creativity and the skills needed when starting a business. The two loaded items in the second components measured if entrepreneurship education provides opportunities to take risks and start a new business.

Table 5.23: Component Matrix[a]

B4	Component
	1
The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance	0.862
The institution collaborates with entrepreneurship experts to promote entrepreneurship education	0.839
The institution provides training and development programmes to promote business start-up	0.817
The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	0.806
The institution organises career talks during convocation day	0.726
The institution facilitates student visits to industries to gain more knowledge about their subject	0.835
The institution practically orients students to outreach programmes	0.789
The institution allows us the space to "try and fail" to encounter "intelligent failures" as part of effective learning	0.664

Extraction Method: Principal Component Analysis.
a. 1 components extracted.

As depicted in Table 5.23, the respondents' scoring pattern loaded heavily on one component. This suggests that all the components measured the variable: perceived job opportunities.

5.5.3 Section A: Biographical data

This section summarises the biographical characteristics of the student respondents.

5.5.3.1 Gender and age

The table below describes the overall gender distribution by age.

Table 5.24: Distribution by gender

			Gender		Total
			Male	Female	
How old are you?	< 16	Count	0	1	1
		% within How old are you?	0.0%	100.0%	100.0%
		% within Gender	0.0%	1.3%	0.7%
		% of Total	0.0%	0.7%	0.7%
	16 – 20	Count	26	42	68
		% within How old are you?	38.2%	61.8%	100.0%
		% within Gender	42.6%	56.0%	50.0%
		% of Total	19.1%	30.9%	50.0%
	21 – 25	Count	34	29	63
		% within How old are you?	54.0%	46.0%	100.0%
		% within Gender	55.7%	38.7%	46.3%
		% of Total	25.0%	21.3%	46.3%
	> 25	Count	1	3	4
		% within How old are you?	25.0%	75.0%	100.0%
		% within Gender	1.6%	4.0%	2.9%
		% of Total	0.7%	2.2%	2.9%
Total		Count	61	75	136
		% within How old are you?	44.9%	55.1%	100.0%
		% within Gender	100.0%	100.0%	100.0%
		% of Total	44.9%	55.1%	100.0%

Overall, the ratio of males to females was approximately 1:1 (44.9%: 55.1%) (p = 0.230).

Age group was distributed into four main categories, that is: < 16, 16-20, 21-25 and above 25 years' age group. The distribution shows that 54% of the respondents between the ages of 21-25 years were males, while 46 percent were females. In the age category 16-20 years, 61.8% of respondents were females and the other 38.2% were males. In the age group 25 years, the results indicate that 75% of respondents were female, while only 25% were males. The age group 16 years and below shows that 100 percent of respondents were females. The findings indicate that there is no difference in the sample composition by gender (p = 0.108) and age (p = 0.186).

5.5.3.2 Type of institution

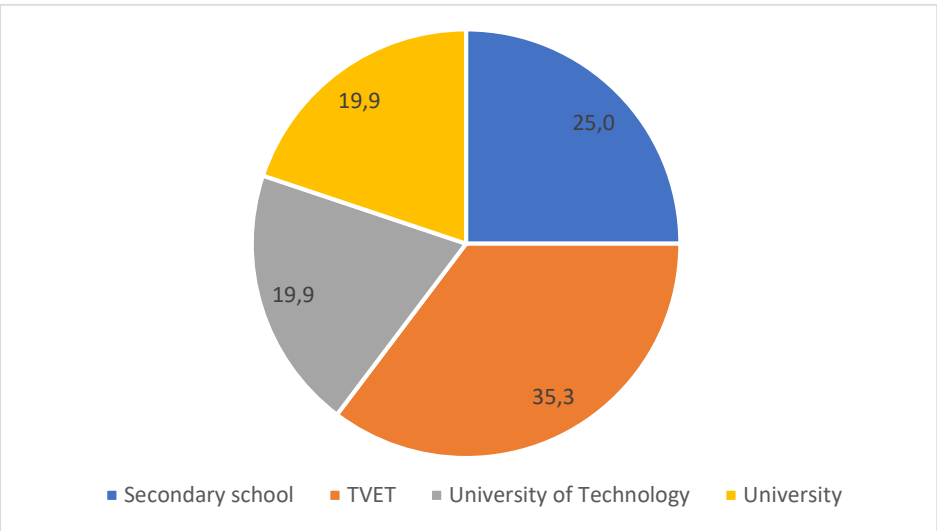


Figure 5.8: Type of institution

Figure 5.8 illustrates a significant difference (p = 0.008) as to where respondents were studying. It can be seen from the graph that the highest 35.3% of the respondents are from TVET, followed by 25 percent student respondents from secondary school, 19.9%from university, and 19.9%from a University of Technology.

This is a useful statistic as it indicates that a fair proportion of the respondents have a higher qualification. This indicates that the responses gathered would have been from an informed (learnt) source.

5.5.3.3 Length of time engaged in entrepreneurial / entrepreneurship education

Figure 5.9 indicates the length of time respondents have been engaged in entrepreneurial / entrepreneurship education.

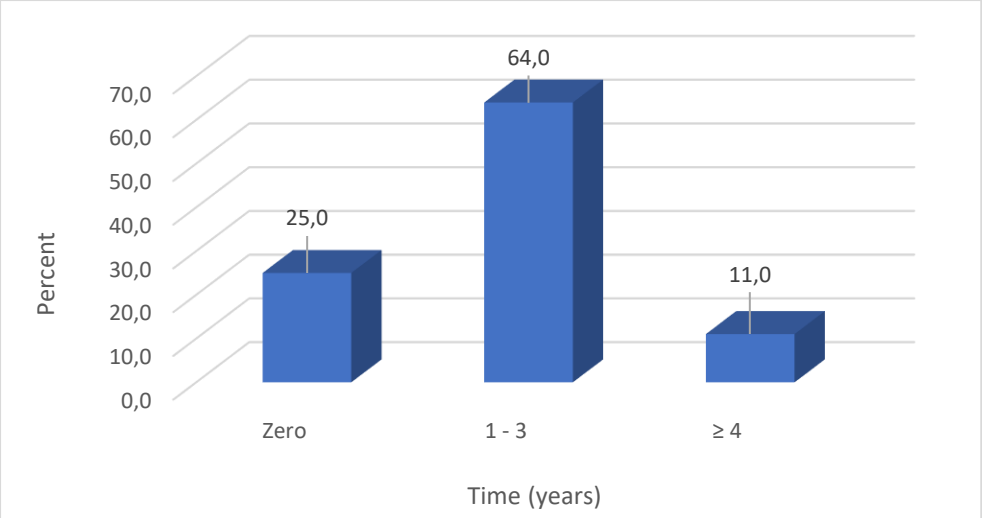


Figure 5.9: Length of time engaged in entrepreneurship education

The results indicate that a majority of respondents (64%) have been engaged in entrepreneurship education for at least 1-3 years; 25% for not more than a year, and 11% have for at least 4 years. Nearly two-thirds of the respondents (64.0%) had been involved for between 1-3 years ($p < 0.001$).

5.5.3.4 Type of entrepreneurial / entrepreneurship training for student

Figure 5.10 indicates the type of learner training in entrepreneurial or entrepreneurship education that the respondents had received.

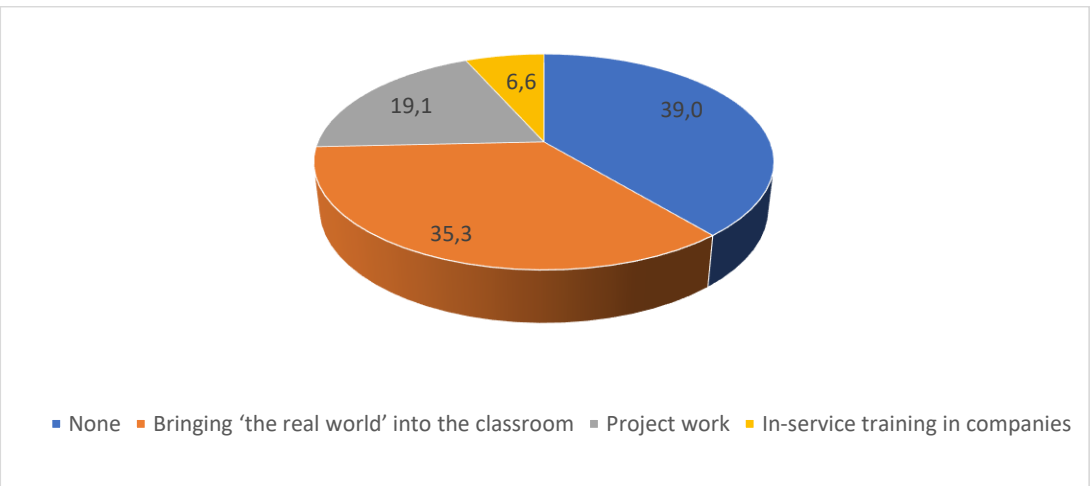


Figure 5.10: Type of training in entrepreneurship education for students

The results indicate that a majority of respondents (39%) have never received any form of training for entrepreneurship education; 35.3% have brought the real world into

the classroom. Only 19.1% of students in public institutions have done project work, while 6.6% have been involved in in-service training. There is a significant difference in the training received ($p < 0.001$).

5.5.3.5 Time spent on entrepreneurship education every week

The figure below indicates the amount of time (in percentage) spent on entrepreneurship education every week.

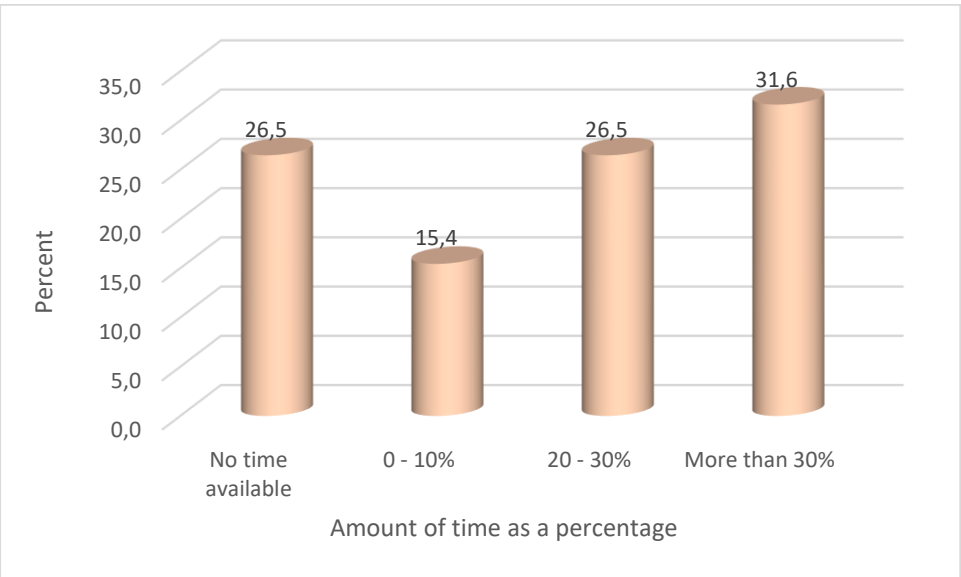


Figure 5.11: Amount of time spent in entrepreneurship education

The results show that 31.6% of the students in PILs spend more than 31.6% of their time in learning entrepreneurship education; while 26.5% spent between 20-30% of their time learning entrepreneurship education. Twenty-six percent of the respondents stated that they are not involved in entrepreneurship education, while a low 15.4% stated that they only spend 10% of time per week in learning entrepreneurship education. There are similar patterns across the different options ($p = 0.055$). The reason could be because the subject is semesterized in some institutions and therefore students have not done it for the year.

5.5.4 Section B analysis

The section that follows analyses the scoring patterns of the respondents per variable per section. The results are first presented using summarised percentages for the

variables that constitute each section. Results are then further analysed according to the importance of the statements.

5.5.4.1 Question 1: Assessment of whether an entrepreneurship education curriculum promotes business start-up

Table 5.25: Summery of scoring patterns – Question 1

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
1.1 The higher the level of education of an individual the greater the possibility of them starting a venture that progresses past the start-up stage	B1.1	47	34.6%	44	32.4%	23	16.9%	17	12.5%	5	3.7%	0.000
1.2 The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start-up their own businesses	B1.2	44	32.4%	59	43.4%	20	14.7%	10	7.4%	3	2.2%	0.000
1.3 The entrepreneurship programmes offered by the institution have practical elements that are devised to encourage the creation of new businesses	B1.3	31	22.8%	53	39.0%	33	24.3%	6	4.4%	13	9.6%	0.000
1.4 In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business	B1.4	44	32.4%	64	47.1%	18	13.2%	6	4.4%	4	2.9%	0.000
1.5 An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed	B1.5	57	41.9%	56	41.2%	19	14.0%	1	0.7%	3	2.2%	0.000

to start an entrepreneurial venture												
1.6 Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses	B1.6	55	40.4%	62	45.6%	15	11.0%	3	2.2%	1	0.7%	0.000
1.7 Entrepreneurship education can alleviate the fear of failure in starting new businesses	B1.7	31	22.8%	59	43.4%	32	23.5%	9	6.6%	5	3.7%	0.000
1.8 It is believed that entrepreneurship education is a platform for addressing unemployment in communities, through the creation of new business	B1.8	52	38.2%	49	36.0%	29	21.3%	4	2.9%	2	1.5%	0.000

The analysis of Question 1 is presented below.

It can be observed that 67% of respondents agreed with the statement (strongly agreed = 34.6%; agreed = 32.4%) that “The higher the level of education of an individual has the greater the possibility of them starting a venture that progresses past the start-up stage”, 16.9% were neutral, and 16.2% disagreed. With regard to the statement, the Chi-square test showed a significant difference ($p < 0.05$) in the scoring patterns of the respondents by age ($\chi2=47.382$; df=4).

As depicted in the Table 5.25 above, it can be observed that of 83.1% of respondents were in agreement that “An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture” (strongly agreed 41.9%; agreed 41.2%), 14.0% were neutral, and 2.9% disagreed (disagree= 0.7%; strongly disagree 2.2%). The Chi-square test shown in Table 5.24 was significant at $p < 0.05$, with a Chi-square value of $\chi2=112.382$ and a degree of freedom of df=4.

A total of 86% (40.4% strongly agree; 45.6% agree) of the respondents indicated that “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses”, 11.0% were neutral, and 2.9% disagreed. Furthermore, the Chi-square analyses ($\chi125.176$; df= 4) revealed a significant difference at $p < 0.05$.

Given the previous results, it is interesting to see the results of analysis of the entrepreneurship programmes offered by the PILs involved in this study. A total of 61.8% of respondents agreed (strongly agreed 22.8%; agreed 39.0%) that entrepreneurship programmes offered by the institution have practical elements that are devised to encourage the creation of new businesses, while 24.3% were neutral, and 14% percent disagreed with the statement (disagree= 4.4%; strongly disagree 9.6%). The Chi-square test is significant at $p < 0.05$, with a Chi-square value of $\chi2=50.176$ and a degree of freedom of df=4.

The following patterns are observed:

- All statements show statistically significant high levels of agreement with the statements.; and
- There are no statements with high levels of disagreement.

5.5.4.2 Question 2: Investigating the perceptions of educators about the benefits of entrepreneurship education

Table 5.26: Summery of scoring patterns – Question 2

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
2.1 Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole	B2.1	41	30.1%	62	45.6%	29	21.3%	4	2.9%	0	0.0%	0.000
2.2 Entrepreneurship education in my institution educates the learners about the benefits of entrepreneurship in the development of the South African economy	B2.2	42	30.9%	65	47.8%	22	16.2%	3	2.2%	4	2.9%	0.000
2.3 Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option	B2.3	56	41.2%	57	41.9%	19	14.0%	2	1.5%	2	1.5%	0.000
2.4 Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals, who become entrepreneurial thinkers that contribute to sustainable economic development	B2.4	54	39.7%	61	44.9%	15	11.0%	5	3.7%	1	0.7%	0.000
2.5 Entrepreneurship education contributes in	B2.5	55	40.4%	49	36.0%	23	16.9%	2	1.5%	7	5.1%	0.000

decreasing the number of unemployed in the country												
2.6 Entrepreneurship education determines individual entrepreneurial interests	B2.6	30	22.1%	69	50.7%	30	22.1%	6	4.4%	1	0.7%	0.000
2.7 Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	B2.7	35	25.7%	55	40.4%	36	26.5%	7	5.1%	3	2.2%	0.000
2.8 Entrepreneurship education increases the number of graduate start-up businesses	B2.8	36	26.5%	54	39.7%	34	25.0%	8	5.9%	4	2.9%	0.000

The analysis of Question 2 is presented below.

It is evident that a majority of respondents at 75.7% agreed with the statement (strongly agree = 30.1%; agree = 45.6%) that “Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole”, 21.3% were neutral, and 2.9% percent disagreed. The Chi-square test indicates the difference is significant at $p < 0.05$, with a Chi-square value of (χ251.706; df = 3; P = 0.000).

Regarding the statement “Entrepreneurship education in my institution educates the learners about the benefits of entrepreneurship in the development of the South African economy”, 78.7% of respondents agreed (strongly agreed = 30.9%; agree = 47.8%), 16.2% were neutral, and 5.1% disagreed (disagree = 2.2%; strongly disagree = 2.9. The Chi-square test was significant at $p < 0.05$, with a Chi-square value of $\chi 2=102.897$ and a degree of freedom of df=4.

The results depict that the majority of students in PILs regard entrepreneurship education as a determining factor in providing knowledge about entrepreneurial activities. Thus, as depicted in the Table 5.26 above, it can be observed that 83.1% of respondents were in agreement with the statement that “Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option” (strongly agreed 41.9%; agreed 41.2%), 14.0% were neutral and3% disagreed (disagree= 1.5%; strongly disagree 1.5%). The Chi-square test shows a significant difference ($p < 0.05$) in the scoring patterns of the respondents, with a Chi-square value of ($x^2=112.309$; df=4).

In the same vein, 76.4% (40.4% strongly agree; 36.0% agree) of the respondents agreed with the statement that “Entrepreneurship education contributes in decreasing the number of unemployed in the country”, 16.9% were neutral, and 6.6% disagreed (1.5% disagree; 5.1% strongly disagree). With regard to the statement, “I usually consult job advertisements” and age groups, the Chi-square Test showed a significant difference ($p <0.05$) in the scoring patterns of the respondents by age ($x^2=84.882$; df=4).

Only 66.1% agreed (strongly agreed 25.7%; agreed 40.1%) with the statement that “Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures”, 26.5% were neutral and 7.3% disagreed (disagree= 5.1%; strongly disagree 2.2%). The Chi-square test with the value of $x^2=70.029$ and the degree of

freedom (df=4) was significant at $p < 0.000$. The results indicate that respondents are not confident about whether or not entrepreneurship education has a bearing on new business creation. Through schools, TVETS and universities youth can be inspired for and trained in opportunity recognition and business creation, promising in the long run to result in the formation of more high-quality businesses in society. However, current entrepreneurship education does not fulfil its venturing potential due to the narrow way it is usually understood and practiced.

5.5.4.3 Question 3: Investigating the key skills that entrepreneurship education promotes

Table 5.27Summery of scoring patterns – Question 3

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
3.1 The institution provides students with internship opportunities in businesses in the local economy, which teach them business skills	B3.1	31	22.8%	51	37.5%	27	19.9%	13	9.6%	14	10.3%	0.000
3.2 Entrepreneurship education imparts the skills to take calculated risks	B3.2	26	19.1%	67	49.3%	32	23.5%	10	7.4%	1	0.7%	0.000
3.3 Entrepreneurship education can play a crucial role in gaining the necessary skills to manage a business and change the views of South Africans towards self-employment	B3.3	48	35.3%	58	42.6%	24	17.6%	4	2.9%	2	1.5%	0.000
3.4 Entrepreneurship education provides the ability to pursue opportunities by coming up with new ideas and marshalling needed resources	B3.4	32	23.5%	72	52.9%	26	19.1%	6	4.4%	0	0.0%	0.000
3.5 Entrepreneurship education affords ability to create and manage a new venture and the ability to think in a creative and critical manner	B3.5	40	29.4%	72	52.9%	17	12.5%	4	2.9%	3	2.2%	0.000
3.6 Entrepreneurship education teaches me to think strategically	B3.6	63	46.3%	46	33.8%	22	16.2%	2	1.5%	3	2.2%	0.000

3.7 Entrepreneurship education teaches that social interaction is an important skill for a successful entrepreneur	B3.7	55	40.4%	56	41.2%	21	15.4%	3	2.2%	1	0.7%	0.000

The analysis of Question 3 is presented below.

From Table 5.27 above it can be observed that 80.1% of respondents were in agreement with the statement that “Entrepreneurship education teaches me to think strategically” (strongly agreed 46.3%; agreed 33.8%), while 16.2% neutral, and 3.7% disagreed (disagree= 1.5%; strongly disagree 2.2%). The results further indicate that 68.4 percent of respondents agreed (strongly agree = 19.1%; agree = 49.3%) that entrepreneurship education imparts the skills to take calculated risks, 23.5 were neutral, and 8.1% disagreed (disagree = 7.4%; strongly disagree = 0.7%). For “Entrepreneurship education can play a crucial role in gaining the necessary skills to manage a business and change the views of South Africans towards self-employment with the statement” it can be seen that the majority of respondents at 77.9% agreed with the statement, 17.6% were neutral, and 4.4% disagreed (agree = 2.9%; strongly disagree = 1.5%). The results further reveal that 76.4% of respondents agreed that entrepreneurship education provides the ability to pursue opportunities by coming up with new ideas and marshalling needed resources; 91.1% were neutral, and 4.4 percent disagreed.

In the same vein, 81.6% of respondents agreed (40.4% strongly agree; 41.2% agree) with the statement that “Entrepreneurship education teaches that social interaction is an important skill for a successful entrepreneur”, while 15.4% were neutral, and 2.9% disagreed (2.2% disagree; 0.7% strongly disagree). Only 60.3% of respondents agreed (strongly agreed 22.8%; agreed 37.5%) with the statement that “The institution provides students with internship opportunities in businesses in the local economy, which teaches them business skills”, while 19.9% were neutral, and 19.9% disagreed (disagree= 9.6%; strongly disagree 10.3%).

5.5.4.4 Question 4: Ascertaining the role of public institutions in promoting entrepreneurship education

Table 5.28: Summery of scoring patterns – Question 4

		Strongly Agree		Agree		Neutral		Disagree		Strongly Disagree		Chi Square
		Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	Count	Row N %	p-value
4.1 The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance	B4.1	36	26.5%	40	29.4%	31	22.8%	10	7.4%	19	14.0%	0.000
4.2 The institution collaborates with entrepreneurship experts to promote entrepreneurship education	B4.2	24	17.6%	36	26.5%	42	30.9%	17	12.5%	17	12.5%	0.001
4.3 The institution provides training and development programmes to promote business start-up	B4.3	16	11.8%	42	30.9%	41	30.1%	15	11.0%	22	16.2%	0.000
4.4 The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	B4.4	25	18.5%	40	29.6%	35	25.9%	21	15.6%	14	10.4%	0.003
4.5 The institution organises career talks during convocation day	B4.5	18	13.2%	47	34.6%	34	25.0%	26	19.1%	11	8.1%	0.000
4.6 The institution facilitates student visits to industries to gain more knowledge about their subject	B4.6	27	19.9%	36	26.5%	34	25.0%	23	16.9%	16	11.8%	0.044
4.7 The institution practically orients students to outreach programmes	B4.7	16	11.8%	52	38.2%	42	30.9%	17	12.5%	9	6.6%	0.000
4.8 The institution allows us the space to “try and fail” to encounter “intelligent failures” as part of effective learning	B4.8	27	19.9%	38	27.9%	46	33.8%	19	14.0%	6	4.4%	0.000

The analysis of Question 4 is presented below.

Table 5.28 above shows that 55.9% percent of respondents were in agreement (strongly agreed 26.5%; agreed 29.4%) with the statement that “The institution offers support to students in order to start up their own businesses by assisting them with writing a business plan, specialist advice from business mentors and financial assistance’ while 22.8% were neutral. The Chi-square test is significant at $p < 0.05$, with a Chi-square value of $\chi 2=22.75$ and a degree of freedom of df=4.

Regarding the statement: “The institution collaborates with entrepreneurship experts to promote entrepreneurship education”, 43.1% percent of the respondents were in agreement with the statement; 30.9% were neutral, and 25% disagreed (disagree =12.5%; strongly disagree =12.5%) Only 21.4% percent of respondents were in disagreement with the statement (disagree= 7.4%; strongly disagree 14.0%). The value of $\chi 2=18.926$ and df=4 revealed a significant difference at $p < 0.05$ in the scoring patterns of collaboration with entrepreneurship experts.

Forty-eight percent of respondents agreed that the institution invites entrepreneurs and practitioners from different organisations to share their experience with students, 25.9% percent were neutral, while 26% percent of respondents disagreed (disagree = 15.6%; strongly disagree = 10.4%). The Chi-square test shows significant differences at $p < 0.05$ at a Chi-square value of $x^2=16.37$; degree of freedom df=4 and a p-value=0.003.

Results further depict that 46% percent of respondents agreed (agree =19.9%; 26.5 %) that PILs facilitate student visits to industries to gain more knowledge about their subject; 29% percent of respondents disagreed (disagree =16.9%; strongly disagree = 11.8%), and 25% neither agreed nor disagreed with the statement. The Chi-square test result shows that $x^2 = 9.809$; df = 4; P = 0,000 for this variable.

In the same vein, 47.8% of the respondents agreed (19.9% strongly agree; 27.9% agree) with the statement that “The institution allows us the space to ‘try and fail’, to encounter ‘intelligent failures’ as part of effective learning”, while 33.8% were neutral, and 18.4% (14.0% disagree; 4.4% strongly disagree) disagreed. The Chi-square test with the value of $x^2=36.279$ and the degree of freedom (df=4) was significant at $p < 0.000$.

A lower percentage of 42.7% of the respondents agreed (strongly agreed 11.8%; agreed 30.9%) with the statement that “the institution provides training and development programmes to promote business start-up”, while 30.1% were neutral and 27.2% disagreed (disagree= 11.0%; strongly disagree 16.2%). The Chi-square test with the value of x^2=35.176 and the degree of freedom (df=4) was significant at $p < 0.000$.

5.5.5 Cross-tabulation of Section A with Section B

The traditional approach to reporting a result requires a statement of statistical significance. A p-value is generated from a test statistic. A significant result is indicated with "$p < 0.05$".

Table 5.29: Pearson Chi-Square Tests

		Gender	How old are you?	At what school level do you study?	How long have you been engaged in entrepreneurial / entrepreneurship education?	What kind of learner training in entrepreneurial or entrepreneurship education have you received?	Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?
The higher the level of education of an individual the greater the possibility of them starting a venture that progresses past the start-up stage	Chi-square	6,276	9,223	18,352	20,542	24,894	18,426
	Df	4	12	12	8	12	12
	Sig.	0,179	0,684	0,105	.008*	.015*	0,103
The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start-up their own businesses	Chi-square	0,966	26,451	15,072	14,653	28,892	10,319
	Df	4	12	12	8	12	12
	Sig.	0,915	.009*	0,238	0,066	.004*	0,588
The entrepreneurship programmes offered by the institution have practical elements that are devised to encourage the creation of new businesses	Chi-square	5,240	12,280	28,069	7,121	45,123	21,499
	Df	4	12	12	8	12	12
	Sig.	0,264	0,423	.005*	0,524	.000*	.044*
In the institution, the entrepreneurship education	Chi-square	0,378	18,961	10,309	17,118	19,617	19,174

curriculum is designed to enhance learner interest in starting an own business	Df	4	12	12	8	12	12
	Sig.	0,984	0,089	0,589	.029*	0,075	0,084
An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture	Chi-square	1,736	5,682	12,956	11,705	17,419	13,593
	Df	4	12	12	8	12	12
	Sig.	0,784	0,931	0,372	0,165	0,135	0,327
Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses	Chi-square	5,460	5,204	23,212	17,847	34,195	15,855
	Df	4	12	12	8	12	12
	Sig.	0,243	0,951	.026*	.022*	.001*	0,198
Entrepreneurship education can alleviate the fear of failure in starting new businesses	Chi-square	1,341	14,997	7,080	24,716	18,546	27,066
	Df	4	12	12	8	12	12
	Sig.	0,854	0,242	0,852	.002*	0,1	.008*
It is believed that entrepreneurship education is a platform for addressing unemployment in communities, through the creation of new business	Chi-square	4,082	8,055	23,158	25,032	13,779	17,494
	Df	4	12	12	8	12	12
	Sig.	0,395	0,781	.026*	.002*	0,315	0,132
Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole	Chi-square	2,158	8,760	20,463	14,676	22,371	17,361
	Df	3	9	9	6	9	9
	Sig.	0,54	0,46	.015*	.023*	.008*	.043*

Entrepreneurship education in my institution educates the learners about the benefits of entrepreneurship in the development of the South African economy	Chi-square	2,931	37,148	19,810	17,649	23,067	18,379
	Df	4	12	12	8	12	12
	Sig.	0,569	.000*	0,071	.024*	.027*	0,105
Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option	Chi-square	7,654	6,299	14,937	25,257	19,265	39,314
	Df	4	12	12	8	12	12
	Sig.	0,105	0,9	0,245	.001*	0,082	.000*
Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals, who become entrepreneurial thinkers that contribute to sustainable economic development	Chi-square	3,945	9,583	13,197	6,274	15,810	8,093
	Df	4	12	12	8	12	12
	Sig.	0,414	0,652	0,355	0,617	0,2	0,778
Entrepreneurship education contributes in decreasing the number of unemployed in the country	Chi-square	3,016	4,109	21,998	7,732	11,118	11,793
	Df	4	12	12	8	12	12
	Sig.	0,555	0,981	.038*	0,46	0,519	0,462
Entrepreneurship education determines individual entrepreneurial interests	Chi-square	3,237	15,225	17,508	10,754	16,783	19,840
	Df	4	12	12	8	12	12
	Sig.	0,519	0,229	0,131	0,216	0,158	0,07
Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	Chi-square	4,446	4,615	12,632	15,511	17,843	26,187
	Df	4	12	12	8	12	12
	Sig.	0,349	0,97	0,396	.050*	0,121	.010*

Entrepreneurship education increases the number of graduate start-up businesses	Chi-square	3,285	14,025	14,250	10,193	21,265	18,045
	Df	4	12	12	8	12	12
	Sig.	0,511	0,299	0,285	0,252	.047*	0,114
The institution provides students with internship opportunities in businesses in the local economy, which teach them business skills	Chi-square	2,193	14,721	28,638	22,018	43,469	26,642
	Df	4	12	12	8	12	12
	Sig.	0,700	0,257	.004*	.005*	.000*	.009*
Entrepreneurship education imparts the skills to take calculated risks	Chi-square	6,247	8,234	14,608	15,969	17,442	9,495
	Df	4	12	12	8	12	12
	Sig.	0,181	0,767	0,264	.043*	0,134	0,66
Entrepreneurship education can play a crucial role in gaining the necessary skills to manage a business and change the views of South Africans towards self-employment	Chi-square	3,919	9,835	16,197	8,954	21,015	12,208
	Df	4	12	12	8	12	12
	Sig.	0,417	0,63	0,182	0,346	0,05	0,429
Entrepreneurship education provides the ability to pursue opportunities by coming up with new ideas and marshalling needed resources	Chi-square	0,734	9,421	8,803	25,386	21,083	19,036
	Df	3	9	9	6	9	9
	Sig.	0,865	0,399	0,456	.000*	.012*	.025*
Entrepreneurship education affords ability to create and manage a new venture and the ability to think in a creative and critical manner	Chi-square	0,242	4,593	15,599	3,665	14,734	8,627
	Df	4	12	12	8	12	12
	Sig.	0,993	0,97	0,21	0,886	0,256	0,734

Entrepreneurship education teaches me to think strategically	Chi-square	2,827	13,629	18,230	12,217	25,640	16,582
	Df	4	12	12	8	12	12
	Sig.	0,587	0,325	0,109	0,142	.012*	0,166
Entrepreneurship education teaches that social interaction is an important skill for a successful entrepreneur	Chi-square	1,554	8,215	10,332	19,288	23,498	20,080
	Df	4	12	12	8	12	12
	Sig.	0,817	0,768	0,587	.013*	.024*	0,066
The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance	Chi-square	2,107	11,002	34,925	15,942	44,768	21,407
	Df	4	12	12	8	12	12
	Sig.	0,716	0,529	.000*	.043*	.000*	.045*
The institution collaborates with entrepreneurship experts to promote entrepreneurship education	Chi-square	3,039	10,909	22,558	16,057	27,499	19,462
	Df	4	12	12	8	12	12
	Sig.	0,551	0,537	.032*	.042*	.007*	0,078
The institution provides training and development programmes to promote business start-up	Chi-square	5,559	14,578	28,552	15,212	28,319	14,334
	Df	4	12	12	8	12	12
	Sig.	0,235	0,265	.005*	0,055	.005*	0,28
The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	Chi-square	5,406	8,086	25,848	13,000	29,753	24,359
	Df	4	12	12	8	12	12
	Sig.	0,248	0,778	.011*	0,112	.003*	.018*

The institution organises career talks during convocation day	Chi-square	4,597	10,909	17,443	11,188	22,134	16,665
	Df	4	12	12	8	12	12
	Sig.	0,331	0,537	0,134	0,191	.036*	0,163
The institution facilitates student visits to industries to gain more knowledge about their subject	Chi-square	3,916	6,903	27,166	10,396	41,852	23,366
	Df	4	12	12	8	12	12
	Sig.	0,417	0,864	.007*	0,238	.000*	.025*
The institution practically orients students to outreach programmes	Chi-square	1,396	16,672	8,854	5,965	26,845	13,729
	Df	4	12	12	8	12	12
	Sig.	0,845	0,162	0,715	0,651	.008*	0,318
The institution allows us the space to “try and fail” to encounter “intelligent failures” as part of effective learning	Chi-square	3,657	12,697	10,939	8,758	27,779	7,738
	Df	4	12	12	8	12	12
	Sig.	0,454	0,391	0,534	0,363	.006*	0,805

5.5.5.1 Assessment of whether an entrepreneurship education curriculum promotes business start-up

The p-value between “The higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up stage” and “How long have you been engaged in entrepreneurial/ entrepreneurship education?” was 0.008, and “What kind of learner training in entrepreneurial or entrepreneurship education have you received?” had a p-value of 0.015. The values for these variables are less than the conventional significance value of 0.05. This means that there is a significant relationship between variables.

The p-value between “The higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up stage” and “gender” was 0.179; “age” had a p-value of 0.684; “At what school level do you study?” had 0.105 and “How much time you spent on entrepreneurship education every week” had 0.103. The values of these are more than the conventional significance value of 0.05, meaning that there is no statistically significant relationship between these variables.

The p-value between “The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start-up their own businesses” and “age” was 0.009, “What kind of learner training in entrepreneurial or entrepreneurship education have you received?” had a p-value of 0.004. The value of the variables is less than the conventional significance value of 0.05, meaning that there is a significance relationship between the variable.

The p-value between “gender” and “At what school level do you study?” had a p-value of 0.238; “How long have you been engaged in entrepreneurial / entrepreneurship education?” and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” had a p-value of 0.588. There is no significant relationship between the variables as the values of these are more than the conventional significance value of 0.05.

The p-value between “In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business” and “How long have

you been engaged in entrepreneurial / entrepreneurship education?" was 0.029. The value of the variable is less than the conventional significance value of 0.05. There is thus a significant relationship between the variables.

The p-value between "In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business" and "gender" was 0.984. "Age" with and "At what school level do you study?" had a p-value of 0.589, "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" and "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" had a p-value of 0.084. The values of these are more than the conventional significance value of 0.05. There is thus no statistically significant relationship between these variables.

The p-value between "An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture" and "gender" was 0.784. "Age" and, "At what school level do you study?" had a p-value of 0.372. "How long have you been engaged in entrepreneurial / entrepreneurship education?" and "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" had a p-value of 0.135. "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" and "An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture" had a p-value of 0.327. The values of these are more than the conventional significance value of 0.05, meaning that there is no statistically significant relationship between these variables.

The p-value between the statement "Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses" and "At what school level do you study" with the p-value of 0.026, "how long have you been engaged in entrepreneurial / entrepreneurship education?" had a p-value of 0.022. "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" and "Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses" had a p-value of 0.001. The value of these

variables is less than the conventional significance value of 0.05. There is thus a significant relationship between the variables.

The p-value between the statement “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses” and “gender” was 0.243. “Age” and “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses” had a p-value of 0.951. The p-value between “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” and “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses” was 0.198. The values show no significant relationship between the variables, since the p-values are more than the conventional significance value of 0.05.

The p-value between the statement “entrepreneurship education can alleviate the fear of failure in starting new businesses” and “how long have you been engaged in entrepreneurial / entrepreneurship education?” with the p-value of 0.002 and “can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” with the p-value of 0.008. The values show a significant relationship between the variables as the value of the variables is less than the conventional significance value of 0.05.

The p-value between “Entrepreneurship education can alleviate the fear of failure in starting new businesses” and “gender” was 0.854. “Age” and “Entrepreneurship education can alleviate the fear of failure in starting new businesses” had a p-value of 0.242. The p-value between “At what school level do you study” and “Entrepreneurship education can alleviate the fear of failure in starting new businesses” was 0.852. The values show no significant relationship between the variables since the p-values are more than the conventional significance value of 0.05.

5.5.5.2 Perceptions of students about the benefits of entrepreneurship education

The p-value between “Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option” and “How

long have you been engaged in entrepreneurial / entrepreneurship education?" was 0.001. "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" and "Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option" had a p-value of 0.000. There is a significance relationship between the variables as the p-values are less than the conventional significance value of 0.05.

The p-value between "Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option" and "gender" was 0.105. "Age" and "At what school level do you study" had a p-value of 0.245. the p-value between "Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option" and "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" was 0.082. The p-values are more than the conventional significance value of 0.05, so there is no relationship between the variable.

The p-value between the statement "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" and "How long have you been engaged in entrepreneurial / entrepreneurship education?" was 0.050. "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" and "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" had a p-value of 0.010. The p-values are less than the conventional significance value of 0.05, meaning that there is a relationship between the variables.

The p-value between "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" and "Gender" was 0.349; "Age" was 0.97; "At what school level do you study?" was 0.396, and "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" was 0.121. The values of these are more than the conventional significance value of 0.05, meaning that there is no statistically significant relationship between these variables.

The p-value between "Entrepreneurship education increases the number of graduate start-up businesses" and "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" was 0.047. There is a significant

relationship between variables, since the p-value is less than the conventional significance value of 0.05.

The p-value between “Entrepreneurship education increases the number of graduate start-up businesses” and “gender” was 0.511. “Entrepreneurship education increases the number of graduate start-up businesses” and “Age” had a p-value of 0.299. The p-value between “Entrepreneurship education increases the number of graduate start-up businesses” and “At what school level do you study” was 0.285. “How long have you been engaged in entrepreneurial / entrepreneurship education?” and “Entrepreneurship education increases the number of graduate start-up businesses” had a p-value of 0.252. The p-value between “Entrepreneurship education increases the number of graduate start-up businesses” and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” was 0.114. There is no relationship between the variables because the p-values are more than the conventional significance value of 0.05.

5.5.5.3 Graduate attributes and skills needed in entrepreneurship education

The p-value between the statement “Entrepreneurship education affords ability to create and manage a new venture and the ability to think in a creative and critical manner” and “Gender” was 0.993; “Age” was 0.97; “At what school level do you study” was 0.27; “How long have you been engaged in entrepreneurial / entrepreneurship education?” was 0.886; “What kind of learner training in entrepreneurial or entrepreneurship education have you received?” was 0.256; and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” was 0.734. The values of the variables are more than the conventional value of 0.05, so there is no statistically significant relationship between variables.

The p-value between the statement “Entrepreneurship education teaches me that social interaction is an important skill for a successful entrepreneur” and “How long have you been engaged in entrepreneurial / entrepreneurship education?” was 0.013 and “What kind of learner training in entrepreneurial or entrepreneurship education have you received?” was 0.024. The results reveal that there is a significant relationship between variables, since the p-value is less than the conventional significant value of 0.05.

The p-value between the statement “Entrepreneurship education teaches me that social interaction is an important skill for a successful entrepreneur” and “Gender” was 0.871; “Entrepreneurship education teaches me that social interaction is an important skill for a successful entrepreneur” and “age” had a p-value of 0.768; “At what school level do you study” and “Entrepreneurship education teaches me that social interaction is an important skill for a successful entrepreneur” was 0.587; and the p-value between “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” and “Entrepreneurship education teaches me that social interaction is an important skill for a successful entrepreneur” was 0.066. The result is the indication of no statistically significant relationship between the variables because the p-values are more than the conventional significance value of 0.05.

The p-value between the statement “The institution provides students with internship opportunities in businesses in the local economy, which teaches them business skills” and “At what school level do you study” was 0.004; “How long have you been engaged in entrepreneurial / entrepreneurship education?” was 0.005; “What kind of learner training in entrepreneurial or entrepreneurship education have you received?” was 0.000; and “Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?” was 0.009. The values show a significant relationship between the variables as the value of the variables is less than the conventional significance value of 0.05.

The p-value of the statement “The institution provides students with internship opportunities in businesses in the local economy, which teaches them business skills” and “gender” was 0.700 and “age” was 0.257. There is no relationship between the variables because the p-values are more than the conventional significance value of 0.05.

5.5.5.4 Role of public institutions in promoting entrepreneurship education

The p-value between “The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance” and “At what school level do you study” was 0.000; “How long have you been engaged in entrepreneurial / entrepreneurship education?” was 0.043; “What kind of learner training in entrepreneurial or

entrepreneurship education have you received?" was 0.000; and "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" was 0.045. The results are the indication of a significance relationship between variables since the p-values are less than the conventional value of 0.05.

The p-value between "The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance" and "gender" was 0.716. "Age" and "The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance" had a p-value of 0.529. The results show that there is no significant relationship between the variables, the p-values are more than the conventional 0.05.

The p-value between the statement "The institution provides training and development programmes to promote business start-up" and "At what school level do you study?" was 0.005. "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" and "The institution provides training and development programmes to promote business start-up" had a p-value of 0.005. The p-values show that there is a significant relationship between variables since the values are less than the conventional 0.05.

The p-value between "The institution provides training and development programmes to promote business start-up" and "At what school level do you study" and "Gender" was 0.235. "Age" had a p-value of 0.265. The p-values are more than the conventional 0.05, which means that there is no significant relationship between the variables.

The p-value between the statement "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as part of effective learning" and "What kind of learner training in entrepreneurial or entrepreneurship education have you received?" was 0.006, showing that there is a significant relationship between variables because the values are less than the conventional 0.05.

The p-value between the statement "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as part of effective learning" and "Gender" was 0.454; "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as

part of effective learning" and "Age" had a p-value of 0.391. The p-value between "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as part of effective learning" and "at what school level do you study" was 0.534; "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as part of effective learning" and "How long have you been engaged in entrepreneurial / entrepreneurship education?" had a p-value of 0.363; while between "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as part of effective learning" and "Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?" the p-value was 0.805. The values of these variables are more than the conventional significant value of 0.05, meaning that there is no statistically significant relationship between these variables.

5.5.6 Pearson's correlation coefficient

As stated previously (Section 5.2.6), Pearson's correlation coefficient is a tool used to investigate the relationship between two quantitative, continuous variables (May, Hunter and Jason 2017). The strength of the correlation based on the absolute value of r_s is 0.00-0.19, Very weak; 0.20- 0.39, Weak; 0.40-0.59, Medium; 0.60-0.79, Strong; and 0.80-1.0, Very strong (Dawson 2009).

Pearson's Correlation was used to test for the direction and the strength of the relationship amongst different variables in order to establish the effect of these variables on the effectiveness of entrepreneurship education in PILs. Positive values indicate a directly proportional relationship between the variables and a negative value indicates an inverse relationship. All significant relationships are indicated by a * or **.

5.5.6.1 Assessment of whether an entrepreneurship education curriculum promotes business start-up

The correlation value between "The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start-up their own businesses" and "the higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up stage" is 0.531, which indicates a medium positive correlation between the variables. Thus, the level of education is a determining factor in the skills needed to start a business.

There is a significant correlation value between “The entrepreneurship programmes offered by the institution have practical elements that are devised to encourage the creation of new businesses” and “The higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up stage” of 0.494, which indicates a medium positive correlation between variables.

There is a significant positive correlation between “In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business” and “The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start-up their own businesses” with a correlation coefficient value of 0.388, which indicates a weak positive correlation between variables.

There is a significant positive correlation between “An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain the practical skills needed to start an entrepreneurial venture” and “In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business” with a correlation coefficient value of 0.399, which indicates a weak positive correlation between variables.

There is a significant positive correlation between “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses” and “The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start-up their own businesses” at a correlation coefficient value of 0.202, which indicates a weak positive correlation between these variables.

The correlation value between “Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses” and “In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business” is 0.382, which indicates a medium positive correlation between the variables.

The findings reveal a significant correlation between “It is believed that entrepreneurship education is a platform for addressing unemployment in communities through the creation of new business” and “Entrepreneurship education

can alleviate the fear of failure in starting new businesses" at 0.351, which indicates a medium positive correlation between the variables.

There is a significant positive correlation between "Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole" and "The higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up stage" at a correlation coefficient value of 0.356, which indicates a weak positive correlation between variables.

There is a significant positive correlation between "Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole" and "It is believed that entrepreneurship education is a platform for addressing unemployment in communities, through the creation of new business" at a correlation coefficient value of 0.425, which indicates a medium positive correlation between variables.

The results show a significant positive correlation between "Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals who become entrepreneurial thinkers that contribute to sustainable economic development" and "Entrepreneurship education can alleviate the fear of failure in starting new businesses" at a correlation coefficient value of 0.237, which indicates a weak positive correlation between these variables.

The results show a significant positive correlation between "Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals who become entrepreneurial thinkers that contribute to sustainable economic development" and "Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option" at a correlation coefficient value of 0.292, which indicates a weak positive correlation between these variables.

There is a significant positive correlation between "It is believed that entrepreneurship education is a platform for addressing unemployment in communities through the creation of new business" and "The higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up

stage" at a correlation coefficient level of 0.320, which indicates a weak positive correlation between these variables. The result means that as people get educated about entrepreneurship, there are more chances that they will start and create business ventures that will curb unemployment.

There is a significant positive correlation between "It is believed that entrepreneurship education is a platform for addressing unemployment in communities through the creation of new business" and "Entrepreneurship education can alleviate the fear of failure in starting new businesses" at a correlation coefficient level of 0.351, which indicates a medium positive correlation between these variables. The findings reveal that if entrepreneurship education is effective, graduates become more interested in venture creation.

5.5.6.2 Perceptions of students on the benefits of entrepreneurship education

The correlation coefficient value between "Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole" and "An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture" is 0.174, which indicates a weak positive correlation of the variables.

The correlation coefficient value between "Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole" and "It is believed that entrepreneurship education is a platform for addressing unemployment in communities through the creation of new business" is 0.425, which indicates a medium strength positive correlation.

There is a significant positive correlation between "Entrepreneurship education in my institution educates learners about the benefits of entrepreneurship in the development of the South African economy" and "In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business" at a correlation coefficient value of 0.369, which indicates a weak strength positive correlation.

The results indicate a significant positive correlation between "Entrepreneurship education helps students to consider new venture creation and self-employment as a

valid graduate career option" and "The entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start-up their own businesses" at a correlation coefficient value of 0.348, which indicates a weak strength positive correlation between these variables.

The coefficient correlation value between "Entrepreneurship education contributes in decreasing the number of unemployed in the country" and "An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain the practical skills needed to start an entrepreneurial venture" is 0.455, which indicates a medium strength positive correlation.

The correlation coefficient value between "Entrepreneurship education contributes in decreasing the number of unemployed in the country" and "Entrepreneurship education in my institution educates learners about the benefits of entrepreneurship in the development of the South African economy" is 0.358, which indicates a weak strength positive correlation.

The correlation coefficient value between "Entrepreneurship education contributes in decreasing the number of unemployed in the country" and "Entrepreneurship education improves economic literacy." is 0.459, which indicates a medium strength positive correlation.

The results indicate that there is a significant positive correlation between "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" and "Entrepreneurship education improves economic literacy" at a correlation coefficient value of 0.429, which indicates a medium strength positive correlation.

The result indicates that there is a significant positive correlation between "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" and "Entrepreneurship education contributes to decreasing unemployment in the country" at a correlation coefficient value of 0.468, which indicates a medium strength positive correlation.

There is a significant positive correlation between "Entrepreneurship education increases the number of graduate start-up businesses" and "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" at

a correlation coefficient value of 0.500, which indicates a medium positive correlation between these variables.

5.5.6.3 Graduate attributes and skills needed in entrepreneurship education

The correlation coefficient value between “The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy” and “Entrepreneurship education increases the number of graduate start-up businesses” is 0.452 which indicates a medium positive correlation between these variables.

The findings indicate that the correlation value between “Graduates gain the skills to take calculated risks through entrepreneurship education” and “Effective entrepreneurship education offers students access to skills the and knowledge needed to start an entrepreneurial venture” is 0.420, which indicates a medium positive correlation between these variables.

The findings indicate that the correlation value between “Graduates gain the skills to take calculated risks through entrepreneurship education” and “In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business” is 0.489, which indicates a medium positive correlation between these variables.

The findings indicate that the correlation value between “Graduates gain the skills to take calculated risks through entrepreneurship education” and “Entrepreneurship education helps students to consider self-employment as a valid graduate career option” is 0.456, which indicates a medium positive correlation between these variables.

The findings indicate that the correlation value between “Graduates gain the skills to take calculated risks through entrepreneurship education” and “The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy” is 0.582, which indicates a medium positive correlation between these variables.

The coefficient correlation value between “Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative

and critical manner" and "Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures" is 0.463, which indicates a medium positive correlation between these variables.

The findings reveal that the correlation between "Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner" and "Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who become entrepreneurial thinkers and contribute to sustainable economic development" is 0.481, which indicates a medium positive correlation between these variables.

There is a significant positive correlation between "Entrepreneurship education equips students to think strategically" and "Effective entrepreneurship education offers students access to skills and knowledge needed to start an entrepreneurial venture" at a coefficient correlation value of 0.512, which indicates a medium positive correlation between these variables.

There is a significant positive correlation between "Entrepreneurship education equips students to think strategically" and "Entrepreneurship education helps students to consider self-employment as a valid graduate career option" at a correlation coefficient value of 0.524, which indicates a medium positive correlation between these variables.

There is a significant positive correlation between "Entrepreneurship education equips students to think strategically" and "Graduates gain the skills to take calculated risks through entrepreneurship education" at a correlation coefficient value of 0.555, which indicates a medium positive correlation between these variables.

The correlation between "Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources" and "Entrepreneurship education contributes to decreasing unemployment in the country" is 0.458, which indicates a medium positive correlation between these variables.

The correlation between "Graduates are enabled through entrepreneurship education to pursue opportunities by coming up with new ideas and marshalling needed resources" and "Graduates gain the skills to take calculated risks through

entrepreneurship education" is 0.493, which indicates a medium positive correlation between these variables.

There is a significant positive correlation between "Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment" and "Graduates are enabled through entrepreneurship education to pursue opportunities by coming up with new ideas and marshalling needed resources" at a correlation coefficient value of 0.593, which indicates a medium positive correlation between these variables.

5.5.6.4 Role of public institutions in promoting entrepreneurship education

The result indicates the significant positive correlation between "The institution offers support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance" and "Entrepreneurship education increases the number of graduate start-up businesses" at a correlation coefficient value of 0.364, which indicates a weak strength between the variables.

There is a significant positive correlation between "The institution provides training and development programmes to promote business start-up" and "The institution offers support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance" at a correlation coefficient value of 0.549, which indicates a medium positive correlation between these variables. This implies that entrepreneurial training and support are a determining factor in entrepreneurship education.

There is a significant positive correlation between "The institution collaborates with entrepreneurship experts to promote entrepreneurship education" and "The institution provides training and development programmes to promote business start-up" at a correlation coefficient value of 0.752, which indicates a strong positive correlation between these variables.

The correlation between "The institution invites entrepreneurs and practitioners from different organisations to share their experience with students" and "The institution

collaborates with entrepreneurship experts to promote entrepreneurship education" is 0.650, which indicates a strong positive correlation between these variables.

The correlation between "The institution organises career talks during convocation day" and "The institution collaborates with entrepreneurship experts to promote entrepreneurship education" is 0.650, which indicates strong positive correlation between these variables.

There is a significant positive correlation between "The institution organises career talks during convocation day" and "The institution collaborates with entrepreneurship experts to promote entrepreneurship education" at a correlation coefficient value of 0.604, which indicates a strong positive correlation between these variables.

There is a significant positive correlation between "The institution organises career talks during convocation day" and "The institution invites entrepreneurs and practitioners from different organisations to share their experience with students" at a correlation coefficient value of 0.568, which indicates a medium positive correlation between these variables.

There is a significant positive correlation between "The institution practically orients students to outreach programmes" and "The institution organises career talks during convocation day" at a coefficient correlation value of 0.561, which indicates a medium positive correlation between these variables.

The correlation between "The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning" and "The institution invites entrepreneurs and practitioners from different organisations to share their experience with students" is 0.637, which indicates a strong positive correlation between these variables.

The correlation between "The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning" and "The institution takes students for visits to industries to gain more knowledge about the subject" is 0.618, which indicates a strong positive correlation between these variables.

The correlation value between "The higher the level of education of an individual, the greater the possibility of them starting a venture that progresses past the start-up

stage" and "The institution allows us the space to 'try and fail' to encounter 'intelligent failures' as part of effective learning" is 0.429, which indicates a medium strength positive correlation of the variables. Therefore, the more the institution allows trial and error, the more likely start-ups will succeed, and vice versa.

5.5.7 Section summary

The focus of this section was on the analysis, presentation and interpretation of the results relating to data from student respondents. This section presented the empirical findings on the relationship between objectives; assessment of entrepreneurship curriculum; benefits of entrepreneurship education; attributes and skills needed in entrepreneurship education; as well as its role in the promotion thereof. All four predictor objectives had a significant positive relationship with effectiveness of entrepreneurship education.

The results revealed a significant positive relationship between the independent and dependent variables. The results revealed that the length of time one has been engaged in entrepreneurship education is a determining factor in starting a venture that progresses past the start-up stage. The results further reveal that entrepreneurship education has the greatest influence on creativity, entrepreneurial skills and motivation to initiate a new venture.

5.6 QUALITATIVE DATA – STUDENTS

This section focused on qualitative data relating to students' perceptions of entrepreneurship education. Analysis revealed three primary themes, namely:

- Promotion and transformation
- Different and distinctive
- Entrepreneurship education vs science and art

Each theme is unpacked below.

5.6.1 Theme 1: Promotion and transformation

This theme looked at how entrepreneurial education promoted a pathway to business start-up and the extent to which entrepreneurship education was transforming SA youth into entrepreneurs.

It was informed by the following sub-themes:

5.6.1.1 Promoting pathways to business start-up

This was informed by the following:

- **Skills and knowledge**

The highest ranked sub-theme, this was informed by the following in hierarchical order:

✓ **Business plan**

This was the highest ranked factor whereby business plan writing was a key skill taught to students. Most students highlighted that teachers provided guidance for embedding enterprise and an entrepreneurial mindset. The responses were in line with the findings of Sekaran and Bougie (2016) which stated that teaching and working methods have been introduced to entrepreneurship education. The most popular teaching methods with final year students in PILs include the creation of business plans followed by class discussion, as well as guest speakers.

Student respondent Tvt s2 stated:

> *Teachers assist students with writing the business plan and instilling entrepreneurial behaviour.*

Student respondent Tvt s3 notably shared the sentiments of student respondent Tvt s3:

> *By assisting students with writing business plans so they are able to communicate their visions.*

Student respondent Tvt s4:

> *By assisting them with writing business plans.*

Student respondent Tvt s5:

By assisting them with writing business plans in order to help guide their decisions.

Student respondent Tvt s8:

The institution provides pathways by helping in writing business plans.

Responses show that teachers in PILs try to develop an entrepreneurial mindset in students through the use of a plan in order to be able to learn how to run a business comprehensively.

✓ **Starting a business**

This was the second largest ranked factor and makes logical correlation to the above as business planning was tied to starting a business. Hence, giving the student the knowledge to start a business coupled with skills such as business plan writing is seen as a strong factor.

Student respondent Tvt s10 stated that initiating their own small business helps as they get the idea of what is expected from them in order to grow the business.

It gives us a heads-up on how to start a business and what to expect in the process.

Student respondent Tvt s9 emphasised that:

It gives students ideas and ways in which a business can be started.

Student respondent UNIV-ST5 highlighted the important characteristics of entrepreneur they learnt in the process by stating that:

It provides students with the knowledge to use to start a new venture.

Student respondent UNIV-ST 7:

We are given the knowledge and skills required when starting a business.

✓ **Idea-sharing**

Idea-sharing promoted interactivity and stimulated thinking.

Student respondent UNIV-ST2:

We shared ideas about businesses, which helped promote innovation. We connected with other students, which makes the innovations come to life.

Student respondent UNIV-ST9:

They give us the opportunity to come up with our own business ideas and put them into action. We make ourselves open and share with others what we are doing and what our thoughts are.

✓ **Experts**

Industry experts provided sound advice based on real experience.

Student respondent Tvt s2 mentioned the importance of collaborating with experienced entrepreneurs in facilitating entrepreneurial education:

We get advice from business experts who give clues towards how to control and finance your business.

Student respondent Tvt s4 emphasised the impact of experienced entrepreneurs in entrepreneurship education:

We get advice from successful entrepreneurs.

Student respondent Tvt s5:

Getting advice from successful entrepreneurs.

✓ **Strategic planning**

Planning is a key part of business and this was taught to students.

Student respondent UNIV-ST6:

They teach us to plan carefully and be able to identify, collect, screen and analyse information about the business we want to partake in.

Student respondent from UOT-S6 mentioned how they are taught to turn a business into a reality:

They teach us strategic planning to make our plans a reality. It is said that the business environment and relevant technologies are constantly changing and new risks and uncertainties will surface on a regular basis. Therefore, they teach us about carefully and thoughtfully aligning the

strength of the business to the opportunities that are available in the company's chosen business environment.

✓ **Current business world**

Understanding the real business world was important for students to know what to expect.

Student respondent Tvt s8:

And making sure that we understand all about what is happening in the business world.

✓ **Already started businesses**

Some students at the institution already had started a business operation, which demonstrated that the skills and knowledge learnt were applicable.

Student respondent UOT-S1:

There are students who already started their business, which proves that the institution promotes a pathway to business start-up.

- **Events and programmes**

This was another prominent sub-theme. There were various events and programmes conducted by the institution, such as market days and entrepreneurship week. These served to bring the real business world to the students and give them the skills, knowledge and experience they needed.

Student respondent Tvt s6 highlighted the use of participating in small businesses in order to gain experiences.

They host small business days.

Student respondent Tvt s7:

We plan market days.

Student respondent UNIV-ST3:

We have entrepreneurial week.

Student respondent UNIV-ST4:

By developing and inventing student entrepreneurship week.

Student respondent UOT-S10:

> *By having events, bringing the real world to students.*

✓ **Centre for Social Entrepreneurship**

One university of technology had a Centre for Social Entrepreneurship (CSE) which hosted workshops whereby students could pitch their business ideas and win prizes.

✓ **Development of Ideas**

Two respondents emphasised that the institution had platforms, departments and start-up funds for sustainable business ideas.

Student respondent UOT-S3 stated that the institution is in the process of updating the curriculum:

> *The institution did not have any entrepreneurship development programme until August 2018, whereby they have start-up funds for sustainable ideas.*

Student respondent UOT-S4:

> *There is a department of entrepreneurship on our campus that assists students in developing their business ideas. They try and make sure that we as students understand the culture of entrepreneurship.*

✓ **Not entirely**

However, one respondent felt that it did not necessarily promote a pathway to business.

Student respondent UOT-S5:

> *It does not necessarily promote a pathway to business start-up. The subjects are more of a theory than being practical.*

5.6.1.2 Extent of transformation of SA youth into entrepreneurs

This sub-theme examined the extent to which entrepreneurship education transformed the youth into entrepreneurs. It generated a variety of factors.

- **Opportunities and support**

This was the highest ranked factor. Opportunities and support were provided for students in the following ways:

✓ **Job creators**

The main focus of entrepreneurship education is to build job-creators who through their businesses can employ others and so reduce unemployment.

Student respondent UNIV-ST2 explained how entrepreneurship education develops an entrepreneurial mindset in students:

> *Teaches us to be independent and embark ourselves on a journey where we begin to start our own business and create opportunities for others.*

Student respondent UOT-S2:

> *It teaches us to be young innovators and improve lifestyles by creating jobs.*

Student respondent UOT-S4:

> *Reduces the rate of unemployment.*

Student respondent UOT-S7:

> *Improve youth's lifestyle by creating jobs.*

Student respondent UOT-S8:

> *They inspire the youth to become job creators instead of job-seekers.*

✓ **Start business**

Relating to the above, entrepreneurship education promoted business start-up, which was a key agent, for transformation, through knowledge, skills and opportunities.

Student respondent Tvt s2:

> *By giving them the opportunity to show what they can do in order to make money.*

Student respondent Tvt s7:

> *Entrepreneurship education transforms SA youth into entrepreneurs by offering support for them to start up their own businesses.*

Student respondent UOT-S8:

> *By learning the skills to start and run successful businesses.*

✓ **Better life**

Entrepreneurship education provided opportunities for students to live better lives and improve their standard of living, while also creating opportunities for others.

Student respondent Tvt s3:

> *By giving them an opportunity to show what they can do in order to make money and improve their standards.*

Student respondent Tvt s2:

> *And improve their standard of living at home also create opportunities for all.*

- **Skills and training**

This ranked highly as skills and training were provided based on the following.

✓ **Business plans**

Learning about drawing up business plans.

✓ **Finances**

Skills and knowledge on how to manage finances and funds.

✓ **Training and Education**

Relevant training and education to build experience.

✓ **Information and knowledge**

Students were also given relevant business information and knowledge.

- **Programmes**

Specific programmes such as Entrepreneurship Week, community education programmes and youth programmes assisted in building knowledge, experience and rapport.

Student respondent UNIV-ST1 mentioned the programmes that are available in the institution for cultivating an entrepreneurial mindset:

> *There is the entrepreneurship week programme formed for every young person interested in entrepreneurship. Students partake in business activities on campus.*

Student respondent Tvt s6 highlighted the extent to which the institution promotes external engagement that encourages innovation and entrepreneurship through collaborations and partnerships:

Community education programmes.

Student respondent Tvt s5:

They form youth programmes which focuses on entrepreneurs and the entrepreneurship ecosystem.

- **Encouragement**

Encouragement and motivation for students to start their businesses was also a key factor of entrepreneurship education.

Student respondent UNIV-ST10 mentioned the implementation of business support programmes that empower aspiring student entrepreneurs:

Encourage us to do better and not being afraid of failure.

Student respondents UNIV-ST3 asserted that they are aware of failure in entrepreneurship:

It encourages youth to start their small businesses. They teach us not to be afraid of failing because success can only come from failure.

Student respondent UOT-S8 indicated that they are inspired to create jobs in order to contribute to economic development:

They inspire the youth to become job creators instead of job-seekers.

Student respondent UOT-S9 emphasised how the programme drove them to initiate their businesses:

It encourages youth to start their small businesses.

- **THINKING AND MINDSET**

An important point was made by two respondents who stated that the mindset and thinking were positively influenced in students towards business, making them more business oriented in their thinking style.

Student respondent Tvt s9 mentioned the development of an entrepreneurial mind-set:

> *It plays a role in developing entrepreneurial thinking and building an entrepreneurial mindset among youth and within the community.*

Student respondent UOT-S10 concurred on the mindset cultivation about entrepreneurship:

> *Promotes positive mindset in youth.*

✓ **Resources**

Resources are also provided to assist students in starting their businesses.

Student respondent UOT-S1:

> *Required resources are provided for the youth to use for starting their businesses.*

✓ **Economy**

Through more business start-ups, the economy of the country will improve.

Student respondent UNIV-ST4:

> *The output of all the production of businesses contributes positively towards the economy of SA.*

✓ **Mentorship**

Mentorship was provided to help students examine their business plans and ideas.

✓ **Lacking aspects and improvement needed**

There were three respondents that felt that some key aspects were lacking and improvement was needed.

✓ **Resources**

Required resources were needed for the youth.

✓ **Lack of entrepreneurial modules**

From a general SA context, some universities still did not have entrepreneurship as a module. This could hinder transformation.

✓ **Introduce at Secondary School**

One respondent felt that entrepreneurship education should be encouraged at secondary school level on all SA schools.

5.6.2 Theme 2: Different and distinctive

This was the largest theme when it came to student responses. It was informed by the following 4 sub-themes.

- Different and worthy of distinction
- Distinctive features-lesson content
- Making entrepreneurship modules more entrepreneurial
- Important entrepreneurship subjects

Each subtheme is unpacked below.

5.6.2.1 Different and worthy of distinction

This sub-theme analysed and described the aspect of entrepreneurship education being different and worthy of distinction at institutions. Many thematic variables were discovered and listed in hierarchical order.

- **Relevant and applicable**

Relevance and applicability were the highest ranked sub-theme. This constituted various factors as listed below.

✓ **Practical**

Practicality of projects and examples ranked high, as confirmed by nine respondents. This is a logical argument as business and entrepreneurship requires practical thinking.

Student respondent Tvt s4 mentioned that the subject involved more practical activities which enhance the entrepreneurial spirit:

> *It is in a practical aspect and we enjoy it even more. It is easy to relate. We are allowed to explore, try our businesses and learn from the mistakes we make.*

Student respondent Tvt s6 highlighted that teachers use examples that inspire them to value entrepreneurship:

They offer practical examples. They use local people and business in order to stimulate an entrepreneurial attitude.

Student respondent UNIV-ST5:

It is more practical even though it doesn't help the students to seek resources to establish business.

Student respondent UOT-S1 emphasised the practicality of the subject:

It is more practical.

Another student respondent UOT-S1 emphasised on practical aspect of the course by stating:

More practical and projects.

Despite the practical aspect of entrepreneurship education in higher education, most PILs have not fully developed strategies to tap this resource. What they do are haphazard courses or subjects which do not really reflect the importance of entrepreneurship in the context of the development of the rest of country.

✓ **Managerial role**

In terms of practicality, it was conveyed that students get to practice the role of being an entrepreneur while studying.

Student respondent UNIV-ST1:

We practice the role of being a manager while still in the institution.

Student respondent UNIV-ST6:

They make sure that we practice the role of being an entrepreneur while still in the institution.

Role-plays in entrepreneurship education play an important role in the development of entrepreneurial intentions, according to the respondents. The result shows that the development of entrepreneurial intent is increasingly being encouraged from the outset at PILs through to graduation, with the aim of stimulating entrepreneurial behaviour. This is in contrast with findings by Ahmad and Buchanan (2015: 351) that entrepreneurial education at South African PILs is based on the colonial approach whereby students are trained largely to fill gaps in the expertise needed at the time.

- **Real world**

✓ Students get to know more about the real world of business though practical exercises and by also inviting entrepreneurs. The PILs prepare students for the real world by challenging them to address real world problems. Students go about the process of organizing their team, developing community outreach projects and participating in a series of competitive events, they develop teamwork, and communication skills that set them apart from the average university student.

Relatable

Students are given relatable material and examples when it comes to entrepreneurship.

✓ **Socio-economics**

One respondent emphasised an important point whereby entrepreneurship education taught students about the growth of entrepreneurship in relation to economic and demographic factors.

- **Engagement**

Engagement was a very highly ranked variable and was informed by the following:

✓ **Lecturer - Student**

Both lecturers and students seemed to work together, whereby the lecturers made learning content easier to understand, while the student ensured that they were engaged with the content.

✓ **Projects**

Projects given by the institution allowed students to engage more.

✓ **ENACTUS**

One UOT student asserted that the well-known programme known as “ENACTUS” was created by the institution to help students with entrepreneurship.

✓ **Presentation on understanding**

Students were given the opportunity to express their understanding of entrepreneurship through presentations.

- **Dedication and motivation**

This was an important factor and was two-fold, whereby it involved both students and lecturers. Hence, dedication and motivation from both brought success and distinction.

✓ **Students**

Students were focused and driven for success. They took work seriously, were passionate about entrepreneurship and hence were eager to become business owners.

Student respondent Tvt s10 indicated that they are informed about the opportunities that entrepreneurship brings:

> *Information about entrepreneurship is given to students and they dedicate themselves for better results.*

Student respondent Tvt s3 stated that students are determined to start their small business while still on campus:

> *We work hard and are very passionate. We manage our small businesses and make a little income on campus.*

Student respondent Tvt s7 indicated that students put efforts into completing tasks that are given to them:

> *We take our work seriously. If teachers assign a task to us, we make sure that we complete the task in time. Some tasks are challenging, but they train us to be better students.*

Student respondent Tvt s9 highlighted that they love the idea of being business owners:

> *Students are eager to become owners of their own businesses.*

✓ **Lecturers**

Similarly, dedication and passion were shown by lecturers/teachers.

Student respondent UNIV-ST8 indicated that the lecturers love their job:

> *Lecturers are passionate about their job.*

Student respondent from UOT-S5:

> *Dedication of students and teachers.*

Student respondent from UOT-S6:

Dedication of lecturers.

- **Forward thinking**

Forward thinking was present in students, which should be an eloquent attribute of entrepreneurship.

✓ **Improving areas**

A very interesting point was made, whereby students showed progressive thinking by utilising entrepreneurship to improve o existing laws and skills.

Student respondent Tvt s2:

It is because in entrepreneurship we improve some existing laws, also coming up with new ideas to improve the business world.

Student respondent from UOT-S7:

To improve entrepreneurship and improve skills.

✓ **New ideas**

Students continuously pitched new business ideas.

Student respondent from UNIV-ST3:

We pitch business ideas that we have in mind.

Student respondent from Tvt s2:

Also coming up with new ideas to improve the business world.

- **Outcomes-based learning**

An important point was made by one respondent whereby learning was outcomes based. This meant that students could see the outcome of the efforts made in entrepreneurial activities.

Student respondent from UOT-S10:

We are given skills in a manner that we can see the outcome of the input in the activities that we are given.

5.6.2.2 Distinctive features – lesson content

Distinctive features of lesson content revealed various sub-themes. These are ranked in hierarchical order.

- **Engagement**

Similar to the to the above, this was the highest ranked sub-theme, which contributed to lesson content distinction.

✓ **Presentations**

Presentations were done, comprising research and business plan presentations.

Student respondent Tvt s10 indicated that they conduct research and present the concept in front of other learners:

We conduct research and present it to class.

Student respondent Tvt s8:

We do presentations based on our business plans.

Student respondent UNIV-ST9:

Doing presentations.

- **PROJECTS AND RESEARCH**

Building on the above, Projects and research was a constituent to a good presentation. This provided students an opportunity to get to know how to research well and develop their projects before presenting.

Student respondent Tvt s10:

We conduct research and present it to class.

Student respondent Tvt s3:

We do projects, research and presentations.

Student respondent UNIV-ST2:

Projects.

Student respondent UNIV-ST4:

More research and presentations.

✓ **Workshops and programmes**

Workshops and programmes were an on-going activity for students at three institutions.

✓ **Information- Idea Sharing**

Information and idea-sharing related to business stimulated thinking.

- **Practical**

Practicality was again emphasised by five respondents from five different institutions.

- **ASSESSMENTS**

Continuous assessments were being done, as confirmed by five respondents from five different institutions.

✓ **Business plan writing**

The business plan writing was seen as a distinctive feature of lesson content because this literally translated into the 'action plan' for the business. It was the foundation thereof.

Student respondent Tvt s2 highlighted the use of the business plan as a guideline in starting a business:

> *We do business planning in writing and put it into an action plan, which makes it easy for a person to see his/her business, if it's making profit or loss.*

Student respondent Tvt s4:

> *We do business planning in writing and put it into an action plan.*

Student respondent Tvt s5:

> *We do business planning in writing and put it into an action plan.*

Student respondent UOT-S2:

> *They teach us skills to write perfect business plans.*

✓ **Cohesion and drive**

Students seemed to have very strong cohesion in terms of ambition, drive and success. This was important and plays a role in student success and distinctiveness.

Student respondent Tvt s7 stated that students want to succeed in starting their businesses:

> *We all have ambition for success.*

Student respondent Tvt s9:

Commitment and passion.

Student respondent UNIV-ST6:

It is the feature of us being focused.

Student respondent UOT-S5 highlighted the importance of working collaboratively with other students:

We work effectively together.

✓ **Live experience-driven**

This was done by allowing students to visit industry and inviting business owners to provide real business knowledge and experience.

✓ **Lecturers**

Two respondents made an important point about how lecturer competency helped in being distinctive. Some lecturers had their own businesses, which brought realistic and current practical knowledge, while some were able to unpack modules, making it easier to understand.

Student respondent Tvt s6:

The way our lecturer unpacks the EBM module, it is easier to understand and also enjoyable.

Student respondent UOT-S3:

The lecturer has a business, therefore have real time knowledge and is very passionate about the module.

5.6.2.3 Making entrepreneurship modules more entrepreneurial

The following were seen as key factors that contributed to making entrepreneurship modules more entrepreneurial (in hierarchical order):

- **Practical**

This was the highest ranked factor, as the practically of entrepreneurial modules was highly emphasised by 18 respondents. This included practical assignments, examples, and activities related to a South African setting.

Student respondent Tvt s10:

And we do a lot of practicals.

Student respondent Tvt s2:

Entrepreneurship does not focus on the book only.

Student respondent Tvt s4:

Entrepreneurship does not focus only on theory, but it is also practical.

Student respondent Tvt s7:

Practical assignments.

Student respondent Tvt s8:

Our institution doesn't focus on the books, but we also do practicals.

Student respondent Tvt s9:

Most modules are based on starting and managing an enterprise. They are based on entrepreneurship.

Student respondent UNIV-ST2:

Practical. They make it easy for us to understand the business world.

Student respondent UNIV-ST4:

The practical skills and teaching of modules.

Student respondent UOT-S1:

Practical tasks are performed.

Student respondent UOT-S2:

It is the practical examples that the lecturer uses to make us understand what is happening in the economy of South Africa.

- **Business Acumen**

This was the second most highly ranked factor, as supported by 11 respondents. Business acumen was highly prevalent in the modules, making them more entrepreneurial. This was informed by the following in hierarchical order:

- **Workshops**

Workshops provide a good avenue for learning more about business and asking questions.

Student respondent Tvt s3:

We attend workshops where you ask any question about business.

Student respondent UNIV-ST7:

We attend workshops as guideline.

- **Business Plans**

Business plan development was a key factor as confirmed by three respondents.

- **Entrepreneurial activities**

One UOT student asserted that students are exposed to expose to entrepreneurial activities on campus. Another respondent asserted that activities such as market days made modules more entrepreneurial.

Student respondent UNIV-ST6:

Having market days makes it more entrepreneurial.

Student respondent UOT-S9:

There are more exposed to entrepreneurial activities in campus.

- **Industry visits and entrepreneurs invited**

Visits to industry and also inviting entrepreneurs to the institutions generated strong practical and realistic business knowledge.

Student respondent Tvt s10:

Entrepreneurs are invited to our institution to share knowledge about businesses

Student respondent UOT-S6:

Visit small businesses.

- **Motivation to start a business**

The modules encourage students to develop business ideas and start-up their own business, rather than being employees or job-seekers.

- **Fair judgement of all ideas**

Students' ideas are pitched and all ideas are treated fairly, without bias or imbalance.

- **Research and presentations**

Conducting research hence presentations were an intricate part of the modules.

Student respondent UNIV-ST1:

We conduct research and do presentations.

Student respondent UNIV-ST3:

We do research and presentations.

- **Resources and platforms for growth**

  Very importantly, students are given resources and platforms to practice their business and promote entrepreneurship growth.

  Student respondent UNIV-ST5:

  More platforms are given for entrepreneurship growth.

  Student respondent UNIV-ST8:

  They made resources available for us to practice business whenever we want to.

5.6.2.4 Important entrepreneurship subjects

This sub-theme examines entrepreneurial subjects in the eyes of the students. The following subjects are ranked in hierarchical order of importance based on responses.

Table 5.30: Entrepreneurial subjects in the eyes of the students

Subjects	Respondents
Entrepreneurial and Business Management Student respondent Tvt s10: *Entrepreneurship and Business Management.* Student respondent Tvt s2: *Entrepreneurship and Business Management which mostly talk about business world and starting up your own business, also encourages brainstorming ideas.* Student respondent Tvt s3: *Entrepreneurship and Business Management.* Student respondent Tvt s4: *Entrepreneurship and Business Management,* Student respondent from Tvt s5: *Entrepreneurship and Business Management*	**Total = 19**
Sales and Marketing:	**Total = 16**
Advertising	*1*
Sales and Sales Management	*3*
Marketing and Marketing Management	*6*
Communication	*6*
Financial:	**Total = 7**
Accounting	*2*
Computerised Financial system	*1*
Economics	*1*
Financial Management	*3*
Other Management:	**Total = 6**
Strategic Management	*2*
Management	*4*
Office related:	**Total = 4**
Computer Practice	*1*
Office Practice	*1*
Entrepreneurial skills	*1*
Administration	*1*
All subjects important	**1**
Human Resources	**1**
PR	**1**

Entrepreneurial and Business Management ranked the highest. This is logical as this subject is at the core of entrepreneurship. Sales and marketing came second, which is also logical as business is primarily about selling.

5.6.3 Theme 3: Entrepreneurship education vs science and art

This theme examined if entrepreneurship education provided skills and knowledge to students in the science and arts, or was it limited to commercial courses.

- **Does provide**

A majority of the respondents (25) indicated that this was the case it was provided to all students.

Student respondent Tvt s10:

> *Yes, every field is provided with knowledge and skills.*

Student respondent Tvt s6:

> *The knowledge and skills are provided to every student.*

Student respondent UNIV-ST7:

> *Yes, our lecturers provide information about entrepreneurship to all the courses.*

Student respondent UNIV-ST8:

> *They do provide knowledge and skills to everyone.*

However, a few respondents explained why knowledge and skills are provided and this informed the following sub-themes.

- **Wish to start or already in business**

Skills and knowledge are provided because some students in other fields such as science etc, are already owning businesses or wish to start their own business.

Student respondent Tvt s8:

> *Yes, and some of science students are already in business.*

Student respondent Tvt s9:

Yes, they do provide skills and knowledge to those students as well, because they might as well wish to start businesses.

Student respondent UOT-S1:

Yes, they do provide skills and knowledge for them. Many students who are studying science have their own businesses.

- **For those interested**

In addition, five respondents asserted that it was provided to those interested in business. Some students irrespective of their field, would have a current or future interest in business, and hence skills and knowledge become important.

Student respondent Tvt s3:

Yes, those who are interested in business are given knowledge and skills.

Student respondent Tvt s4:

Only those who are interested in starting their own businesses.

Student respondent Tvt s5:

Only those who are interested in starting their own businesses.

Student respondent UNIV-ST10:

I think they do provide knowledge to those interested.

- **Money motivated**

A very interesting point was made by one respondent whereby everyone had the opportunity to demonstrate their skills and knowledge as a means to see if they could do better (in any field) if it meant obtaining money.

Student respondent Tvt s2:

Yes, students are given a chance to show up their talents and skills they have. They give you a chance and see if you can do it better to get money.

- **Does not**

However, four respondents asserted that entrepreneurship education did not provide knowledge and skills to students in other fields, but was limited to commercial courses only.

Student respondent UNIV-ST1:

> *It is provided in commercial courses only.*

Student respondent UNIV-ST2:

> *It is provided in commercial courses.*

Student respondent UNIV-ST4:

> *Not really, from our institution because only students from commerce have background of it.*

Student respondent UOT-S3:

> *No, in the institution the subjects of business registration and intellectual property of a business hasn't been taught to science and art students.*

5.6.4 Summary table

Research Questions	Theme and Subthemes	Key Findings
Research Question 1 What is the perception of PILs students about entrepreneurship education curricula and modules offered in public institutions of learning in terms of promoting entrepreneurship competencies?	**Promotion and transformation** • Promoting pathway to business start-up • Extent of Transformation - SA youths into entrepreneurs	To this question study found that teachers in PILs use different methods to teach entrepreneurship (that is research, theory and practical aspects) but more emphasis is on theory. Majority of respondents asserted that the entrepreneurship education offered in PILs do promote skills and knowledge about starting a business but does not teach the much-needed competencies to help one sustain through start up stage. Student respondents highlight that teachers give them the opportunity to come up with their own business ideas but the PILs do not have funds in place to help them put the business ideas into action. "We make ourselves open and share with others what we are doing and what our thoughts are."
Research Question 2 What is the perception of students about the benefits and effectiveness of the content of entrepreneurship education in PILs?	**Different and Distinctive** • Different and worthy of distinction • Distinctive features lesson content • Important entrepreneurship subjects • Making entrepreneurship modules more entrepreneurial	To this question, it is found that there is element of practical component related to giving students a hands-on approach to business creation and allowing students to relate to the content. It was pointed out by students that the entrepreneurship programme in PILs is using theoretical content than practical components, and established that there is little influence on students to develop entrepreneurship mindset. It can be noted that the practical modules are not accompanied by experiential learning to motivate students to start their small businesses on campus.
Research Question 3 What are the competencies that entrepreneurship education in PILs promotes?	***Entrepreneurship education vs Science and art***	Student respondent said: "*the knowledge and skills are provided to every student".* Another respondent emphasised that "*students are given a chance to show up their talents and skills they have, they give you a chance and see if you can do it better but without funds it is always impossible for us as students to turn our dreams into reality".* The results reveal that commonly used methods used in entrepreneurship programme in PILs are written exams, group projects and business plans. As a result, it is clear that entrepreneurship curriculum does not promote entrepreneurship competences need to cultivate entrepreneurship mindset in students. It is also noted that resources in these institutions are the main problem that somehow hinder the effectiveness of the entrepreneurship education since most institutions are forced to focus more on theory since they don't have enough resources for practical aspect of the subject.
Research Question 4 To what extent do public institutions of learning support and promote entrepreneurial activity on campus?	**The field is provided with knowledge and skills**	To this question, the study found that PILs do not restrict students from selling on campuses but they do not offer them financial support in order to start up their own businesses. They teach students about how to compile a business plan, but they hardly involve entrepreneurship specialist, business mentors and financial institution to help make student's dream a reality.

5.6.5 Comparison of the results

Teaching staff	Students
The teachers/lecturers are aware about the role that entrepreneurship plays in society (85%), but it is unclear whether they really develop entrepreneurial thinking in students and this was noted by their high level of neutral responses.	Majority of students in PILs are aware of entrepreneurship and its importance. It can be noted that even though they are aware of the advantages that come with being your own boss, students still believe in being employed so they can have a fixed salary.
Teachers/lecturers feel that the entrepreneurship curricula in PILs prepare students to be responsible, enterprising individual who become entrepreneurial thinkers and be able to contribute the economy of the country.	Result shows that entrepreneurship curriculum is not properly designed to promote self-employment. It noted that some students think entrepreneurship is similar to all other subjects.
The results show that teachers are not sure about the skills and competencies that entrepreneurship education teaches. Almost half of respondents did not agree with the notion that entrepreneurship curriculum is designed to equip students with needed skills, knowledge and competencies to opt for self-employment.	Students highlight that entrepreneurship education in PILs is more theoretical then being practical. The result shows that the method of assessment used by these institutions focus more on tests instead of project-based assessments. Therefore, this reveals that students are not imparted with enough skills to be competent and be able to engage in entrepreneurship straight after graduation.
Educators complained about inadequate resources. "*We do have students who really believe in entrepreneurship and who are innovative, but the issue of space on campus limits their ideas. If we can get business start-up support needs, we could do better if we had more resources and support…"*	Students respondent felt that the required resources are not enough for students to use for starting their businesses whilst still studying. As a result, it is better to seek for employment and start engaging in business at a later stage of life.
The results reveal that some teachers/lecturers have not received entrepreneurship training and / or never been involved in entrepreneurship activities but they are teaching it because they are qualified teachers in other areas.	It can be noted that students lack motivation to start businesses. This could be because majority of teaching staff in the field are not involve entrepreneurial activities therefore it is difficult for them to instill behavior that they are not sure of in students.
The study found that the entrepreneurship mentors and expert entrepreneurs are not often being used by these institutions to come and motivate students and cultivate entrepreneurial behavior in them. This was confirmed by the level of neutral responses when asked about the engagement of these entrepreneurship expert in making entrepreneurship curriculum effective.	A few students highlighted that there is a element of mentorship but some key aspects still need to be improved. One student mentioned that the focus is only to those who are already started their businesses not all students.

5.7 CONCLUSION

This chapter formed the core of the study. Based on the data analysis and the findings of this study, it was found that there is a wide diversity of initiatives to support entrepreneurship education in PILs. The tested variables provided a comprehensive

picture of these issues, challenges as well as shortfalls faced by PILs. The results illustrated entrepreneurship involvement on campus, and practical aspects of the subject as the key catalyst to effectiveness of entrepreneurship education according to both sets of respondents.

The responses from both Likert scale questionnaires and personal interviews reveal that students and teaching staff highlighted that there is a need for entrepreneurship education development especially a more practical element in the entrepreneurship curriculum of PILs. Students further emphasised the need for inclusion of entrepreneurship professionals. We can deduce that most teaching staff and students from different institutions are aware of the shortcomings of the effectiveness of entrepreneurship education curriculum and they recognise the importance of closing a gap between entrepreneurship practices and theory.

Internal and external factors, government support mechanisms were also considered to have the potential to improve the effectiveness of entrepreneurship education but this is not seen as being realised at present s resources remain limited. Entrepreneurship education in PILs, regardless of the type of the institution within which they were taught, had similar intentions (that is, to equip the youth with functional knowledge and competencies to build up their character, attitude and vision) but there was no evidence of this being fully realised in the estimation of respondents.

The next chapter interprets and discusses the research findings by providing explanations of observations made as well as of the responses given on the questionnaire and interviews in accordance with the research objectives and research questions.

CHAPTER 6: DISCUSSION OF KEY FINDINGS IN RELATION TO THE LITERATURE REVIEW PER RESEARCH OBJECTIVE OF THE STUDY

6.1 INTRODUCTION

This chapter provides a detailed discussion on the findings relating to the primary data analysed in the previous chapter. The discussion will relate these findings to the study objectives and research questions, as well as the literature review, and express the implication of each finding, in order to draw valid conclusions for the entire study. The key aim of the study was to evaluate the effectiveness of entrepreneurship education in public institutions of learning in the province of KwaZulu-Natal.

To attain this broad aim, the following research objectives were formulated:

- To ascertain the PILs students' perception of the entrepreneurship education curricula offered in public institutions of learning in promoting entrepreneurial competencies.
- To ascertain the perceptions of teaching staff regarding the benefits and effectiveness of entrepreneurship education in PILs.
- To assess the nature of the competencies that entrepreneurship education promotes in PILs.
- To explore and examine the extent to which public institutions of learning support and promote entrepreneurial activity on campuses.

6.1.1 Key findings of objective 1

To evaluate the effectiveness of entrepreneurship education in public institutions of learning in the province of KwaZulu-Natal.

From a job creation point of view, development of entrepreneurship education has been identified by the South African government as a top priority (Littlewood and Holt 2018). Brière, Tremblay and Daou (2014: 19) found that the frequency at which people

engage in entrepreneurial activities was gradually dwindling. One of the reasons adduced for the decline by Chimucheka (2014) is a lack of entrepreneurial education. One vital area of study regarding small and medium business owners is that of determining the motivations behind individuals setting up their businesses in the first place. This driver, or motivation, provides a direction for further inquiry on the possible factors that lead to the success of small and medium businesses. Generally, the literature on pedagogic approaches in EE highlight that the current pedagogies are ineffective in matching graduates' skill expectations with their skill acquisition, and therefore, a new approach is needed focusing in entrepreneurship context (Fatoki (2014: 296). Bauman and Lucy (2019) argued that the PILs were still having a lack of focus on development of entrepreneurship-oriented curricula, and therefore recommend the upgrading of entrepreneurship education.

Based on the literature review and findings of this study, the idea of *learning entrepreneurship* by actually starting and running a *business* aligns with the concept of *experiential learning*, also known as '*learning* by doing', which posits that an infusion of direct experiences is necessary for *learning* to take place. This approach further embraces teamwork and cohesiveness amongst students. The adoption of this approach is also supported by findings of this study, as a majority of the respondents (66.7%) agreed with the statement that entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses as part of the curriculum offered in PILs. Perhaps, the adoption of the experiential learning will help students who are keen to become entrepreneurs to acquire hands-on experience whilst studying, increase their personal networks, enhance their academic success and boost self-confidence levels.

6.1.2 Key findings of objective 2

To ascertain the PILs students' perception of the entrepreneurship education curricula offered in public institutions of learning in promoting entrepreneurial competencies.

Ondiba and Matsui (2019) state that assessment provides information on programmes not just individual students, providing information that can be aggregated across sections of a single course and is meaningful across courses. Assessment enables

educators to assess whether the curriculum is coherent and whether students do indeed now have the knowledge, skills and values that graduates should possess. The following questions should be asked when assessing a curriculum: What should a graduate of a programme know, be able to do and value? Have graduates acquired this learning? What are the contributions of the programme to student growth? How can student learning be improved? (Jones and Iredale 2010)

There are two approaches to teaching, namely traditional methods in which knowledge is passed passively to learners by means of lectures, and experiential approaches during which knowledge is constructed by learners in the process of doing (e.g. internships, role-playing etc.) (Robb, Valerio and Parton 2014). In agreement with the literature, the findings of the study reveal that a significant number of respondents (72.4%) agreed with the position that in the institution the entrepreneurship education curriculum is planned to stimulate learner interest in starting and owning a business. The result reveals a positive correlation with a Chi-square value of $x^2 = 82.368$ and a degree of freedom of df = 4.

With reference to the findings of the study, respondents also indicated that PILs curricula support business start-ups by stating that:

> *It promotes pathways by giving learners skills about starting their business and offer the knowledge needed to start entrepreneurial venture. However, we still have a long way to try and change the perception students have about self-employment. A majority of students still believe in being employed rather than being their own boss.*

Accordingly, the attainment of these skills through practical learning and training workshops serve as great support in developing entrepreneurship mind-set in students.

6.1.3 Key findings of objective 3

To ascertain the perceptions of teaching staff regarding the benefits and effectiveness of entrepreneurship education in PILs. Research indicates that perceptions regarding the desirability and feasibility of entrepreneurial behaviour can be influenced by education and training (Bagheri and Lope Pihie 2013; Fatoki 2014). According to Akhuemonkhan, Raimi and Sofoluwe (2013), perceived self-

efficacy/control for entrepreneurial behaviours is influenced by the acquisition of management skills and exposure to entrepreneurial situations. Thus, an education programme can influence the antecedents of intention as identified by the theory of planned behaviour Fayolle and Gailly (2015).

According to Fayolle and Gailly (2015); Jabeen *et al.* (2017) and Akinbami (2015), educating students about the certainties of entrepreneurship may improve their ESE, but at the same time decrease the perceived desirability of creating a business venture. Rahman and Day (2015) state that the educational setting appears to be productive for development of perceived self-efficacy through participation in student associations, evaluation of work in and out of class, peer evaluation. All these elements can contribute to how and individual sees themselves and whether they believe they are able to become an effective entrepreneur. The results of the study indicate that the majority (88.5%) of respondents feel that entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures. An increase in the perception of PILs support strengthen the positive relationship between perceived effective entrepreneurship education and perceived creativity disposition, such that the relationship is amplified for a stronger perception of PILs' support.

Accordingly, entrepreneurship education ought to provide a comprehensive learning management for student entrepreneurs, helping them to establish correct values and cognitive systems, enhance their perceptions of innovation and continuously integrate, and accumulate new knowledge to shape their innovative ability and personality (Rauch and Hulsink 2015). It is not proven that this has been achieved currently in PILs in KZN

6.1.4 Key findings of objective 4

To assess the nature of the competencies that entrepreneurship education promotes in PILs. In South Africa the problem of graduate unemployment has become a major issue (Jabeen *et al.* 2017). There has been an increase in the number of public and private higher education institutions and the number of students enrolled, which has resulted in a huge increase in the number of graduates, meaning, inevitably, that a large number of graduates will be unsuccessful in their job searches (Chimucheka, 2014). The learning process in entrepreneurship education should foster the

development of competencies of creativity, innovation and entrepreneurship, as this helps to develop the learner as an individual who recognizes opportunities, creatively solves problems and conflicts, accepts responsibility and risk decisions and takes initiatives. According to Mashau, Fields and Nyawo (2019), development of entrepreneurial skills can change this by producing job providers and not just job seekers. Thus, “institutions of education in South Africa need to nurture the development of entrepreneurial competencies among their students” (Ahmad and Buchanan 2015: 351). Oluwajodu *et al.* (2015) avers that entrepreneurship competencies combine creativity, a sense of initiative, problem-solving, the ability to marshal resources, and financial and technological knowledge. These competencies enable entrepreneurs and entrepreneurial employees to provoke and adapt to change. There is some evidence that these can be developed through entrepreneurship education and training that focus on promoting an entrepreneurial mindset and behaviours. As concluded above, this study does not find conclusie evidence that this is being achieved.

In agreement with the literature, the findings of the study that maintained that a skills-based programme encourages the development and practice of entrepreneurship skills by stating that:
In our institution we provide students with level of skills and knowledge required to run a productive business. This was supported by another teacher respondent who emphasised that *“entrepreneurship education promotes a pathway by giving learners skills on starting their business and offering knowledge needed to start an entrepreneurial venture. But we still have a long way to try and change the perception students have about self-employment.* One student respondent mentioned that *“I still believe in being employed rather than being self-employed”.*

6.1.5 Key findings of objectives 5

To explore and examine the extent to which public institutions of learning support and promote entrepreneurial activity on campuses. The South African government recognises the role that entrepreneurs play in the economy and social development (Harrington and Maysami, 2015). The Accelerated and Shared Growth Initiative of South Africa (ASGISA) aims for South Africa to evolve as an

entrepreneurial nation with the small business sector being competitive enough to contribute significantly to employment (Herrington, Kew and Kew 2015). This initiative envisions small businesses being fully integrated into the economy with access to support and development services. This will enable them to enter national, African and international markets as well (Cassim, Soni and Karodia, 2014). The findings suggest that there is still a fairly long way to go before PILs in KZN will achieve this.

The study showed PILs provide direct support for start-ups through mentoring, grants, and incubation facilities . Start-up support is providing a helping hand in business start-up without taking away the “do it on your own”. It is all about making, entrepreneurship support systems accessible and attractive for future entrepreneurs, and about rectifying market and system failures in financing and premises. For universities to be effective, partnerships with entrepreneurship support actors in the territory and beyond are relevant. The findings indicate that 54% agreed that the institution offers support to students in order to start up their own businesses by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance. The low level of agreement from respondents however, would seem to indicate that the institutions do not, or not often, offer direct support for students to start up their own businesses. This encompasses both entrepreneurship education, with its two main objectives of generating motivation and mind-set for entrepreneurship and the skills and competencies needed to successfully start-up and grow a business, and the provision ofstart-up support.

However, PILs need dedicated start-up support services, often also as single units that centralise and steer a multitude of activities, to offer would-be entrepreneurs and those already in the start-up process, consultation and access to networks and premises.

6.2 CONCLUSION ON THE VARIABLES MATCHED WITH THE THEORIES

This section explores relevant theories relating to entrepreneurship and entrepreneurship education. Entrepreneurship education involves both training and education. Entrepreneurship training focuses on the formation of the skills, behavioural change, and mind-sets required for recognising and starting new businesses (Robb, Valerio and Parton 2014). Entrepreneurship education instils functional skills to

develop the kind of knowledge, character, attitude and values that enable the student to address a broad range of problems (Lahn and Erikson 2016; Bridge 2017: 684). Entrepreneurship education is a precondition for entrepreneurship training and it needs to form part of teachers' training programmes. With an upsurge in graduates' unemployment and the growing number of young people inflowing the higher education system, PILs are finding that the traditional narrative (that having a degree means that you are instantaneously employable) is losing its cogency. This study sees a need for PILs to have a vision of how entrepreneurship will be implemented at an institutional level and how this will be supported and communicated.

Bauman and Lucy (2019) contend that entrepreneurship education is an important avenue for the development of an entrepreneurial mind-set and skills amongst young people which can benefit society as a whole and not just their business ventures. Therefore, based on the findings of the study, "*there is a need to stimulate entrepreneurial mind-sets of young people and to create more favourable societal climate for entrepreneurship, as the country (SA) is not exploiting its entrepreneurial potential"*. According to South African government, public institutions of learning have an important role to play in improving the entrepreneurial competence of SA's graduates. The empirical findings further highlight that creative leadership level of education, training and technical skills were identified as critical competences necessary for nascent entrepreneurs to sustain their start-up business, innovation and growth.

The study revealed that entrepreneurship education is frequently considered an effective strategy in PILs in terms of developing entrepreneurship mind-set din students and its supposed benefits have been much praised by researchers and entrepreneurship instructors, as indicated in the research findings. Nonetheless, the effect of such intention to start-up a business and be an entrepreneur is only tacit at present and it has remained relatively untested. The results confirmed that entrepreneurship education certainly drives PILs students' entrepreneurship mind-set. This study highlighted that teaching staff should enhance their competence, particularly related to entrepreneurship, such as entrepreneurship webinars, in-house training, and certification program. The null hypotheses set in Chapter 1 are rejected.

6.3 DISCUSSION OF KEY FINDINGS IN TERMS OF THEMES OF THE STUDY,

The themes discussed below are derived from the data collected from the relevant questions of the survey.

6.3.1 Role of entrepreneurial education

The institutionalisation in institutions of learning of the development of entrepreneurial competencies and knowledge is a priority to encourage future economic actors who have the potential for being enterprising and innovative. Entrepreneurship education is a viable strategy to increase the entrepreneurial attitudes of both potential and nascent entrepreneurs.

The findings showed PILs in a fairly good light in their teaching of entrepreneurship. Teachers and lecturers were clearly keen to paint their own institutions in as good a light as possible and instructors play a big role in trying to instil an entrepreneurial mindset in students. Reviewing the results, however, the study concluded overall that PILs lack a model of entrepreneurship education (Tehseen et al. 2019). One respondent stated that "t*he inherent nature of university education which is theoretically-based does limited work in promoting start-ups. It is left up to the student to decide on this".* Nevertheless, teachers are trying their utmost to promote entrepreneurship initiatives on campus, as stated by respondents that "*We encourage students to sell some items on campus in order to instil an entrepreneurial spirit in them".*

Research indicates that entrepreneurship education improves entrepreneurial performance as evidenced by the establishment of new enterprises, improvement in growth and profitability as well as rate of survival (Waghid, 2019; Akhuemonkhan, Raimi and Sofoluwe 2013; Chimucheka 2014). Therefore, entrepreneurship education, can contribute to employment and the reduction of poverty (Dobratz, Singh and Abbey (2015).

This study found that the role of entrepreneurial subject teachers in PILs is important. One of the teachers said "*we invite people who own small businesses to talk to students".* Teachers are the ones that have the responsibility of developing an entrepreneurship mind-set in students and encourage them to consider self-

employment and entrepreneurial career pathways. One respondent said: "*We educate our students about the importance of starting your own business. We instil an entrepreneurial mind-set to them in order to encourage the importance of self-employment".* Another respondent said "*we invite people who own small businesses to talk to students".* This is in line with the findings of the study "we prepare students for the real world by challenging them to address real world problems. Students go about the process of organizing their team, developing community outreach projects and participating in a series of competitive events, they develop teamwork, and communication skills that set them apart from the average university student".

A review of the literature shows that entrepreneurship education benefits individual students and the national economy. Entrepreneurship education helps individual students benefit through gaining the knowledge and skills to be able to think of self-employment as a career option, and then the self-confidence to start a business which then benefits the national economy (Cassim, Soni and Karodia 2014; Bignotti and Le Roux 2016).

6.3.2 Entrepreneurial difference and distinction

The study notes that entrepreneurship education is unique per institution. The practical aspects of entrepreneurial education were the most highly ranked because this was supported by a majority of respondents. The practical component related to giving students a hands-on approach to business creation and allowing students to relate to the content. It was pointed out by most teacher respondents that PILs promote entrepreneurship education, stating that "*we offer practical examples. It is the fact that this is a practical module which students can relate to and they enjoy it".* Practical aspects include how to start and run a business (Ismail, Sawang and Zolin 2018: 168).

Teacher respondent UNIV-T6 stated:

> *We invite entrepreneurs to tell them about the journey of entrepreneurship. The experienced entrepreneurs also provide the teachers responsible for developing and delivering an enterprise and entrepreneurship curriculum so that we can help students develop enterprising behaviour*.

Research suggests that entrepreneurship can be taught as a subject, and teaching it is as much a craft than a science, i.e. experience-based learning is as important knowledge teaching (Rauch and Hulsink 2015; Akinbami 2015; Fayolle and Gailly 2008).

6.3.3 Evaluation and measurement

This theme examined the various evaluation methods in terms of learner analysis in relation to lesson content, as well as teacher evaluation of their own entrepreneurship characteristics.

One of the sub-themes relate to how teachers evaluate learners in relation to lesson content. Student assessment and the commonly assessment methods used in entrepreneurship programme in PILs are written exams, group projects and business plans. The assessment methods are the most highly ranked analysis method as supported by a majority of teacher respondents "*we evaluate students through different forms of learner assessments and that helps us in influencing the instructional method and strategies that are suitable for entrepreneurial education".*

6.3.4 Staff recruitment

This theme shows that PILs are committed to attracting the highest calibre staff by ensuring that recruitment and selection processes are fair, efficient and comply with legislation. It can be noted that PILs are committed to equality of opportunity in recruitment, selection, promotion and all other areas of employment. PILs pay significant attention to the recruitment and selection of staff in order to ensure the fair treatment of all applicants and to secure the appointment of persons who will be able to contribute towards the long-term success of the institution. It is the responsibility of recruiting managers to ensure that policy and procedure are carefully followed for the duration of their recruitment exercise (Themes 2019). Heads of Department/Directorates make members of their staff aware of the requirement to familiarise themselves with and follow this policy and procedure. Recruiting managers are required to fully evaluate the need for new, changed or replacement posts prior to seeking authorisation for the position. Managers considers if the duties of the post can be eliminated or re-allocated to existing post-holders, taking existing workloads into

account. Recruiting managers are responsible for ensuring that all vacancies are approved by the appropriate authority in PILs (Themes 2019).

A majority of the respondents (18) mentioned that the normal HR processes and policies are followed in recruitment, possibly in conjunction with DHET Policy. Six respondents provided details about qualifications and specialisations that were mandatory. This included majors in business-related subjects, specialisation in entrepreneurship and Masters and PHD studies. This is a logical argument as entrepreneurship education does require specialisation within the field, which ideally should be to the level of a higher degree.

Teacher respondent TVET-T2:

> *A post is advertised in the selection process. Candidate qualifications and subjects are scrutinised.*

Teacher respondent TVET-T6:

> *Recruited through assessing the higher level of education and experience.*

Teacher respondent TVET-T9:

> *Through HR, the candidate must have majors in entrepreneurship, business management and sales management.*

The findings highlight that despite all the high standards written by HR, it can be noted that lecturers are not entrepreneurship specialist since majority of them are not entrepreneurs. The requirement for lecturing in entrepreneurship programme includes majors in business-related subjects, specialisation in entrepreneurship and Masters and PHD studies.

6.4 DISCUSSION OF KEY FINDINGS “FOR SECTION B” IN RELATION TO THE LITERATURE REVIEW PER RESEARCH OBJECTIVE OF THE STUDY

6.4.1 Promotion and transformation

Entrepreneurship has become a driver of economic development and governments are funding the formation of new entrepreneurship degree programmes worldwide. However, entrepreneurship education programmes have also been criticised by

Rauch and Hulsink (2015) as lacking rigour, a common framework and best practices. Wu, Yuan and Pan (2018:6) conclude that “there is little consensus on just what exactly entrepreneurship students should be taught”. In fact, the question “can entrepreneurship be taught?” continues to be raised. Ismail, Sawang and Zolin (2018: 169) point out that there is a lack of research on how to measure the success of entrepreneurship programmes.

There have been calls by Ustav and Venesaar (2018) for a total revisioning of the way entrepreneurship education is designed, implemented, and assessed. This theme looked at how entrepreneurial education promotes a pathway to business start-up and the extent to which entrepreneurship education is transforming SA youths into entrepreneurs. The study found that teachers in PILs use different methods to teach entrepreneurship (that is research, theory and practical aspects). Student respondent Tvt s2 stated that “*teachers assist students with writing the business plan and instilling entrepreneurial behaviour”.* Student respondent Tvt s3 echoed this b*y* emphasising that *“teachers assist students with writing business plans so they can be able to communicate their visions”*. Ismail, Sawang and Zolin (2018: 169) “asserted that well-designed teaching programmes can inculcate the skills and attributes and career intentions needed to start a business venture”. This is supported by student respondent UNIV-ST5 who said that entrepreneurship education *“provides students with knowledge to use to start a new venture”.* A student respondent from UNIV-ST2 concurs by saying: “*we share ideas about businesses which help promote innovation. We connect with other students which makes the innovations come to life”.* A student respondent from UOT-S6 further stated:

> *we are taught to use strategic planning, to make our plans a reality. It is said the business environment and relevant technologies are constantly changing and new risks and uncertainties will surface on a regular basis, therefore they teach us about carefully and thoughtfully aligning the strength of the business to the opportunities that are available in the company’s chosen business environment.*

6.4.2 Different and distinctive

The study notes that the teaching and learning process for entrepreneurship education quality is compromised by PILs education system by focusing on examination as the main form of assessment. Based on observations and results of open-ended questions, the study reveals that lectures still dominate with little emphasis on practical aspects of the course. On the other hand, the study shows that teachers use their power to try and instil entrepreneurial behaviour in students by confirming the use of traditional teaching method of requiring students to create a business plan was still as the most popular used method. This study noted that servicing departments such as Entrepreneurship Centres and/or Centres for Social Entrepreneurship have the task of building partnerships and creating a sense of shared responsibility in both teachers and students.

Reviewing the results, the study concluded that PILs seek collaborative relationships with departments so as to improve communication, feedback and support structures. This was highlighted by a majority of respondents. Respondents indicated that there was positive communication between industry, students and the PILs. This is in line with the response from student respondent coded Tvt s3 who stated that "*we attend workshops where you ask any question about business".* Another respondent stated that students are taken for visits to small businesses in order to make the entrepreneurship education different and distinctive, compared to other business-related modules. This study emphasised that communication is vital in order to build common understandings and collaboration amongst all stakeholders.

6.4.3 Entrepreneurship education as science and art

According to Gordon and Bursuc (2018: 125), "entrepreneurship education involves two aspects: education and training". Training concentrates on skills and behaviour, while education aims to build knowledge and values associated with the broader picture. Entrepreneurship education is a precondition for entrepreneurship training so should form part of the curriculum of teacher training programmes (Mustapha and Selvaraju, 2015).

The study revealed that from the students' perspective, practical aspects of entrepreneurship education make it easy for them to practice entrepreneurship

because this promotes entrepreneurial behaviour. Student respondent Tvt s6 said: "*the knowledge and skills are provided to every student".* Student respondent Tvt s2 emphasised that "*students are given a chance to show up their talents and skills they have, they give you a chance and see if you can do it better to get money".* According to Fayolle and Gailly 2008; Bagheri and Lope Pihie 2013; Nag and Das 2015), the science aspect of entrepreneurship education enables and creates a knowledge framework which improves understanding of entrepreneurship. This aspect is teachable via conventional methods, but the art part requires teachers to reflect on their own experience and be creative in their teaching activities, including the use of interactive teaching methods.

6.5 CHAPTER SUMMARY

The material in this chapter was based on the interpretation of data recorded in Chapter 5. It is evident that there is an element of entrepreneurship education incorporated into PILs curricula. A majority of teaching staff perceive the entrepreneurship curriculum as effective, However, one teaching staff mentioned that:

> "*we still have a long way to try and change the perception students have about self-employment. A majority of students still believe in being employed rather than being their own boss*".

The qualitative results were triangulated to the quantitative findings, indicating reliability in the findings and consequently the primary data attained from respondents.

Overall the research served to confirm the literature accessed and the theory employed in the study, although it is suggested that a further dimension could be added to the Theory of Planned Behaviour in that, unless the structures of society and the context is supportive, 'perceived behavioural control' will not be possible for individuals to achieve. The study's contribution was to enrich and deepen knowledge of the current situation as regards government funded institutions of learning, in their attempts to promote entrepreneurial activity for the benefit of the economy, and for job creation, at a time when both are critical concern in South Africa. The very limited areas of success in entrepreneurial education established by the study should therefore serve as a warning and wakeup call for policy makers at government level, and at educational institutional level, to consider more focussed support systems and

more rigorous and appropriate entrepreneurial educational policies. The expense required should be subject to a cost-benefit analysis.

The chapter that follows provides the conclusion and recommendations; based on the main objectives of the research.

CHAPTER 7: CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

Entrepreneurship and entrepreneurship education are gaining ground in South Africa. Government together with PILs are promoting entrepreneurship as means to fulfil self-employment dreams, generate wealth and stimulate the economy of the country. Literature indicates that PILs are facing escalating pressure to play a significant role in promoting self-employment and entrepreneurship considering the number of unemployed graduates expecting to be employed by companies and organisations Although entrepreneurship education ranks high on policy agendas in the country, limited research has been conducted to assess its impact. The outcomes of entrepreneurship education are also still not understood despite the wide promotion of entrepreneurship education in PILs. There are still doubts about whether entrepreneurship education actually cultivates an entrepreneurial mindset, affects entrepreneurial activities and/ or contributes significantly to entrepreneurial success.

The main aim of the study was to evaluate the effectiveness of entrepreneurship education in PILs in the Kwa-Zulu Natal province. Therefore, the focus of the chapter is on the summary of the findings of the study, conclusions regarding the objectives, implications, limitations, and recommendations for further research.

7.2 SUMMARY OF THE KEY FINDINGS

The primary aim of this study was to evaluate the effectiveness of entrepreneurship education in PILs in KZN and suggest a prototype model derived from this evidence. Based on the findings, the following conclusions can be drawn:

The respondents identified experiential and practical learning as the most significant variables on the effectiveness of entrepreneurship education, with the majority of respondents highlighting that saw this as vital for cultivating entrepreneurship mind-set and developing entrepreneurship intentions. The results also indicated that 87.4% of the respondents believed that experiential learning specifically can enhance the ability of entrepreneurship education to develop entrepreneurship mind-set in students.

These findings highlight that in order for entreprebeurship education to be more effective and produce greater results, relevant training, focusing on curriculum development and field related knowledge, should be supported. This is supported by the respondent who pointed out that “a number of challenges being faced in the provission of entrepreneurship education includes; inadequate entrepreneurship trainers and lack of appropriate traing material. However, there is a number of existing opportunities for entrepreneurship education growth in the country, such as the growing number of succesful entrepreneurs who can be used as role model and mentors, entrepreneurship support materials availabe on Internet, availabilty of workshops in entreprenerial training istitutions, and industries that can be used as business incubators and the best practice of model of entrepreneurship education within South Africa and internationally.

On the other hand, it is stated in the literature, that PILs are trying their best with limited resources to provide students with dynamic business concepts and sound business knowledge that could develop entrepreneurship mind-sent and enable entrepreneurship graduates start and sustain samll businesses. Teaching staff is the most important resource in entrepreneurship education curriculum implementation since they are the ones who implement the ideas of the designers. An experienced supply of entrepreneurship teacters is therefore, needed in the implementation of the curriculum to be effective.

According to the findings of the study, there is a correlation ($x^2 = 53$; df = 3; P = 0.000) between entrepreneurship education and the skills needed for business start-up. Ismail, Sawang and Zolin (2018: 169) contend that “entrepreneurship education promotes entrepreneurial knowledge, skills, attitudes and behaviours”. Sawang and Zolin (2018) concur that graduates of such programmes are able to acquire creative and innovative skills and be able to identify opportunities and create new businesses. A total of 73.6% of respondents agreed with the statement that the entrepreneurship education curriculum in the institution is designed to equip students with the skills needed to start up their own business. The results differ from Bauman and Lucy (2019: 2) who have “stated that education in South Africa is designed to produce job-seekers rather than producing job creators”. PILs need students who are looking to make a difference. Entrepreneurs, by definition, want to make a difference in the world. In

business perspective, entrepreneurs look to solve problems, take risk, meet needs and ease the problem by means of selling a product or service.

In terms of level of education, 62% of respondents believed that the higher the level of education of an individual, the greater the possibility of starting a venture that progresses past the start-up stage. The findings are aligned with (Santhosha Shetty and Siddiq 2015) contention that entrepreneurship education facilitates the attainment of entrepreneurial knowledge, skills, attitudes and behaviours. Therefore, it is important to note that entrepreneurship education, is thus about life-long competence, cultivation of mind-set and to ensure number of positive social benefits. There is a general agreement by researchers that more emphasis should be place on entrepreneurship education as opposed to business education, business education has limited coverage that entrepreneurship education, which include additional topics such as innovation and creativity, and risk taking.

69% of respondents believed that well developed entrepreneurship education in PILs can alleviate the fear of failure in starting new businesses. 87.3% of respondents also highlighted that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses. The results indicate that “entrepreneurship education can promote an understanding of business, its purposes, structure and relationship with the rest of society”, which is consistent with the findings of Iwu *et al.* (2019: 2).

Respondents mentioned the two teaching methods they felt had an impact on making entrepreneurship education effective: Practical exercises and case studies. Majority of respondents stated that *“we make entrepreneurship more practical. We encourage students to learn by doing”.* Another respondent emphasised that

> *“we analyse the learners according to their submitted business plans. As potential or future entrepreneurs, learners must be able to plan wisely in terms of budgeting, as well as be able to show potential investors that they are considering risks by creating a realistic business plan”.*

The findings also support the literature in that business plans help entrepreneurs to focus on the specific steps necessary to make business ideas succeed, enabling them to achieve both short-term and long-term objectives.

7.3 CONCLUSION OF THE OBJECTIVES OF THE STUDY

This section presents conclusions reached on the findings of the study, analysed in chapter five, for each of the supporting objectives of the study.

The succeeding section provides an overview of the conclusions of the study in line with the research objectives. The conclusions are based on the statistical analysis of the empirical findings, and the hypotheses tested. The variables that were tested, and which are discussed below, are grounded on the questionnaire (see Appendix 1) which was formulated in accord with a comprehensive literature review and with the research objectives. The questionnaires were distributed personally to the target population in order to gather primary data. The data, when analysed, reflected a host of challenges and critical factors affecting effectiveness of entrepreneurship education in PILs in KZN. The findings suggest that a standardised integrated model for entrepreneurship education, providing key pointers for the development of entrepreneurial mind-set and successful innovation, can be designed, applied and used for the benefit of the country. The proposed integrated model is presented and discussed in the following section.

7.3.1 Sub-objective 1: To assess whether the entrepreneurship education curriculum offered in public institutions of learning promotes business start-ups

The purpose of this sub-objective was to address the research question that sought to assess whether the entrepreneurship education curriculum offered in PILs develops an entrepreneurial mindset in students and promotes business start-ups. The study found that PILs acknowledge the impact of entrepreneurship education. Moreover, the study showed that most PILs have started to engage in programme development with the aim of improving the effectiveness of entrepreneurship education. The majority of these institutions are busy aligning their curricula with graduate attributes, of which entrepreneurship is one of highest ranking. The study recognises that entrepreneurship education programmes in PILs are increasingly being established and expanded to equip students with the skills, knowledge and behaviours required to create new enterprises and add value to the economy. The findings further revealed that entrepreneurship education is still regarded by some respondents (both teachers

and students) as being important at an early stage of development. This is understandable considering the lack of consensus on assessment procedures and measurement of learning outcomes.

Where entrepreneurial education in PILs in the Province of KZN is concerned, it is concluded that there is a positive entrepreneurial attitude amongst the respondents in that teachers are willing to instil entrepreneurial behaviour in students, while students are willing to take entrepreneurial risks. The study further highlighted that PILs still generally producing graduates who prefer salaried jobs straight after graduation and then possibly consider entrepreneurship at a later stage of their careers. As much as these institutions are trying, the study revealed that entrepreneurship education is not properly developed in PILs to be able to effectively equip students with the entrepreneurial attitudes and skills so that they can choose entrepreneurship as a career path. However, the respondents believed that if they had better access to funding or if government can provide PILs with enough funds, entrepreneurship education can be perceived as a career option by students and thereby contribute significantly to the country's economy.

7.3.2 Sub-objective 2: To investigate the perceptions of educators about the benefits and effectiveness of entrepreneurship education in society

The research question asked in order to address this sub-objective was part of the previous question asked in sub-objective one, but the emphasis here was "What perceptions do teachers have about the benefits and effectiveness of entrepreneurship education in society?". The results of the study indicate that most teachers in PILs perceive entrepreneurship education as a universal mainstay for society and the country as a whole. Although the respondents highlighted that entrepreneurship education is not properly developed in PILs, the study found that teachers or educators still regard entrepreneurship education as a solution to low economic growth, unemployment, poverty and social exclusion. As a result, teachers have focused their efforts on collaborating with entrepreneurs in society in order to understand them and their behaviour in the multifaceted and uncertain environment in which they operate, for the purpose of helping students to be more entrepreneurially minded. Collaborating with experienced entrepreneurs is central to the pedagogy of entrepreneurship and teaching as it has been confirmed that entrepreneurship can be

taught. In light of the above, it is evident that teachers are trying their best to adapt the educational processes, procedures and curriculum to provide a suitable platform for student entrepreneurs to launch from.

7.3.3 Sub-objective 3: To investigate the key skills that entrepreneurship education promotes

The study revealed that the implementation of key entrepreneurial skills is not effective enough due lack of resources which can help entrepreneurial ideas gain suitable recognition. Resources and opportunities in the business environment are vital elements that stimulate entrepreneurial intention (Ahmad and Buchanan 2015).

Literature has indicated that all students at universities should be exposed to entrepreneurship skills education so as to motivate them to start their own business. As stated by Teacher respondent TVET-T7:

> Entrepreneurship education promotes a pathway by giving learners skills on starting their business and offering knowledge needed to start an entrepreneurial venture. But we still have a long way to try and change the perception students have about self-employment. A majority of students still believe in being employed rather than being their own boss.

The study further revealed the knowledge of developing a business plan as one of the key skills in entrepreneurship.

7.3.4 Sub-objective 4: To ascertain the extent to which public institutions of learning actively support and promote entrepreneurial activity on campuses

The findings revealed that PILs do actively support entrepreneurship activities on campus. The literature points out that there is a higher level of intent in those with previous experience in entrepreneurial activities compared to those with no previous experience. The study found that students are encouraged to sell items on campus in order to promote experience and stimulate the entrepreneurial spirit. The results further revealed that PILs encourage students to start small businesses on campus. The respondents emphasised that they have students who really believe in entrepreneurship and who are innovative, but the issue of space on campus limits their

ideas. The respondents highlighted that if they could get financial support for business start-ups they could do better. Most of the institutions mentioned that they have entrepreneurship week programmes available for every young person interested in entrepreneurship and students do partake in business activities on campus. The results showed that teachers are trying their utmost to promote entrepreneurship initiatives on campus.

7.4 CONCLUSION OF THE RESEARCH HYPOTHESES

This section offers a comprehensive summary of the conclusions made in terms of the hypotheses set in Chapter One and presented as the null hypotheses (Ho) and alternative hypothesis (Ha). The main hypotheses for this study are addressed as follows:

Ha1: There is a relationship between curriculum offered in PILs and business start-ups

Bivariate correlation results reflected a significantly positive strong relationship between the tested variables at 0.377** (sig. 0.000) level. The null hypothesis is rejected and it can be concluded that educational curriculum and entrepreneurship education have influence on business start-ups.

Ha2: There is a relationship between how instructors perceive entrepreneurship education and its effectiveness in society

Bivariate correlation results reflected a significantly positive weak relationship between the tested variables at 0.334** (sig. 0.000) level. The null hypothesis is rejected and it can be concluded that education is perceived as effective in developing an entrepreneurship mind-set, and building up entrepreneurial intentions and innovation, thereby increasing the number of business start-ups and reducing the rate of unemployment in graduates and society at large.

Ha3: There is a relationship between skills and entrepreneurship education.

Bivariate correlation results reflected a significantly positive medium relationship between the tested variables at 0.452** (sig. 0.000) level. The null hypothesis is rejected and it can be concluded that entrepreneurship education passes the

necessary skills and concepts to individuals to identify new business opportunities and to reach levels of self-confidence sufficient to benefit from identified opportunities.

Ha4: There is a relationship between the extent to which public institutions of learning actively support entrepreneurship education and the promotion of entrepreneurial activity on campuses

Bivariate correlation results reflected a significantly positive weak relationship between the tested variables at 0.358** (sig. 0.000) level. The null hypothesis is rejected and it can be concluded that entrepreneurship support and the promotion entrepreneurial activities on campus have an influence in the effectiveness of entrepreneurship education.

7.5 IMPLICATIONS OF THE STUDY

The proposition of this study is twofold: contribution to theory and to the education sector.

7.5.1 Contribution to the implementation theory

The contribution of this study to the body of knowledge relating to pedagogy in entrepreneurship education is by suggesting an integrated model consisting of the important elements in entrepreneurship education for developing an entrepreneurial mind-set in students, with reference to South African PILs, specifically in KZN. These, as well as other institutions of learning in other countries, as stated in the literature and through the findings of the study, are subject to numerous challenges which impede their potential effectiveness and hence the ability to cultivate an entrepreneurship mind-set and intention.

The proposed integrated entrepreneurship education depicts that assessment techniques, attributes and skills taught, and subject knowledge acquired, are principal aspects of entrepreneurship education and development of entrepreneurial mind-sets in students in PILs. It is therefore important for the effectiveness of entrepreneurship education to pay close attention to these theories and other relevant business education, innovation, and business growth theories that would help PILs to deal with the unemployment and start-up failure that currently exists. The Theory of Planned Behavior (TPB) and A Need for Achievement Theory can also help nascent

entrepreneurs to understand the importance of entrepreneurship education to develop an entrepreneurship mind-set and intention.

The implementation concept and integrated model should be encouraged in the policy 'formulation-implementation-reformulation' cycle in educational institutions, especially, the integrated entrepreneurship model suggested by this research, which encapsulates a conceptual model of entrepreneurship education (Bauman and Lucy, 2019).

7.5.2 Contribution to educational institutions

It might be expected that entrepreneurship education is already well-established, with a clear framework and specific theories. However, this has not happened so far, and the area needs further research in order to help bring about effective results (Fulgence, 2015). Ramchander (2019: 3) states that South Africa is confronted by various challenges, including high business failure rates, low employment capacity, lack of growth in businesses and lack of educated entrepreneurs. These challenges are deemed to be the explanation for the lack of entrepreneurship knowledge and skills as well as the lack of access to finance (Ncube and Zondo, 2018: 1).

It is against this background that it was considered important to study and evaluate possible ways to develop entrepreneurship education as the key to developing an entrepreneurship mind-set and entrepreneurial intention. The empirical findings indicated that, in the opinion of both teaching staff and students, greater entrepreneurship success is achievable through entrepreneurship education, training and field-related technical skills, given the right educational resources. If entrepreneurship can be formally incorporated into the curriculum in PILs, appropriate entrepreneurship education and training can be enhanced and students equipped in understanding the concepts, knowledge and competencies of entrepreneurship in order to increase the numbers of entrepreneurs significantly. Simplified access to government support through both finance and training, together with less onerous procedures in connection with registration and compliance with tax laws were identified, in varying degrees, as being significant catalysts for entrepreneurship education. Off-campus experiences and learning opportunities have also been identified as being significant catalysts for improving competencies.

7.6 RECOMMENDATIONS BASED ON THE RESULTS OF THE STUDY

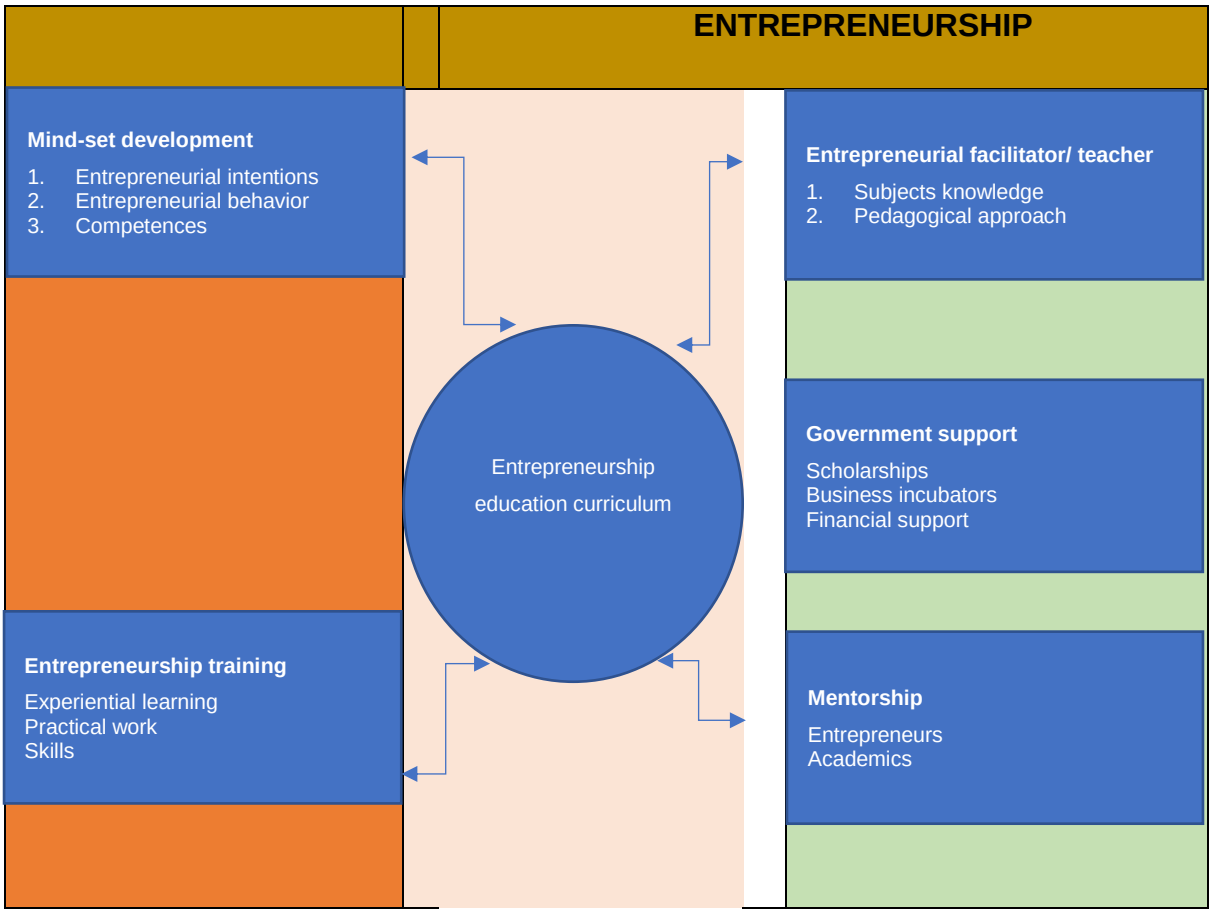
The study based on the literature review suggests the following steps be taken to improve implementation and development of the entrepreneurship education curriculum in PILs in KZN.

Theoretical framework formulated through variables identified from the literature review

As indicated in the preceding chapters, the construction of the study objectives, hypotheses and data collection tools was achieved through an extensive literature search. The review of the literature served as an important source for identifying and selecting variables that supported the development of the research study.

Based on the literature review, it can be concluded that entrepreneurship education curricula are affected by a number of challenges which can create major setbacks in terms of developing entrepreneurship mind-sets in students, and for decreasing the level of unemployment and increasing business creation. These challenges were identified and categorised into research themes in order to create a study focus for the research. As shown in the theoretical framework below, entrepreneurship education and training, entrepreneurship curricula, entrepreneurship facilitators/teachers, entrepreneurship impact/behaviour, government support and entrepreneurship mentors were all identified as critical components that influence entrepreneurship education in acquiring and achieving entrepreneurship education curriculum development and cultivating entrepreneurial mind-sets in students. These variables were used for questionnaire development and were scientifically tested, and, as a result, the proposed integrated model has been developed and is presented below.

Theoretical framework based on literature review

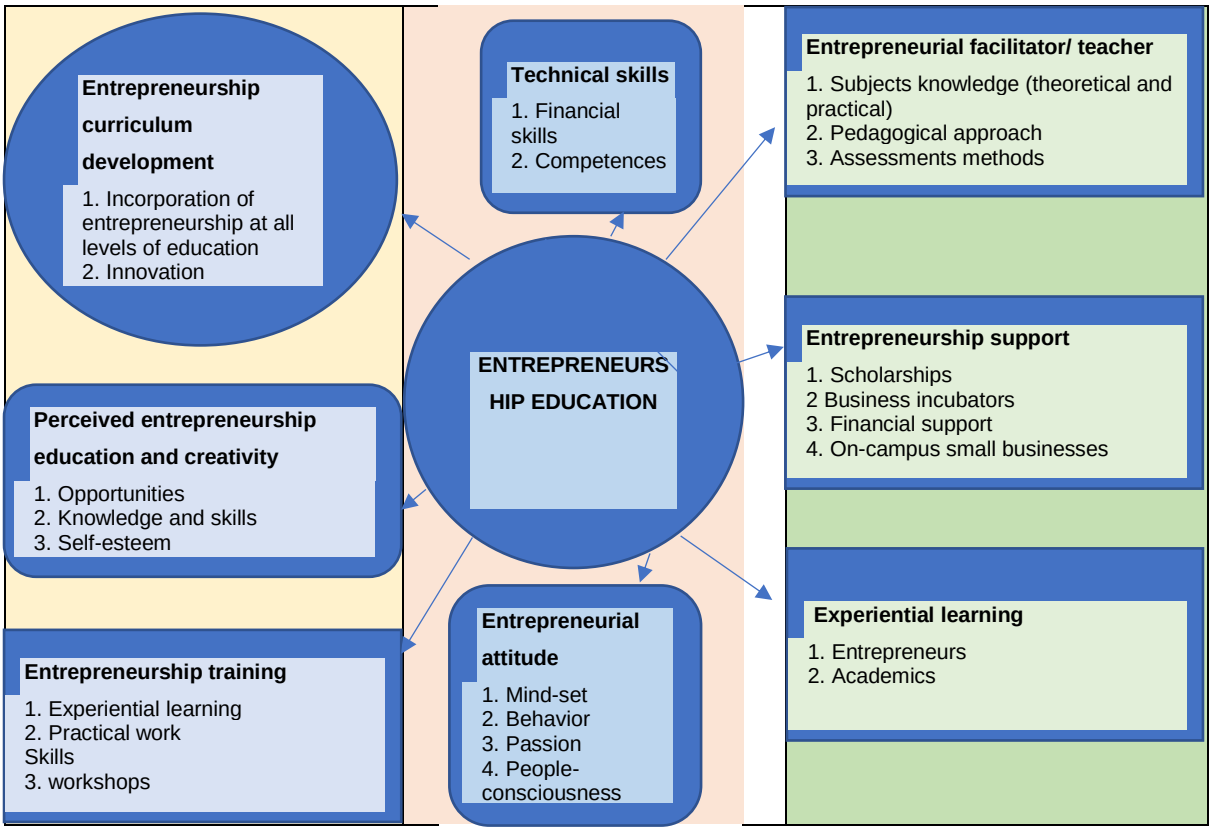


Source: developed by the researcher

Figure 7.1 Theoretical framework based on literature review

This framework was developed through a thorough analysis of both primary and secondary data gathered and through insight gained from the study's conceptual framework. Primary data was achieved by testing a wide range of variables, all of which were considered by the respondents (final year students and teaching staff in PILs) to have a substantial impact on efficiency of entrepreneurship education curriculum in PILs.

7.7 SUGGESTED INTEGRATED CONCEPTUAL FRAMEWORK



Source: developed by the researcher

Figure 7.2 Suggested integrated conceptual framework

Entrepreneurship curriculum development: the inclusion of entrepreneurship education at all levels of education institutions was found to be important. This is because entrepreneurship and its education are a continuing process that entail innumerable talents, skills and knowledge, leading to a unique pedagogy capable of developing entrepreneurship mind-sets and imparting competencies and knowledge simultaneously. Therefore, it is recommended that the policy makers and programme coordinators should seriously look into this aspect and consider revisiting the existing entrepreneurship curriculum. A major investment of time and resources will be required when incorporating entrepreneurship education curricula at all level of education institutions. However, the changes involved are likely to bear long-term benefits for the graduates and society at large.

Entrepreneurship facilitator/ teacher: the limitation of available resources was identified by the empirical study as a major setback in entrepreneurship education effectiveness. It is recommended that students are provided with entrepreneurial

teachers or instructors who are able to enhance entrepreneurship attractiveness by creating competitive advantage (that is, inclusion into entrepreneurship programmes dealing with company creation, creation of self-employment support units and PILs seedbed development, or creativity and entrepreneurship workshops are a few examples of initiatives developed within PILs aimed to encourage students to create companies. No doubt, students who have teachers/lecturers with entrepreneurship experience will experience a significantly greater increase in their entrepreneurship mind-set and intentions that those students who have the teachers with no entrepreneurship experience. Experienced entrepreneurship teachers are in a better position to share ideas and information concerning novel approaches, and to role play situations, and initiate projects.

Perceived entrepreneurship education and creativity: entrepreneurship education had been identified in the empirical findings as a key aspect in developing individuals' ability to recognise business opportunities, to develop self-esteem and to develop knowledge and skills in creating a venture in the event of risk. Furthermore, the study conceptualized effective entrepreneurship education as that which provides individuals with a practical sense of business, building self-confidence and developing competencies for a successful business venture.

Entrepreneurship training: The level of education of the leadership was found to be important. The people who possess higher qualifications have been perceived to be prepared to take calculated risks compared to entrepreneurs with lower or no qualification. It is therefore recommended that PILs should invest qualified entrepreneurial staff.

Entrepreneurship support**:** it is perceived that barriers and support factors in the PILs setting directly affects entrepreneurship education effectiveness. The study highlights that what makes entrepreneurship education effective may not be only economical, but may involve changes that are institutional. PILs are therefore seen as promoters of entrepreneurship by providing entrepreneurship education and complementary supports that are necessary to boost the potential intentions of venture creation and subsequent growth, hence they are key players in the provision of

training. Therefore, perception of PILs support is positively related to entrepreneurship intentions and business start-up.

Experiential learning: the proposed integrated conceptual framework reflects that lack of experiential learning and practical activities have been regarded as part of learning aspects that are critical as indicated by student respondent. The need is to have industry exposure, to try and fail, and to gain as much experience as possible. The study further reflects that experiential learning facilitates the development of an entrepreneurship mind-set, as it helps bridge the gap between the attainment of theoretical knowledge and the generation of entrepreneurial competencies and mind-sets through active learning.

Financial skills: a lack of financial skills, limited budgeting knowledge, difficulty in finding investors and understanding credit, have all been regarded as financial aspects that are critical as highlighted by respondents. The need is to have the above financial skills support in order to improve the effectiveness of entrepreneurship education.

Entrepreneurial attitude: an entrepreneurship attitude was also identified as one of the important aspects of entrepreneurship education. The empirical findings found that attitude towards entrepreneurship is the choice of students to become self-employed rather than employed by an organisation.

Overall, it is recommended that for entrepreneurship education to be effective and produce better results, teaching staff should enhance their competence, particularly related to entrepreneurship, by means such as entrepreneurship workshops and webinars, in-house training, and certification programmes. The entrepreneurship curriculum in PILs in SA should also be enhanced so that it can form entrepreneurial competencies, cultivate entrepreneurship mind-sets and foster student enthusiasm for entrepreneurship. Furthermore, entrepreneurship education in PILs should inspire students to develop creative ideas to become entrepreneurs. Entrepreneurship education should also provide the needed knowledge about entrepreneurship, continuing to encourage and develop students to be ready to become entrepreneurs. The conceptual framework indicated in the model above will help in the conception of these individual approaches.

7.8 LIMITATIONS OF THE STUDY

A limitation of this study is the total number of participants. 256 may be regarded as not truly representative of the total population. However, the syllabus offered in government high schools and in TVET colleges is identical throughout South Africa, it can be assumed that the experiences of staff and students in these institutions will be similar. In the case of universities each institution has flexibility in developing individual curricula within guidelines set by the DHET. Thus, different findings from the universities were noted. Again, the population for the sample for this study was limited to final-year students and teaching staff in the department of Management and Entrepreneurial Studies in PILs (including schools, Universities, Universities of technology and Technical and Vocational Education and Training Collages) in the Department of Management and Entrepreneurship Studies or Business Studies. Future research could employ a broader sample to include all faculties and programmes which focus on entrepreneurship. It is also noted that a control group of students who were not exposed to entrepreneurship education should have been included to strengthen the validity of the findings.

The findings of the study may not be directly generalisable to all institutions of learning in other provinces and across other types of institutions of learning in South Africa. However, similarities in curricula in both high schools and TVET colleges, along with prevailing conditions which impact on all South African PILS, will enable this study to be used to assist government and all PILs in the country to establish ways in which they can develop an entrepreneurial mind-set in students so that they can contribute further to the country's economic growth.

Another limitation was the reluctance of education institutions to complete questionnaires, as they incorrectly saw the interviewers as strangers seeking to obtain information that might lead to their being found guilty of lapses. However, the Ethical Clearance letter and the researcher identification details were used to prove the intent of the study as being purely for research purposes, and to solicit the support of the respondents.

7.9 RECOMMENDED INTERVENTION STRATEGIES FOR ENTREPRENEURSHIP EDUCATION

The recommendations for this study are based on the empirical findings with the aim of assisting the development and effectiveness of entrepreneurship education in government-funded higher institutions of education in KwaZulu-Natal. This section discusses the recommended intervention strategies.

7.9.1 Entrepreneurship policy forum in South Africa

The study recommends that government policies should promote growth and economic prosperity to create an environment that promotes entrepreneurship education and fosters small and medium enterprises. Entrepreneurship education should not be confined to business students but should be made available for students in all disciplines. PILs should run workshops and short courses for small and medium enterprise owners/managers.

7.9.2 Recruitment of experienced staff

It is recommended that the staffing team recruit experienced entrepreneurship teachers who will be able to cultivate an entrepreneurial mind-set in students. These teachers should endeavour to instil entrepreneurial behaviour. The appointment of specialist teaching staff would add value in PILs for improved entrepreneurship activities.

7.9.3 Partnering with relevant agencies

Collaborations with entrepreneurship professional bodies and business institutions are also recommended. Professional bodies can provide expert advice on technical issues around entrepreneurship education. Business institutions can provide advice to help facilitate the development of entrepreneurship education curricula and improve teaching pedagogies so that they adequately develop the entrepreneurial mind-set in students.

7.9.4 Teaching strategies

It is recommended that students be inducted into the workings of the business world. This will make them sensitive to real-world business challenges, setbacks and rewards. A significant number of students may then become inspired to start their own businesses and to take calculated risks. Student experiences in an entrepreneurship course (especially in the business plan simulation) and in being involved in business competitions can equip them with the necessary confidence to perform well in presentations for promoting or marketing their businesses. These activities can inspire students to become effective social entrepreneurs as well. It is also recommended that both students and staff be exposed to international competitions so that they can become fully aware of what is required in order for them to win international competitions in the future.

7.9.5 Government support

Several studies maintain that the South African Government should be involved in promoting and supporting entrepreneurship and entrepreneurship education with increased funding and more effective systems.

- **Awareness campaigns**

The study recommends that the government actively engage in the promotion of entrepreneurship education in PILs and establish mechanisms that will ensure compliance not only in business-related studies but in all programmes. In this study some respondents were not aware of the importance of initiating their own ventures and the possibilities of being their own boss and creating employment for others. The study found that a majority of student respondents still prefer salaried jobs that will guarantee payment at the end of the month. This lack of awareness signifies the absence of both government and PILs' involvement in promoting entrepreneurship and entrepreneurship education. Even though most PILs regard entrepreneurship as one of their graduate attributes, it is not clear how this is embedded in curricula.

7.9.6 Compliance enforcement

Chapter 2 discussed the importance of entrepreneurship education and how it contributes to local business and to the country's economy. However, this study

reveals that entrepreneurial behaviour in students is not being inculcated at the rate required. It was found that student respondents were not aware of the importance of entrepreneurship education and as a result they were only focused on mastering employability skills. The study, therefore, recommends stringent compliance mechanisms that will ensure that entrepreneurship education is adequately embedded in the curricula for all programmes.

7.9.7 Sponsorships

It is recommended that government provide funding to PILs so they can have adequate resources. Moreover, both PILs and government should find ways to sponsor students who are willing to take risks by starting businesses, which will encourage more students to partake in entrepreneurship.

7.10 SUGGESTIONS FOR FUTURE RESEARCH

In light of the findings of this study, a lot of interventions and effective policies are needed to boost the entrepreneurship education in South African PILs. However, the following suggestions for further research would help to gain an even more comprehensive understanding of the issues enabling further specific recommendations to be made, not only to cultivate entrepreneurial mind-sets in students but also to create positive ripple effects on developing entrepreneurial competencies, knowledge and skills, which are transferable and beneficial in starting a business.

This research has generated many questions in need of further investigation. What is now needed is a cross-national, comparative study with a developed country that offers entrepreneurship education. Moreover, South African PILs must improve the integration and inclusion of entrepreneurship education curricula that PILs try to promote. It is suggested that successful strategies for entrepreneurship education in developed countries that are possible in South African context should be examined.

While the focus of this study was on final year students and teaching staff in PILs, more research should be done with the focus on graduates. This could assist in additional knowledge about their perspectives and the effectiveness of

entrepreneurship education in their experience. In this sense, the desirability and feasibility of broad entrepreneurship education may be done with graduates and particularly with those who have become successful entrepreneurs, along with those who have attempted to set up businesses but have failed. Important lessons can be learned from both.

Further research also needs to assess the role played by private institutions of learning in contributing to the effectiveness of entrepreneurship education, in KZN and in other Provinces.

A critical assessment of teaching methods and strategies used in entrepreneurship education in PILs need to be undertaken. This will help education institutions to invest in appropriate resources.

A focus group is needed of both successful and unsuccessful entrepreneurs who were not exposed to entrepreneurship education to determine the effectiveness of EE.

Further research should be conducted on Government business support structures and systems as they have significant shortcomings currently, in terms of contributing to the effectiveness of entrepreneurship education in PILs.

Most significantly in-depth interviews should involve both successful and unsuccessful entrepreneurs as respondents, in order to be able to assess the strengths and weaknesses of current curricula from the perspective of those who have hands-on recent experience.

7.11 CONCLUSION

This study concludes that entrepreneurship education programmes for both students and teaching staff in PILs are confronted with several challenges. The development of enhanced entrepreneurship curricula is the common challenge, which includes cultivating entrepreneurship mind-sets in students and acting as alternatives to traditional entrepreneurship educational approaches. It can be noted that despite the number of initiatives (that is, encouraging entrepreneurship skills and knowledge, developing curriculum that respond to the labour market, etc) aimed on developing entrepreneurship curriculum in PILs, entrepreneurship competencies and mind-sets

have not been properly developed in these institutions. The study found that the teaching approaches that are mainly used in PILs are lectures, group presentation, and group or individual assignments. The involvement of entrepreneurship experts, simulation/creation of small businesses, development of business models, entrepreneurship workshops and involving successful entrepreneurs as guest lecturers are strategies which are hardly ever utilised in classes.

The fact that the South African government has realised the importance of entrepreneurship education is positive. However, all stakeholders, including business owners and managers, should also do their best to improve entrepreneurship knowledge and skills. To achieve this, additional resources (funding and teaching resources) are required to ensure the effective implementation of measures to address entrepreneurship education challenges.

This study adds its weight to the consensus that entrepreneurship education is relevant for the development of South Africa and Africa at large. Human capital is a key national asset in the contest for survival in the era of globalisation, especially in relation to the Fourth Industrial Revolution (4IR) and COVID-19. Moreover, the findings of the study are in line with the National Higher Education Strategic Plan which seeks to transform higher education in order to produce human capital with an entrepreneurial mentality and high-level entrepreneurial skills and competencies (Department of Higher Education and Training 2019).

The outcome of this study makes an important contribution in establishing that entrepreneurship education in PILs currently still have numerous limitations when it comes to effectiveness. The study found that most PILs do not have sufficient resources, and that they have only limited influence on students in developing entrepreneurship mind-sets and in creating a culture of entrepreneurship amongst the students. It also concluded that lack of resources like finance, technology, training and support from government are the major hindrances towards effectiveness of entrepreneurship. These challenges make it difficult for some of the recommended pedagogies, teaching methods, theories and models to be adopted by PILs.

As discussed above (p50) ‘Rauch and Hulsink (2015) state that the educational setting appears to be productive for development of perceived self-efficacy through mentorship by successful entrepreneurs, evaluation of work in and out of class, and

peer evaluation. All these elements can contribute to how an individual sees themselves and whether they believe they are able to become an effective entrepreneur. This study has been able to indicate that at present the kinds of education offered by PILs fall short of achieving this potential, and also that a further level should be added to the theory of planned behaviour in that unless the stated conditions are understood and also are available in the particular context in which the education takes place the theory involving ‘perceived behavioural control’ cannot be effectively realised.

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APPENDICES

Appendix 1: Information letter and consent form

Title of the Research Study: The evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu natal Province

Principal Investigator/s/researcher: (TR Ncube, PhD: Management Sciences, Business Administrations, Lecturer: Accounting and Informatics)
mattandyncube@gmail.com / thandukwazin@dut.ac.za 079 726 7702 0r 033 845 8883

Supervisor: Dr LM Lekhanya (D. Tech: Marketing; PhD: Management; Curr: CFA)
Tel: +27 79 757 1631 or +27 72 335 3411 Email Address: lawrenceL@dut.ac.za

Brief Introduction and Purpose of the Study:
The South African education system is still producing job seekers and not job creators. Lack of entrepreneurship education has been identified as one of the prime factors in South Africa. It has been recommended that entrepreneurship education be integrated into the school curriculum at all levels, so as to build a strong entrepreneurial culture. This study aims to evaluate the entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province. The results of this survey will be used to improve entrepreneurial education in public institutions of learning in the country.

Outline of the Procedures:
You are kindly requested to complete the questionnaire as honestly and fully as you are able. Incomplete forms cannot be included in the survey. Your answers will be anonymous and findings aggregated. Permission to conduct this study will be sought from the Research Ethics Committee.

Risks or Discomforts to the Participant:
There are no risks to you as participants of this research.

Benefits:
The results of this survey will be used to improve entrepreneurial education in public institutions of learning in the country and also add to the academic body of knowledge.

Reason/s why the Participant May Be Withdrawn from the Study:
It is your prerogative to discontinue your participation from this study and no penalties/charges will be laid against you.

Remuneration:
You will not be given any remuneration or incentives for being part of this study. Your participation is voluntary.

Costs of the Study:
The researcher will only cover all the costs incurred during the course of this study. You will not be liable for any costs or expenses.

Confidentiality:
All the information you provide will be kept confidential and anonymous.

Research-related Injury:
You will not be exposed in any harm by participating in this research.

Persons to Contact in the Event of Any Problems or Queries:
Please contact the researcher (0797267702), my supervisor (0313735835) or the Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Director: Research and Postgraduate Support, Prof S Moyo on 031 373 2577 or moyos@dut.ac.za

Signature……

Appendix 2: Questionnaire staff

Faculty of Management Sciences

Department of Entrepreneurial Studies and Management

QUESTIONNAIRE FOR TEACHING STAFF IN PUBLIC INSTITUTIONS OF LEARNING IN KWA-ZULU NATAL PROVINCE

Preamble: This research focuses on "the evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province (South Africa)"

The researcher wishes to evaluate the impact of entrepreneurship education in public institutions of learning, and also to ascertain the extent to which these institutions actively support and promote entrepreneurial activities on campuses.

Entrepreneurship education is considered as one of the prominent forces that determine the development of the economy, therefore there is a need to stimulate entrepreneurial mind-sets of young people and to create more favourable societal climate for entrepreneurship, as the country (SA) is not exploiting its entrepreneurial potential. According to South African government, public institutions of learning have an important role to play in improving the entrepreneurial competence of SA's graduates.

It would be highly appreciated if you could contribute in this study by answering the attached questionnaire. The information provided will be treated with utmost confidentiality and anonymity and will be used for the purpose of this research only. Your security is strengthened and authenticated by the attached ethical clearance, introductory and the consent letters.

Signature: 

SECTION A:

Identification

1. Name and Surname: ----------
2. E-mail Address: ----------
3. Country: ----------
4. Name of your institution: ----------

Gender

Male	
Female	

1. **How old are you?**

From 20 to 30 years old	
From 31 to 40 years old	
From 41 to 50 years old	
Over 50	

2. **At what school level do you teach?**

Secondary school	
TVET	
University of Technology (UoT)	
University	

3. **For how long have you been teaching? ---------- years**

4. **How long have you been engaged in entrepreneurial / entrepreneurship education?**

0 years	
1-3 years	
4 years or more	

5. **What kind of teacher training in entrepreneurial or entrepreneurship education have you received?**

None	
Teacher training on a specific programme/ project	
Teacher training on a mini companies	
Teacher training on entrepreneurial / entrepreneurship education in general	

6. **Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?**

No time available	
0-10%	
20-30%	
More than 30%	

SECTION B

Please read the statement below and indicate your level of agreement or disagreement. Mark the appropriate box with a cross or a tick. Only one cross or tick per statement is required.

NOTE: SA = Strongly Agree, A = Agree, N= Neutral, SD= Strongly Disagree, D= Disagree.

1. ASSESSMENT OF WHETHER AN ENTREPRENEURSHIP EDUCATION CURRICULUM PROMOTES BUSINESS START-UP

No.	STATEMENT	SA	A	N	D	SD
1.1	The higher the level of education of an individual the greater the possibility of starting a venture that progresses past the start-up stage					
1.2	Effective entrepreneurship education offers students access to skills and knowledge needed to start an entrepreneurial venture					
1.3	The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start up their own businesses					
1.4	As part of the curriculum offered by the institution, the entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses					
1.5	In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business					
1.6	Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses					
1.7	Entrepreneurship education can alleviate the fear of failure in starting new businesses					
1.8	It is believed that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses					

2. INVESTIGATING THE PERCEPTIONS OF EDUCATORS ABOUT THE BENEFITS OF ENTREPRENEURSHIP EDUCATION

No.	STATEMENT	SA	A	N	D	SD
2.1	Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole					
2.2	Entrepreneurship education improves economic literacy.					
2.3	Entrepreneurship education helps students to consider self-employment as a valid graduate career option					
2.4	Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development					
2.5	Entrepreneurship education contributes to decreasing unemployment in the country					
2.6	Entrepreneurship education determines individual entrepreneurial interests					
2.7	Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures					
2.8	Entrepreneurship education increases the number of graduate start-up businesses					

3. INVESTIGATING THE KEY SKILLS THAT ENTREPRENEURSHIP EDUCATION PROMOTES

No.	STATEMENT	SA	A	N	D	SD
3.1	The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy					
3.2	Graduates gain the skills to take calculated risks through entrepreneurship education					
3.3	Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner					
3.4	Entrepreneurship education equips students to think strategically					
3.5	Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources					
3.6	Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment					
3.7	Entrepreneurship education teaches students the importance of social interaction as a skill for a successful entrepreneur					

4. ASCERTAINING THE ROLE OF PUBLIC INSTITUTIONS IN PROMOTING ENTREPRENEURSHIP EDUCATION

No.	STATEMENT	SA	A	N	D	SD
4.1	The institution offers support to students in order to start up their own businesses, by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance					
4.2	The institution provides training and development programmes to promote business start-up					
4.3	The institution collaborates with entrepreneurship experts to promote entrepreneurship education					
4.4	The institution invites entrepreneurs and practitioners from different organisations to share their experience with students					
4.5	The institution organises career talks during convocation day					
4.6	The institution takes students for visits to industries to gain more knowledge about the subject					
4.7	The institution practically orients students to outreach programmes					
4.8	The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning					

SEMI-STRUCTURED INTERVIEW QUESTIONS

1. How does entrepreneurship education in your institution promote a pathway to business start-up?

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2. How do you conduct learner analysis in your lesson content?

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3. In what way is the curriculum in the entrepreneurship programme planned that will transform SA youths into entrepreneurs?

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4. What constitutes the distinctive features of entrepreneurship education in your lesson content?

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5. What makes your entrepreneurship modules more entrepreneurial?

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6. What makes entrepreneurship education different and worthy of distinction in your institution?

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7. How do you as a teacher/or instructor check on your own entrepreneurship characteristics?

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8. How are staff that teach entrepreneurship studies at your institution recruited? ……

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9. Which subjects in your programme are important and how do these distinguish your institution from others?

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Thank you for your participation!

Appendix 3: Questionnaire students

Faculty of Management Sciences

Department of Entrepreneurial Studies and Management

QUESTIONNAIRE FOR STUDENTS IN PUBLIC INSTITUTIONS OF LEARNING IN THE KWA-ZULU NATAL PROVINCE

Preamble: This research focuses on "the evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province (South Africa)"

The researcher wishes to evaluate the impact of entrepreneurship education in public institutions of learning, and also to ascertain the extent to which these institutions actively support and promote entrepreneurial activities on campuses.

Entrepreneurship education is considered as one of the prominent forces that determine the development of the economy, therefore there is a need to stimulate entrepreneurial mind-sets of young people and to create more favourable societal climate for entrepreneurship, as the country (SA) is not exploiting its entrepreneurial potential. According to South African government, public institutions of learning have an important role to play in improving the entrepreneurial competence of SA's graduates.

It would be highly appreciated if you could contribute in this study by answering the attached questionnaire. The information provided will be treated with utmost confidentiality and anonymity and will be used for the purpose of this research only. Your security is strengthened and authenticated by the attached ethical clearance, introductory and the consent letters.

Signature:……..

SECTION A:

Identification

1. Name and Surname: ----------
2. Name of your institution: ----------

1. Gender

Male	
Female	

2. How old are you?

Less than 15 years old	
From 16 to 20 years old	
From 21 to 25 years old	
Over 26	

3. At what school level do you study?

Secondary school		University of Technology (UoT)	
TVET		University	

4. How long have you been engaged in entrepreneurial / entrepreneurship education?

0 years	
1-3 years	
4 years or more	

5. What kind of learner training in entrepreneurial or entrepreneurship education have you received?

None	
Bringing 'the real world' into the classroom	
Project work	
In-service training in companies	

6. Can you indicate how much time (in percentage) you spent on entrepreneurship education every week?

No time available	
0-10%	
20-30%	
More than 30%	

SECTION B

Please read the statement below and indicate your level of agreement or disagreement. Mark the appropriate box with a cross or a tick. Only one cross or tick per statement is required.

NOTE: SA = Strongly Agree, A = Agree, N= Neutral, D= Disagree, SD= Strongly Disagree.

1. **ASSESSMENT OF WHETHER AN ENTREPRENEURSHIP EDUCATION CURRICULUM PROMOTES BUSINESS START-UP**

No.	STATEMENT	SA	A	N	D	SD
1.1	The higher the level of education of an individual the greater the possibility of them starting a venture that progresses past the start-up stage					
1.2	The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start-up their own businesses					
1.3	The entrepreneurship programmes offered by the institution have practical elements that are devised to encourage the creation of new businesses					
1.4	In the institution, the entrepreneurship education curriculum is designed to enhance learner interest in starting an own business					
1.5	An effective entrepreneurship education curriculum allows people to access the relevant knowledge and gain practical skills needed to start an entrepreneurial venture					
1.6	Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals who are able to take risks and create new businesses					
1.7	Entrepreneurship education can alleviate the fear of failure in starting new businesses					
1.8	It is believed that entrepreneurship education is a platform for addressing unemployment in communities, through the creation of new business					

2. PERCEPTIONS OF STUDENTS ABOUT THE BENEFITS OF ENTREPRENEURSHIP EDUCATION

No.	STATEMENT	SA	A	N	D	SD
2.1	Entrepreneurship education enhances knowledge about the benefits of entrepreneurship in society as a whole					
2.2	Entrepreneurship education in my institution educates the learners about the benefits of entrepreneurship in the development of the South African economy					
2.3	Entrepreneurship education helps students to consider new venture creation and self-employment as a valid graduate career option					
2.4	Entrepreneurship education seeks to prepare people to be responsible, enterprising individuals, who become entrepreneurial thinkers that contribute to sustainable economic development					
2.5	Entrepreneurship education contributes in decreasing the number of unemployed in the country					
2.6	Entrepreneurship education determines individual entrepreneurial interests					
2.7	Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures					
2.8	Entrepreneurship education increases the number of graduate start-up businesses					

3. GRADUATE ATTRIBUTES AND SKILLS NEEDED IN ENTREPRENEURSHIP EDUCATION

No.	STATEMENT	SA	A	N	D	SD
3.1	The institution provides students with internship opportunities in businesses in the local economy, which teach them business skills					
3.2	Entrepreneurship education imparts the skills to take calculated risks					
3.3	Entrepreneurship education can play a crucial role in gaining the necessary skills to manage a business and change the views of South Africans towards self-employment					
3.4	Entrepreneurship education provides the ability to pursue opportunities by coming up with new ideas and marshalling needed resources					
3.5	Entrepreneurship education affords ability to create and manage a new venture and the ability to think in a creative and critical manner					
3.6	Entrepreneurship education teaches me to think strategically					

3.7	Entrepreneurship education teaches that social interaction is an important skill for a successful entrepreneur					

4. THE ROLE OF PUBLIC INSTITUTIONS IN PROMOTING ENTREPRENEURSHIP EDUCATION

No.	STATEMENT	SA	A	N	D	SD
4.1	The institution offers support to students in order to start up their own businesses, by assisting them with writing a business plan, specialist advice from business mentors and financial assistance					
4.2	The institution collaborates with entrepreneurship experts to promote entrepreneurship education					
4.3	The institution provides training and development programmes to promote business start-up					
4.4	The institution invites entrepreneurs and practitioners from different organisations to share their experience with students					
4.5	The institution organises career talks during convocation day					
4.6	The institution facilitates student visits to industries to gain more knowledge about their subject					
4.7	The institution practically orients students to outreach programmes					
4.8	The institution allows us the space to “try and fail” to encounter “intelligent failures” as part of effective learning					

SEMI-STRUCTURED INTERVIEW QUESTIONS

1. How does entrepreneurship education in your institution promote a pathway to business start-up?

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2. To what extent does entrepreneurship education transform SA youths into entrepreneurs?

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3. Does entrepreneurship education provide skills and knowledge to students in the sciences and arts who seek to commercialise their intellectual property or it is just another subject provided in commercial courses?

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4. What makes entrepreneurship education different and worthy of distinction in your institution?

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5. Which subjects in your programme are important to entrepreneurship and make your institution different?

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6. What constitutes the distinctive features of entrepreneurship education in your institution's lesson content?

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7. What makes the entrepreneurship modules at your institution more entrepreneurial?

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Thank you for your participation!

Appendix 4: DUT IREC approval letter

DUT
DURBAN UNIVERSITY OF TECHNOLOGY

Institutional Research Ethics Committee
Research and Postgraduate Support Directorate
2nd Floor, Berwyn Court
Gate 1, Steve Biko Campus
Durban University of Technology

P O Box 1334, Durban, South Africa, 4001

Tel: 031 373 2375
Email: lavishad@dut.ac.za
http://www.dut.ac.za/research/institutional_research_ethics

www.dut.ac.za

11 April 2018

IREC Reference Number: **REC 38/17**

Mr T R Ncube
159 Amen Street
Newlands West
4037

Dear Mr Ncube

The evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province

The Institutional Research Ethics Committee acknowledges receipt of your final data collection tools for review.

We are pleased to inform you that the data collection tools have been approved. Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the IREC acknowledges receipt of your gatekeeper permission letters.

Please note that FULL APPROVAL is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the IREC according to the IREC Standard Operating Procedures (SOP's).

Please note that any deviations from the approved proposal require the approval of the IREC as outlined in the IREC SOP's.

Yours Sincerely,

Professor J K Adam
Chairperson: IREC

DUT DURBAN UNIVERSITY OF TECHNOLOGY
2018 -04- 11
INSITUTUTIONAL RESEARCH ETHICS COMMITTEE
P O BOX 1334 DURBAN 4000 SOUTH AFRICA

Appendix 5: DUT IRIC permission letter

Directorate for Research and Postgraduate Support
Durban University of Technology
Tromso Annexe, Steve Biko Campus
P.O. Box 1334, Durban 4000
Tel.: 031-3732576/7
Fax: 031-3732946

14th June 2018

Mr Thandukwazi Richman Ncube
c/o Department of Entrepreneurial Studies and Management
Faculty of Management Sciences
Durban University of Technology

Dear Mr Ncube

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research and Innovation Committee (IRIC) has granted full permission for you to conduct your research "The evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province" at the Durban University of Technology.

The DUT may impose any other condition it deems appropriate in the circumstances having regard to nature and extent of access to and use of information requested.

We would be grateful if a summary of your key research findings can be submitted to the IRIC on completion of your studies.

Kindest regards.
Yours sincerely

PROF CARIN NAPIER
DIRECTOR (ACTING): RESEARCH AND POSTGRADUATE SUPPORT DIRECORATE

Appendix 6: KZN DoE permission letter

education

Department:
Education
PROVINCE OF KWAZULU-NATAL

Enquiries: Phindile Duma | Tel: 033 392 1041 | Ref.:2/4/8/1384

Mr TR Ncube
159 Amen Street
762 Westridge
Newlands West
4037

Dear Mr Ncube

PERMISSION TO CONDUCT RESEARCH IN THE KZN DoE INSTITUTIONS

Your application to conduct research entitled: **"THE EVALUATION OF ENTERPRENEURSHIP EDUCATION IN PUBLIC INSTITUTIONS OF LEARNING IN KWAZULU-NATAL PROVINCE",** in the KwaZulu-Natal Department of Education Institutions has been approved. The conditions of the approval are as follows:

1. The researcher will make all the arrangements concerning the research and interviews.
2. The researcher must ensure that Educator and learning programmes are not interrupted.
3. Interviews are not conducted during the time of writing examinations in schools.
4. Learners, Educators, Schools and Institutions are not identifiable in any way from the results of the research.
5. A copy of this letter is submitted to District Managers, Principals and Heads of Institutions where the Intended research and interviews are to be conducted.
6. The period of investigation is limited to the period from 31 October 2017 to 09 July 2020.
7. Your research and interviews will be limited to the schools you have proposed and approved by the Head of Department. Please note that Principals, Educators, Departmental Officials and Learners are under no obligation to participate or assist you in your investigation.
8. Should you wish to extend the period of your survey at the school(s), please contact Miss Phindile Duma at the contact numbers below
9. Upon completion of the research, a brief summary of the findings, recommendations or a full report/dissertation/thesis must be submitted to the research office of the Department. Please address it to The Office of the HOD, Private Bag X9137, Pietermaritzburg, 3200.
10. Please note that your research and interviews will be limited to schools and institutions in KwaZulu-Natal Department of Education.

Riverdene Secondary School
Hillgroove Secondary School
Hunt Road Secondary School

Dr. EV Nzama
Head of Department: Education
Date: 01 November 2017

..Championing Quality Education - Creating and Securing a Brighter Future

KWAZULU-NATAL DEPARTMENT OF EDUCATION
Postal Address: Private Bag X9137 • Pietermaritzburg • 3200 • Republic of South Africa
Physical Address: 247 Burger Street • Anton Lembede Building • Pietermaritzburg • 3201
Tel.: +27 33 392 1004/41 • **Fax.:** +27 033 392 1203• **Email:**Phindile.Duma@kzndoe.gov.za •**Web:**www.kzneducation.gov.za
Facebook: KZNDOE….Twitter: @DBE_KZN….Instagram: kzn_education….Youtube:kzndoe

Appendix 7: Gatekeeper permission letter

159 Amen Street
762 Westrich
Newlands West
Marble ray
4037

2018/10/10

REQUEST FOR PERMISSION TO CONDUCT RESEARCH

Dear Sir/ Madam

My name is Thandukwazi Ncube, a PhD student at the Durban University of Technology. The research I wish to conduct for my Doctoral thesis involves "The evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province".

I am hereby seeking your consent to conduct a research in your institution.

I have provided you with a copy of my proposal which includes copies of the data collection tools and consent and/ or assent forms to be used in the research process, as well as a copy of the approval letter which I received from the Institutional Research Ethics Committee (IREC).

If you require any further information, please do not hesitate to contact me on 0797267702, 0338458883 or thandukwazin@dut.ac.za ncubetr1@gmail.com. Thank you for your time and consideration in this matter.

Yours sincerely,

TR NCUBE
Durban University of Technology

Appendix 8: University of Zululand permission granted

UNIVERSITY OF ZULULAND

University of Zululand, Private Bag X1001, KwaDlangezwa, 3886
W: www.unizulu.ac.za
T: +27 35 902 6731 E: DlaminiA@unizulu.ac.za
Deputy Vice-Chancellor: Research and Innovation Office

Mr TR Ncube
159 Amen Street
762 West Rich Newlands West
4037
Durban University of Technology
033 845 8883
Per email: mattandyncube@gmail.com

26 February 2018

Dear Mr TR Ncube

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT UNIZULU: "THE EVALUATION OF ENTREPRENEURSHIP EDUCATION IN PUBLIC INSTITUTIONS OF LEARNING IN KWAZULU-NATAL PROVINCE".

Your letter to me, refers.

I hereby grant approval for you to conduct part of your research at UNIZULU, as per the methodologies stated in your research proposal and in terms of the data collection instruments that you have submitted. I note also that the University of KwaZulu-Natal, has issued an ethical clearance certificate and having read the documentation, I am happy to accept that certificate.

You may use this letter as authorization when you approach the appropriate persons. Please note that permission is based on the documentation that you have submitted. Should you revise your research instruments, or use additional instruments, you must submit those to us as well.

I wish you well in your research.

Yours sincerely,

Professor Gideon De Wet 26/2/18
Chairperson: University of Zululand Research Ethics Committee
Deputy Vice-Chancellor: Research and Innovation
cc: Mr. D Van Rensburg: Registrar
cc: Mr. M Khawula: Deputy Registrar: Secretariat & Policy Development

Appendix 9: Umfolozi TVET permission granted

higher education & training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

UMFOLOZI TVET COLLEGE
Let the future be known

12 March 2018

TO WHOM IT MAY CONCERN:

The purpose of this letter is to grant permission to **Thandukwazi Ncube**

As per the request to conduct the research project :

Research Project Title: : "The evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province."

Aim of the Research:. The aim of this research is to add to the current skills debate in planning of entrepreneurship education. In particular, it seeks to highlight the need to improve the educational systems to strengthen the culture of entrepreneurship education and to gain a better understanding of how to promote entrepreneurship education.

Tertiary Insitution : Durban Univesrity of Technology

Faculty or School : Management Science, Business Administration

Qualification: PhD: Management Sciences, Business Administration

Name of Supervisor : Dr LM Lekhanya

Study Site Location: Umfolozi TVET College , All Campus

Consent of participants : All participants must be given consent forms to sign before the commencemnet of study.

Confidentiality : All participants must be guaranteed confidentiality

Permission granted by:

SZ ZUNGU
PRINCIPAL

Private Bag X5023, Richards Bay 3900, Tel: +27 (35) 902 9501, Fax: +27 (35) 789 2585, www.umfolozicollege.co.za
SERVING COMMUNITIES IN ILEMBE, UTHUNGULU & UMKHANYAKUDE DISTRICTS

Appendix 10: Elangeni TVET permission letter

higher education & training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

Elangeni College
Technical and Vocational Education and Training

An ISO 9001 and OSHAS 18001 certified organisation.

09 April 2018

Dear Mr T Ncube

Re: Request for using the College as a site of research

Elangeni College has no objection to you using our college as a site of research: The evaluation of entrepreneurship education in the public institutions of learning in KwaZulu Natal Province.

However, the following conditions for external research apply:

- The name(s) of staff employed by the college cannot be used in any document
- The name(s) of college students cannot be used in any document
- When you need to collect data, please follow proper processes of making appointments with the relevant employees adhering to protocols.
- Once you have decided which college sites you will interested in using, please send that information to the Principal's office, so the relevant Campus Manager(s) can be informed.
- Ensure that the request for data/appointment is sent well in advance.
- Your research cannot disturb teaching and learning or any crucial function.

Please note that failure to comply with all of the above conditions will result in the necessary legal action taken against you.

The college would like to read the final document.

Yours sincerely

TJ Aryetey

College Principal

SABS ISO 9001 **Central Office.** 15 Portsmouth Road, Pinetown, 3610 **Postal Address.** Private Bag X9032, Pinetown, 3600 SABS OHSAS 18001

Email. info.elangeni@elangeni.edu.za **Phone.** 031 716 6700 **Fax.** 031 716 6777

INANDA 131 of Street 108812 Inanda Tel: 031 519 0933
KWADABEKA 140 Khululeka Road Clermont Tel: 031 711 0313
KWAMASHU F 5 Malandela Road KwaMashu Tel: 031 503 9708
MPUMALANGA 280 Shezi Main Road Mpumalanga Tel: 031 771 0148/2568
NDWEDWE P100 Main Road Ndwedwe Tel: 074 582 9178
NTUZUMA G 384 Ithendele Drive Ntuzuma Tel: 031 509 1924
PINETOWN 38 Bamboo Lane Pinetown Tel: 031 702 3260
QADI Zulu Reserve Road Botha's Hill Tel: 031 777 1742

Appendix 11: University of KwaZulu-Natal permission granted

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

1 February 2019

Mr Thandukwazi Ncube
Durban University of Technology
Email: mattandyncube@gmail.com

Dear Mr Ncube

RE: PERMISSION TO CONDUCT RESEARCH

Gatekeeper's permission is hereby granted for you to conduct research at the University of KwaZulu-Natal (UKZN) towards your postgraduate studies, provided Ethical clearance has been obtained. We note the title of your research project is:

"The Evaluation of Entrepreneurship Education in Public Institutions of Learning in Kwa-Zulu Natal Province."

It is noted that you will be constituting your sample by handing out questionnaires to students and academic staff members at UKZN.

Please ensure that the following appears on your notice/questionnaire:

- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

Yours sincerely

MR SS MOKOENA
REGISTRAR

Office of the Registrar
Postal Address: Private Bag X54001, Durban, South Africa
Telephone: +27 (0) 31 260 8005/2206 **Facsimile:** +27 (0) 31 260 7824/2204 **Email:** registrar@ukzn.ac.za
Website: www.ukzn.ac.za

Appendix 12: Durban University of Technology permission granted

Directorate for Research and Postgraduate Support
Durban University of Technology
Tromso Annexe, Steve Biko Campus
P.O. Box 1334, Durban 4000
Tel.: 031-3732576/7
Fax: 031-3732946

14th June 2018

Mr Thandukwazi Richman Ncube
c/o Department of Entrepreneurial Studies and Management
Faculty of Management Sciences
Durban University of Technology

Dear Mr Ncube

PERMISSION TO CONDUCT RESEARCH AT THE DUT

Your email correspondence in respect of the above refers. I am pleased to inform you that the Institutional Research and Innovation Committee (IRIC) has granted full permission for you to conduct your research "The evaluation of entrepreneurship education in public institutions of learning in Kwa-Zulu Natal Province" at the Durban University of Technology.

The DUT may impose any other condition it deems appropriate in the circumstances having regard to nature and extent of access to and use of information requested.

We would be grateful if a summary of your key research findings can be submitted to the IRIC on completion of your studies.

Kindest regards.
Yours sincerely

_____
PROF CARIN NAPIER
DIRECTOR (ACTING): RESEARCH AND POSTGRADUATE SUPPORT DIRECORATE

Appendix 13: Mangosothu University of Technology permission granted

Mangosuthu
University of Technology

UMLAZI - KWAZULU NATAL

P.O. Box 12363 Jacobs 4026 Durban Tel: 031 907 7111 Fax: 031 907 2892

7 June 2018

Dear Mr TR Ncube

Title: The evaluation of entrepreneurship education in public institutions of learning in KwaZulu-Natal Province Ref: ME 6/18/04

The Interim MUT Ethics Committee considered and noted your application for the proposed study at their meeting held on 7th March 2018. The study was approved.

Your acceptance of this approval denotes your commitment to comply with the South African National Research Ethics Guidelines of 2004 as amended, South African Good Clinical Practice Guidelines (2006) as amended, and the MUT Research Ethics Policy, Procedures and Guidelines. The approval is valid for one year, (01June 2018 to 30th June 2019).

Your reference is ME 6/18/04.

Furthermore, permission to conduct the project is granted on the condition that any changes to the project must be brought to the attention of the MUT Research Ethics Committee as soon as possible.

Good luck with your research.

Yours faithfully,

Dr Z.L. Kwitshana
Interim Chairperson
Ethics Committee
Mangosuthu University of Technology
Tel: 031 8199273; Email: kwitshanazl@mut.ac.za; Skype Zilungile.Kwitshana

Appendix 14: Hunt Road Secondary School permission letter

HUNT ROAD SECONDARY SCHOOL

415 Berea Road South
Berea
DURBAN 4001

Tel. [031] 201-0862
201-0876
Fax [031] 202-1884

19 February 2018

Our Ref.:P.B.M / res

Your Ref.:

Dear Mr Mncube

PERMISSION TO CONDUCT RESEARCH IN OUR SCHOOL

Your application to conduct research entitled "The evaluation of Entrepreneurship Education in Public Institutions of learning in KwaZulu- Natal Province" is hereby granted.

I wish to advise you that your survey and interviews should not interfere with the school's programmes of teaching and learning and should not coincide with any examination programmes.

Yours sincerely

Duly signed
P. B Mkhize (Mr.)
Principal

Appendix 15: Hillgrove Secondary School permission letter

Braeman →

HILLGROVE SECONDARY SCHOOL

P.O. BOX 76005
MARBLE RAY
4037

77 HILLGROVE DRIVE
HILLGROVE DRIVE
NEWLANDS WEST
4051

TEL/FAX: 031 819 4400

e-mail: admin@hillgrovesec.co.za

24/01/2018

PERMISSION TO CONDUCT RESEARCH AT SCHOOL

Permission to conduct research at HILLGROVE SECONDARY SCHOOL has bee granted

The conditions for approval as follows.

1. The research will make all arrangement concerning the research and interviews
2. That Educator and Learning programmes are not interrupted
3. That all Rules and code of conduct the school is followed

Yours in Education

KZN DEPT OF EDUCATION
HILLGROVE SECONDARY SCHOOL
P.O. Box 76005, Marbleray, 4035
77 Hillgrove Drive, Newlands West
Umlazi District, Ethekweni Region
Telefax : 031 578 5761

Thank vou

Principal
MR B P Mpungose

Appendix 16: Riverdene Secondary School permission letter

RIVERDENE SECONDARY SCHOOL

Riverdene Drive — Riverdene Newlands West — 4051 — Tel/Fax: 578 5765
P.O.Box 76252 — Marble Ray — 4035
email address: riverdenesecondary@gmail.com

Mr T. R. Ncube

159 Amen Street

Newelands West

4037

24 January 2018

PERMISSION TO CONDUCT RESEARCH AT SCHOOL

Permission to conduct research at Riverdene Secondary School has bee granted .

The conditions for approval are as follows :

1. The researcher will make all the arrangements concerning the research and interviews.
2. That Educator and learning programmes are not interrupted.
3. That all rules and code of conduct of the school is followed.

Yours in Education,

S. NAIDU (DEPUTY PRINCIPAL)

RIVERDENE SECONDARY SCHOOL
317 RIVERDENE DRIVE
RIVERDENE, DURBAN, 4051
P.O. BOX 76252, MARBLERAY, 4035
TEL/FAX : 031 578 5765
EMAIL : riverdenesecondary@gmail.com

School's Vision

To produce holistically developed and marketable learners

Appendix 17: Majuba TVET College permission letter

DHET 004: APPENDIX 1: APPLICATION FORM FOR STUDENTS TO CONDUCT RESEARCH IN PUBLIC COLLEGES

that the findings and recommendations of the study do not represent the views of the said College/s or the Department of Higher Education and Training.

l) I will provide a summary of my research report to the Head of the College/s in which I undertook my research, for information purposes.

I declare that all statements made in this application are true and accurate. I accept the conditions associated with the granting of approval to conduct research and undertake to abide by them.

SIGNATURE	
DATE	2018 /10/17

FOR OFFICIAL USE

DECISION BY HEAD OF COLLEGE

Please tick relevant decision and provide conditions/reasons where applicable		
Decision		***Please tick relevant option below***
1	Application approved	✓
2	Application approved subject to certain conditions. ***Specify conditions below***	
3	Application not approved. ***Provide reasons for non-approval below***	

NAME OF COLLEGE	Majuba TVET College.
NAME AND SURNAME OF HEAD OF COLLEGE	SJ. Mlotshwa.
SIGNATURE	
DATE	22/10/2018.

5

Appendix 18: Umgungundlovu TVET College permission letter

higher education & training

Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

UMGUNGUNDLOVU TVET COLLEGE

13 April 2018

TO WHOM IT MAY CONCERN

This letter serves to confirm that permission has been granted to Thandukwazi Ncube to conduct research in Umgungundlovu TVET College (Midlands Campus) on "entrepreneurship education in public institutions of learning"

A VAN DER MERWE
CAMPUS MANAGER
MIDLANDS CAMPUS

Central office • 44 Burger street, Private Bag X9060, Pietermaritzburg 3200 • **Tel:** 033 3412100 • **Fax:** 0333459827
Campuses • **Edendale** - Garden street, Edendale • **Midlands** – Cnr Pine street and Mayors Walk, Pietermaritzburg
• **Msunduzi** – 114 Pietermaritz Street, Pietermaritzburg • **Northdale** – Cnr Balhambra and Newholmes Way, Northdale
• **Plessislaer** – FJ Sithole Road, Imbali

Appendix 19: Pearson' Correlation Coefficient table

			The higher the level of education of an individual the greater the possibility of starting a venture that progresses past the start-up stage	Effective entrepreneurship education curriculum of an individual the greater the possibility of starting a venture that progresses past the start-up stage	The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start up their own businesses	As part of the curriculum offered by the institution, the entrepreneurship programme s include practical elements aimed at encouraging the creation of new businesses	In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business	Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses	Entrepreneurship education can alleviate the fear of failure in starting new businesses	It is believed that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses	Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole	Entrepreneurship education improves economic literacy.	Entrepreneurship education helps students to consider self-employment as a valid graduate career option	Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development	Entrepreneurship education contributes to decreasing unemployment in the country	Entrepreneurship education determines individual entrepreneurial interests	Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	Entrepreneurship education increases the number of graduate start-up businesses	The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy	Graduates gain the skills to take calculated risks through entrepreneurship education	Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner	Entrepreneurship education equips students to think strategically	Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources	Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment	Entrepreneurship education teaches students the importance of social interaction as a skill for a successful entrepreneur	The institution offers support to students in order to start up their own businesses, by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance	The institution provides training and development programmes to promote business start-up	The institution collaborates with entrepreneurship experts to promote entrepreneurship education	The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	The institution organises career talks during convocation day	The institution takes students for visits to industries to gain more knowledge about the subject	The institution practically orients students to outreach programmes	The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning
pearman's rh	The higher the level of education of an individual the greater the possibility of starting a venture that progresses past the start-up stage	Correlation C	1.000																															
		Sig. (2-tailed)																																
		N	87																															
	Effective entrepreneurship education offers students access to skills and knowledge needed to start an entrepreneurial venture	Correlation C	.272**	1.000																														
		Sig. (2-tailed)	0.011																															
		N	87	87																														
	The entrepreneurship education curriculum in the institution is designed to equip students with skills needed to start up their own businesses	Correlation C	0.099	.377**	1.000																													
		Sig. (2-tailed)	0.363	0.000																														
		N	87	87	87																													
	As part of the curriculum offered by the institution, the entrepreneurship programmes include practical elements aimed at encouraging the creation of new businesses	Correlation C	0.137	.320**	.297**	1.000																												
		Sig. (2-tailed)	0.205	0.003	0.005																													
		N	87	87	87	87																												
	In the institution, the entrepreneurship education curriculum is planned to stimulate learner interest in starting an own business	Correlation C	0.075	.281**	.424**	.390**	1.000																											
		Sig. (2-tailed)	0.488	0.008	0.000	0.000																												
		N	87	87	87	87	87																											
	Entrepreneurship education seeks to prepare graduates to be responsible, enterprising individuals who are able to take risks and create new businesses	Correlation C	0.082	.407**	.387**	.369**	.582**	1.000																										
		Sig. (2-tailed)	0.452	0.000	0.000	0.000	0.000																											
		N	87	87	87	87	87	87																										
	Entrepreneurship education can alleviate the fear of failure in starting new businesses	Correlation C	0.110	.385**	0.161	.338**	.378**	.348**	1.000																									
		Sig. (2-tailed)	0.312	0.000	0.136	0.001	0.000	0.001																										
		N	87	87	87	87	87	87	87																									
	It is believed that entrepreneurship education can be a platform for addressing unemployment in communities through the creation of new businesses	Correlation C	.277**	.329**	.228*	.253*	.240*	.330**	.418**	1.000																								
		Sig. (2-tailed)	0.009	0.002	0.034	0.018	0.025	0.002	0.000																									
		N	87	87	87	87	87	87	87	87																								
	Entrepreneurship education enhances knowledge about the role of entrepreneurship in society as a whole	Correlation C	.230*	.334**	0.189	0.113	0.143	.288**	.294**	.436**	1.000																							
		Sig. (2-tailed)	0.032	0.002	0.080	0.298	0.188	0.007	0.006	0.000																								
		N	87	87	87	87	87	87	87	87	87																							
	Entrepreneurship education improves economic literacy.	Correlation C	0.145	.357**	.328**	0.070	0.193	.355**	.336**	.533**	.602**	1.000																						
		Sig. (2-tailed)	0.181	0.001	0.002	0.522	0.090	0.001	0.001	0.000	0.000																							
		N	87	87	87	87	87	87	87	87	87	87																						
	Entrepreneurship education helps students to consider self-employment as a valid graduate career option	Correlation C	0.211	.492**	0.144	0.093	0.197	.280**	.260*	.320**	.325**	.505**	1.000																					
		Sig. (2-tailed)	0.050	0.000	0.184	0.392	0.082	0.009	0.015	0.002	0.002	0.000																						
		N	87	87	87	87	87	87	87	87	87	87	87																					
	Entrepreneurship education seeks to prepare students to be responsible, enterprising individuals, who become entrepreneurial thinkers and contribute to sustainable economic development	Correlation C	0.073	.396**	0.176	0.033	.227*	.235*	.253*	.275**	.301**	.369**	.568**	1.000																				
		Sig. (2-tailed)	0.501	0.000	0.104	0.764	0.035	0.028	0.018	0.010	0.005	0.000	0.000																					
		N	87	87	87	87	87	87	87	87	87	87	87	87																				
	Entrepreneurship education contributes to decreasing unemployment in the country	Correlation C	0.091	.358**	.305**	0.171	0.206	.304**	.299**	.390**	.270**	.459**	.359**	.496**	1.000																			
		Sig. (2-tailed)	0.401	0.001	0.004	0.112	0.056	0.004	0.005	0.000	0.011	0.000	0.001	0.000																				
		N	87	87	87	87	87	87	87	87	87	87	87	87	87																			
	Entrepreneurship education determines individual entrepreneurial interests	Correlation C	0.075	.245*	0.189	0.075	.257*	0.174	0.058	-0.019	0.117	0.104	.252*	.291**	.435**	1.000																		
		Sig. (2-tailed)	0.488	0.022	0.080	0.492	0.016	0.108	0.591	0.861	0.282	0.337	0.018	0.006	0.000																			
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87																		
	Entrepreneurship education fosters the creation of new entrepreneurs who could start new ventures	Correlation C	0.164	.315**	.230*	0.062	.347**	.379**	.281**	.296**	.303**	.419**	.361**	.363**	.468**	.491**	1.000																	
		Sig. (2-tailed)	0.129	0.003	0.032	0.568	0.001	0.000	0.008	0.005	0.004	0.000	0.001	0.001	0.000	0.000																		
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87																	
	Entrepreneurship education increases the number of graduate start-up businesses	Correlation C	.278**	.242*	.321**	0.170	.273*	.427**	0.025	.296**	0.071	.297**	.386**	.267**	.395**	.286**	.500**	1.000																	
		Sig. (2-tailed)	0.009	0.024	0.002	0.115	0.000	0.000	0.820	0.005	0.512	0.005	0.000	0.012	0.000	0.007	0.000																	
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87																
	The institution provides entrepreneurship education that teaches graduates business skills through internship opportunities at businesses in the local economy	Correlation C	.268*	0.155	0.168	0.190	.357**	.311**	0.118	.240*	.255*	.284**	.358**	.211*	0.164	0.188	.277**	.452**	1.000															
		Sig. (2-tailed)	0.012	0.151	0.119	0.078	0.001	0.003	0.277	0.025	0.017	0.008	0.001	0.050	0.130	0.081	0.009	0.000																
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87															
	Graduates gain the skills to take calculated risks through entrepreneurship education	Correlation C	0.193	.420**	.238*	.230*	.489**	.340**	.331**	.318**	.234*	.311**	.456**	.431**	.376**	.220*	.410**	.422**	.582**	1.000														
		Sig. (2-tailed)	0.074	0.000	0.026	0.032	0.000	0.001	0.002	0.003	0.029	0.003	0.000	0.000	0.000	0.041	0.000	0.000	0.000															
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87														
	Skills provided through entrepreneurship education play a crucial role in graduates developing the ability to think in a creative and critical manner	Correlation C	0.140	.395**	.282**	0.031	.329**	.382**	.268*	.344**	.328**	.373**	.441**	.481**	.330**	0.130	.463**	.307**	.307**	.582**	1.000												
		Sig. (2-tailed)	0.196	0.000	0.008	0.776	0.002	0.000	0.012	0.001	0.002	0.000	0.000	0.000	0.002	0.231	0.000	0.004	0.004	0.000												
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87											
	Entrepreneurship education equips students to think strategically	Correlation C	0.197	.512**	0.174	0.202	.336**	.432**	.274*	.337**	0.159	.314**	.524**	.395**	.369**	.332**	.356**	.347**	.247*	.555**	.539**	1.000											
		Sig. (2-tailed)	0.067	0.000	0.106	0.060	0.001	0.000	0.010	0.001	0.142	0.003	0.000	0.000	0.000	0.002	0.001	0.001	0.021	0.000	0.000											
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87										
	Graduates are enabled through entrepreneurship education to pursue opportunities, by coming up with new ideas and marshalling needed resources	Correlation C	0.127	.345**	.291**	.329**	.455**	.450**	.314**	.406**	.297**	.460**	.442**	.415**	.458**	.299**	.369**	.398**	.320**	.424**	.593**	1.000										
		Sig. (2-tailed)	0.241	0.001	0.006	0.002	0.000	0.000	0.003	0.000	0.007	0.000	0.000	0.000	0.000	0.005	0.000	0.000	0.003	0.000	0.000	0.000										
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87									
	Entrepreneurship education affords graduates the ability to create and manage a new venture in a socially responsive manner, changing students' views towards self-employment	Correlation C	0.179	.346**	.267*	.262*	.405**	.510**	.262*	.387**	.284**	.440**	.438**	.366**	.492**	.240*	.416**	.532**	.332**	.386**	.422**	.424**	.593**	1.000								
		Sig. (2-tailed)	0.097	0.001	0.012	0.014	0.000	0.000	0.014	0.000	0.008	0.000	0.000	0.000	0.000	0.025	0.000	0.000	0.002	0.000	0.000	0.000	0.000									
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87								
	Entrepreneurship education teaches students the importance of social interaction as a skill for a successful entrepreneur	Correlation C	-0.042	.423**	.236*	.226*	.335**	.410**	.258*	.270*	0.165	.314**	.329**	.410**	.462**	.340**	.349**	.414**	0.209	.413**	.403**	.581**	.484**	.605**	1.000							
		Sig. (2-tailed)	0.696	0.000	0.032	0.036	0.002	0.000	0.016	0.011	0.127	0.003	0.002	0.000	0.000	0.001	0.001	0.000	0.052	0.000	0.000	0.000	0.000	0.000								
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87							
	The institution offers support to students in order to start up their own businesses, by assisting them in compiling a business plan, with specialist advice from business mentors and financial assistance	Correlation C	0.034	0.016	.253*	.294**	.236*	.260*	0.049	0.180	-0.090	0.131	0.102	0.079	0.166	-0.005	0.168	.364**	.262*	.236*	0.145	0.052	0.175	.358**	0.188	1.000						
		Sig. (2-tailed)	0.755	0.883	0.018	0.006	0.028	0.015	0.654	0.095	0.409	0.225	0.346	0.466	0.124	0.961	0.119	0.001	0.014	0.028	0.181	0.635	0.105	0.001	0.081							
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87						
	The institution provides training and development programmes to promote business start-up	Correlation C	0.058	0.043	0.085	0.124	0.154	0.206	0.009	0.165	0.021	0.042	0.186	0.180	.275**	0.147	.225*	.326**	.315**	.397**	0.156	0.098	0.151	.296**	.242*	.549**	1.000					
		Sig. (2-tailed)	0.592	0.690	0.431	0.253	0.154	0.055	0.935	0.127	0.847	0.699	0.084	0.094	0.010	0.175	0.036	0.002	0.003	0.000	0.150	0.364	0.163	0.005	0.024	0.000	0.000					
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87					
	The institution collaborates with entrepreneurship experts to promote entrepreneurship education	Correlation C	0.095	0.108	-0.040	0.092	0.121	0.163	0.040	0.159	0.053	0.014	0.127	0.177	.281**	0.070	.217*	0.181	.252*	.494**	.216*	0.186	0.182	0.176	0.172	.403**	.752**	1.000				
		Sig. (2-tailed)	0.383	0.322	0.711	0.397	0.263	0.132	0.714	0.142	0.626	0.901	0.241	0.101	0.008	0.521	0.044	0.094	0.018	0.000	0.044	0.085	0.092	0.103	0.112	0.000	0.000	0.000				
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87				
	The institution invites entrepreneurs and practitioners from different organisations to share their experience with students	Correlation C	0.070	-0.054	-0.002	0.066	0.077	0.125	-0.010	0.062	0.068	0.019	0.054	0.108	0.183	0.194	0.161	0.133	.302**	.381**	0.141	0.182	.214*	0.145	0.042	.373**	.543**	.650**	1.000			
		Sig. (2-tailed)	0.517	0.622	0.989	0.546	0.477	0.248	0.925	0.569	0.531	0.862	0.620	0.321	0.090	0.073	0.137	0.221	0.004	0.000	0.192	0.092	0.046	0.180	0.699	0.000	0.000	0.000	0.000			
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87			
	The institution organises career talks during convocation day	Correlation C	0.004	0.008	.219*	0.117	.461**	.309**	0.048	0.186	0.023	0.098	0.124	.224*	.269*	.215*	.227*	.317**	.274*	.460**	.304**	.292**	.321**	.303**	.256*	.335**	.553**	.604**	.568**	1.000		
		Sig. (2-tailed)	0.969	0.939	0.042	0.279	0.000	0.004	0.660	0.085	0.833	0.365	0.252	0.037	0.012	0.046	0.034	0.003	0.010	0.000	0.004	0.006	0.002	0.004	0.017	0.001	0.000	0.000	0.000			
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87		
	The institution takes students for visits to industries to gain more knowledge about the subject	Correlation C	0.039	-0.026	-0.007	.245*	.316**	.221*	0.136	0.101	-0.001	-0.109	0.003	0.109	0.051	0.115	0.040	0.082	0.193	.348**	0.052	.211*	0.174	0.013	0.107	.307**	.426**	.517**	.641**	.517**	1.000		
		Sig. (2-tailed)	0.717	0.811	0.952	0.022	0.003	0.040	0.208	0.351	0.992	0.314	0.975	0.316	0.639	0.291	0.714	0.450	0.074	0.001	0.634	0.050	0.107	0.907	0.324	0.004	0.000	0.000	0.000	0.000		
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	
	The institution practically orients students to outreach programmes	Correlation C	-0.171	-0.139	0.002	0.092	0.177	0.033	0.086	0.008	0.036	-0.030	-0.009	0.146	0.042	0.139	0.026	-0.009	.254*	.228*	-0.026	0.147	0.069	0.015	0.127	0.163	.441**	.462**	.537**	.561**	.571**	1.000	
		Sig. (2-tailed)	0.114	0.200	0.983	0.396	0.101	0.758	0.427	0.945	0.743	0.781	0.935	0.178	0.700	0.200	0.814	0.936	0.017	0.034	0.811	0.174	0.524	0.889	0.241	0.130	0.000	0.000	0.000	0.000	0.000	
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87
	The institution allows graduates the space to try and fail so they may encounter intelligent failures as part of effective learning	Correlation C	-0.056	-0.141	0.157	0.174	.338**	.256*	0.154	0.120	-0.041	0.063	-0.044	0.129	0.179	0.165	0.176	0.118	.349**	.277**	0.189	0.152	.250*	0.163	.214*	.425**	.438**	.426**	.637**	.510**	.618**	.602**	1.000
		Sig. (2-tailed)	0.607	0.193	0.146	0.106	0.001	0.017	0.155	0.269	0.705	0.562	0.689	0.235	0.098	0.127	0.102	0.278	0.001	0.009	0.079	0.161	0.020	0.132	0.047	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
		N	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87	87

Appendix 20: Editing certificate

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EDITING CERTIFICATE

Re: **Thandukwazi R Ncube**
PhD thesis: **Evaluation of the effectiveness of entrepreneurship education in public institutions of learning in the Province of KwaZulu-Natal**

I confirm that I have edited this thesis and the references for clarity, language and layout. I returned the document to the author with track changes so correct implementation of the changes and clarifications requested in the text and references is the responsibility of the author. I am a freelance editor specialising in proofreading and editing academic documents. My original tertiary degree which I obtained at the University of Cape Town was a B.A. with English as a major and I went on to complete an H.D.E. (P.G.) Sec. with English as my teaching subject. I obtained a distinction for my M.Tech. dissertation in the Department of Homoeopathy at Technikon Natal in 1999 (now the Durban University of Technology). I was a part-time lecturer in the Department of Homoeopathy at the Durban University of Technology for 13 years.

Dr Richard Steele
15 July 2020
per email