UNIVERSITY OF KWAZULU-NATAL

ENTREPRENEURSHIP EDUCATION AND STUDENTS' ENTREPRENEURIAL INTENTIONS AT SELECTED TERTIARY INSTITUTIONS IN DURBAN

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DECLARATION

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DEDICATIONS

To GOD be the Glory Great things he has done!

ABSTRACT

Entrepreneurship continues to receive much recognition worldwide from both the academic and corporate ends. High unemployment and failing economies amongst other factors have resulted in various stakeholders supporting the promotion of entrepreneurship. Educational institutions have since taken a leading role in promoting entrepreneurship. Entrepreneurship courses have been introduced in universities to prepare students for entrepreneurship, institutions in South Africa have played their role in this regard. Emphasis has however been placed on the implementation of interventions that promote entrepreneurial development. Targeted interventions must be implemented to promote entrepreneurship behaviour. This study sought to determine the extent to which entrepreneurship education can enhance entrepreneurial activity as the researcher proposes entrepreneurship education as a key determinant of entrepreneurship intention. The results of the study were intended to benefit formal entrepreneurship education curriculum development towards the promotion of entrepreneurial intention and behaviour. The study followed a quantitative research approach and a survey research design. A sample of 280 students was selected from 1 000 undergraduate students enrolled for entrepreneurship courses in two public Universities in Durban: University of KwaZulu-Natal and Durban University of Technology. Using a self-administered structured questionnaire which was electronically distributed, data was collected from 197 students and analysed using SPSS version 27. The findings of the study concluded that there was a positive significant relationship between entrepreneurship education and students' entrepreneurial intentions ($r= .79$, $p< 0.01$). The results of the regression analysis however indicated that the best predictor of entrepreneurship education was subjective norms ($B= .347$; $t= 3.783$, $p< 0.01$). Results from T-tests analysis indicated that students who attended extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus ($M= 59.44$, $SD= 15.603$) differed significantly with those who did not ($M= 52.53$, $SD= 16.654$). Students' verbal responses indicated that entrepreneurial education must be augmented with practical education and extra-curricular entrepreneurship activities. The study provides recommendations to university education curriculum developers, policy makers and university management on the successful implementation of entrepreneurship education. Formal entrepreneurship education should be augmented with extra-curricular entrepreneurship activities such as business plan competitions, business workshops, entrepreneurship seminars and coaching sessions with industry experts and entrepreneurs.

Keywords: Entrepreneurship, Entrepreneurship Education, Entrepreneurship Intention.

TABLE OF CONTENTS

Contents Page

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

UKZN……. University of KwaZulu-Natal

DUT…….Durban University of Technology

QLFS……Quarterly Labour Force Survey

EFCs……Entrepreneurial Framework Conditions

UNESCO…… United Nations Educational, Scientific and Cultural Organization

WHO……...World Health Organisation

USA…… United States of America

SA……South Africa

LIST OF APPENDICES

CHAPTER 1

STUDY ORIENTATION

1. 1 Introduction

This study sought to investigate the role played by entrepreneurship education in the development of students' entrepreneurial intentions. In particular, the study sought to assess the effectiveness of entrepreneurship education offered at the University of KwaZulu-Natal (UKZN) and Durban University of Technology (DUT) on the development of students' intentions towards entrepreneurial behaviour. In addition, the study sought to evaluate the contribution of selected demographic variables and factors other than entrepreneurship education on the entrepreneurial intentions of UKZN and DUT students.

"As we face an increasingly uncertain, complex future, how we think about entrepreneurship has to evolve. Successful ventures going forward will need to address real human needs- not just market opportunities" – Mohammed Alsherebi, a Senior Partner at Kada and Centeleon tweeted on 10 February 2021. In a similar commentary, Marc Russell Benioff a popular American internet entrepreneur quoted "I always knew I wanted to be an entrepreneur, I started my own software company in high school and went to college to study entrepreneurship". These two commentaries would make one wonder about the state of entrepreneurship expertise and know-how in today's societies. Entrepreneurship is a discipline that has received extensive recognition over a couple of years, more especially in the 21st century. Literature ranging from books, journal articles, conference publications, the internet and various social media sites is awash with information pertaining to entrepreneurship and topics surrounding the discipline.

Various discussions and pieces of research ranging from the different types of entrepreneurship, behaviours and characteristics that promote entrepreneurship, theories of entrepreneurship and countries that engage in and support entrepreneurship have been published and are still being published worldwide. In addition, research conferences such as the 18th IECER Entrepreneurship Conference, Global Entrepreneurship and Innovation Research Conference 2020, ICMEI 2020: Management, Entrepreneurship and Innovation Conference, ICEID 2020: Entrepreneurship, Innovation and Development Conference and ICEIM 2020: Entrepreneurship and Innovation Management Conference were scheduled in tremendous support of the discipline. Several successful entrepreneurs are using various networking platforms such as Facebook and Twitter to encourage and inspire people more especially young students and graduates to think entrepreneurship. Mark Zuckerbeg, Founder

and CEO of Facebook owned by Meta Platforms; Bill Gates, Co-founder of Microsoft; Strive Masiyiwa, Executive Chairman and Founder of the Econet Group Zimbabwe and KWESE TV; Vusi Thembekwayo a South African Economic Futurist and world-renowned Global Business Speaker and Aliko Dangote, Founder and CEO of Dangote Group Nigeria have been influential in encouraging entrepreneurship. Many people from different countries as well as aspiring entrepreneurs follow and participate in the activities conducted on these entrepreneurs' social network platforms which shows that their presence and contribution is felt. Furthermore, most educational institutions ranging from schools, colleges, universities, and other training institutions worldwide have introduced entrepreneurship education in their curriculum. This shows the extent to which the discipline has been gaining momentum throughout the years.

It is significant that the reasons behind the extensive promotion of entrepreneurship be reviewed to understand the importance of this research study. High unemployment is one of the major reasons behind the promotion of entrepreneurship in several countries more especially African, such as South Africa, Zimbabwe, Zambia and Botswana. According to Statistics South Africa (2023), the Quarterly Labour Force Survey indicated that South Africa's unemployment rate in the 1st quarter of 2023 (Q1: 2023) was 32.9%, from 32.7% in the fourth quarter of 2022 (Q4: 2022). Further analysis of the labour market rates indicated that the unemployment rate of South African graduates remained at 10.6% in Q1: 2023 from Q4: 2022 (Statistics South Africa, 2023). In addition, the unemployment rate for other tertiary institutions increased from 21% in Q4:2022 to 23.5% in Q1:2023 (Statistics South Africa, 2023). Recently there has been a massive loss of jobs, retrenchments and companies closing due to the Corona Virus pandemic that swept most parts of the world.

Nasr and Boujelbene (2014) argued that entrepreneurship plays a crucial role in developing economies, therefore, universities should take an active role in entrepreneurship education teaching and learning, and their current contribution to the field is visible. Entrepreneurship education is such a fundamental concept that its value should never be underestimated given the much-needed development and growth in the field of entrepreneurship and the increase of entrepreneurs in South Africa. However, Kobus Engelbrecht, spokesperson for the 2017 Entrepreneur of the Year competition sponsored by Sanlam and BUSINESS/PARTNERS noted that there is a growing concern and importance for educational curricula to incorporate and imbed entrepreneurship and the knowledge and expertise associated with it, in other words it should be a key focus area for the youth (Rajgopaul, 2017). This shows that entrepreneurship education should be present in educational curricula but did not provide the much-needed

clarity on the extent to which it influences the development of entrepreneurship or youths' intentions to venture into entrepreneurship.

Dating back to the 1990s, there was a debate on whether formal entrepreneurship education encourages or discourages entrepreneurial activities amongst university students. A key element in this debate was scholars were trying to figure out whether entrepreneurship can be taught, or can be mastered naturally. Timmons (1994) and Plaschka and Welsch (1990) as cited in in Martin, McNally and Kay (2013) argued that formal education does not promote entrepreneurship as it is only meant for preparing students to take up conventional careers thereby reducing entrepreneurial intentions. In contrast, Gorman et al. (1997) argued that formal entrepreneurship education enhances entrepreneurial activities whilst Pittaway and Cope (2007) posited that it raises students' intentions to take up entrepreneurship careers. However, Koratko (2005) as cited in in Martin, McNally and Kay (2013) argued that it is not important to figure out whether entrepreneurship can be taught, and that rather it is important to focus on what should be taught and how it should be taught. It is therefore important that universities figure out what it is that they want to include in their entrepreneurship curriculum bearing in mind the objectives of entrepreneurship education.

The Consortium of Entrepreneurship Education (2013) as cited in Fatoki (2014) pointed out that the role of entrepreneurship education is to equip people, more especially the youth, with skills that will enable them to engage in entrepreneurship or, better still, to think entrepreneurship so that they would become key players in the development of economies and societies. Similarly, Paul (2005) as cited in Odia and Odia (2013) mentioned several objectives of entrepreneurship education and amongst them include, to educate young graduates to think entrepreneurship and create self-employment, to enable young people to be innovative and contribute to the development of their countries. In addition, Arogundade (2011) as cited in Odia and Odia (2013) posited that entrepreneurship education should be provided to youths and young people at all levels of education as it equips them with self-reliant skills. Fatoki (2014) noted that successful future entrepreneurs can be current students enrolled in different universities and therefore entrepreneurship education facilitates a smooth transition of graduates to the field of entrepreneurship. Nwangwu (2006) as cited in Odia and Odia (2013) posited that entrepreneurship education was introduced in Nigerian higher education tertiary institutions with an objective of giving university students the skills they needed to be self-reliant and to curb unemployment.

1. 2 Background to the study

Baumol (2008) argued that entrepreneurship facilitate economic development through innovation and can be seen as a cure to poverty. Schumpeter (1934) defined entrepreneurship as "an agent of economic and business change through a stream of innovations or inventions and improvements, which are multi-dimensional, technical, organizational, products, marketing" as cited in Mehmood, Alzoubi, Alshurideh, Al-Gasaymeh and Ahmed (2019:6). Schumpeter's definition of entrepreneurship goes beyond merely starting and running a business for financial gains, what Mehmood et al. (2019) referred to as a conservative view of entrepreneurship. Innovation and inventions are at the centre of Schumpeter definition of entrepreneurship. It can be argued that Schumpeter's entrepreneurship is a necessity in the fourth industrial resolution (4IR) that is characterised by technological inventions and new products and services developments. However, starting a business without innovation is still entrepreneurship. Entrepreneurship can therefore be simply defined as starting a business for employment and income generation and to achieve one's personal goals.

Karimi, Chizari, Biemans and Mulder (2010) posited that entrepreneurship has in recent years been considered a key player in the socio-economic growth and development of many countries, and hence it is widely spoken about. In addition, in response to the problem of unemployment, governments, policy makers and economists are urging people to venture into entrepreneurship to create employment, provide jobs and help curb poverty. Choto, Tengeh and Iwu (2014) mentioned that entrepreneurship activities create the much-needed employment in several countries. When people launch businesses and become entrepreneurs, they create jobs for themselves and when these businesses grow and expand, they will be able to employ other people which results in employment creation, which is the major advantage offered by entrepreneurship. In addition, Fretschner (2014) stated that policymakers recognise that new business ventures escalate economic growth, improve social welfare, personal wealth and social cohesion as well as helping get rid of youth unemployment.

Considering the mentioned benefits of entrepreneurship, governments of several countries came up with initiatives to support and encourage entrepreneurship. The Global Entrepreneurship Monitor (2011) recognised that South Africa was one of the emerging countries that provided immense entrepreneurial support to its people (Kelley, Singer and Herrington, 2012). Various small-business agencies, such as the National Youth Development Agency (NYDA) and Small Enterprise Development Agency (SEDA), have been established in South Africa as part of initiatives set to promote emerging entrepreneurs (Shambare, 2013).

In addition, some South African institutions run programs which encourage students to engage in entrepreneurship. UKZN embarks on a program known as the Student Entrepreneurship Week (SEW), which is a week of activities dedicated to teaching students more about entrepreneurship (UKZNDABAonline, 2019). Successful entrepreneurs are invited to share their journeys with students and motivate them to think entrepreneurship. Despite the effort by the government to create small business agencies that support entrepreneurship and activities by universities, entrepreneurship uptake by university graduates remains low as indicated by the Global Entrepreneurship Monitor South Africa (GEM SA) 2021/2022 report (Bowmaker-Falconer & Meyer, 2022).

Global Entrepreneurship and Development Institute (2017) acknowledges that South Africa is one of the prominent countries in entrepreneurship in the region of Sub-Saharan Africa. Similarly, Rajgopaul (2017) noted that South Africa was in March 2017 recognised as one of the entrepreneurial giants in sub-Saharan Africa occupying the second place, after Botswana. Generally, this shows that South Africa is doing well in the field of entrepreneurship. Of interest to the researcher, however, is the intentions of individual people, more especially young people to engage in entrepreneurship as the researcher speculates that without entrepreneurial intention the picture cannot be complete. Moreover, there is a growing concern among researchers and academics to conduct research locally and globally on the entrepreneurial intentions of students (Fatoki, 2014; Fiet, Miao, Qian and Bae, 2014; Malebana, 2014; Malebana, 2015).

Bird (1988: 442) defined entrepreneurial intentions as "entrepreneurs' states of mind that direct attention, experience and action towards business concept". Entrepreneurial intention can be simply defined as the desire to venture into entrepreneurship activities and is an important element in entrepreneurial development. Kong, Zhao and Tsai (2020) noted that entrepreneurship is a process that consists of two stages; the development of entrepreneurship intention and the accomplishment of entrepreneurship behaviour. Entrepreneurship intention is therefore an important element in the development of entrepreneurship. Bowmaker-Falconer and Herrington (2020) noted that entrepreneurial intention is of utmost importance in the entrepreneurship development process as there is a strong positive relationship between entrepreneurial intention and actual entrepreneurial behaviour. This study therefore sought to investigate the role played by education in shaping the entrepreneurial intentions of university students. Bowmaker-Falconer and Meyer (2022) reported that the entrepreneurial intentions of the South African adult population increased from 11.9% in 2019 to 20% in 2021. However

entrepreneurial activity uptake amongst graduates in 2021 was reported to be 17.2%, 0.5% lower than non-graduates. With the increasing unemployment rate in South Africa, more especially among graduates, 10.6% in Q1:2023, one would expect an increase in entrepreneurial activity amongst graduates which is not the case according to the GEM SA 2021/2022 report, which is a cause for concern. The relatively low involvement of graduates in entrepreneurial activities as presented in the GEM SA 2021/2022 report would give researchers, academics and experts in the field of entrepreneurship a reason to conduct research on entrepreneurial intentions, which calls for this research study.

1.3 Study site background

This research study was conducted in two public universities in Durban, UKZN and DUT. This section provides a background history of the two institutions and highlights their contribution to entrepreneurship education and training. The section provides details of how the institutions contribute to the teaching and learning of entrepreneurship education through the various entrepreneurial programmes and activities offered on their campuses.

1.3.1 Durban University of Technology (DUT).

DUT which had approximately 33 000 students in 2021 is situated in Durban and Pietermaritzburg, two cities in the KwaZulu-Natal region of South Africa (DUT, 2021). The university was formed as a result of a merger between two Technikons, ML Sultan and Technikon Natal in April of 2002 and was initially named the Durban Institute of Technology and later the Durban University of Technology (DUT, 2021). DUT is a member of the International Association of Universities and is one of the leading institutions in higher education, technological training, research and innovation (DUT, 2021). DUT has a total of seven campuses, five in Durban: Brickfield Campus, City Campus, ML Sultan Campus, Ritson Campus, and Steve Biko Campus; and two in Pietermaritzburg: Indumiso Campus and Riverside Campus (DUT, 2021). DUT students are spread across the different campuses depending on their program of study. DUT has a total of six Faculties which are; “Accounting and Informatics, Applied Sciences, Management Sciences, Engineering and the Built Environment, Health Sciences, and Arts and Design” (DUT, 2021: para5). In 2020, the University was amongst the top 500 Universities globally and 10th for citations globally and 5th Nationally (DUT, 2021).

Just like many other universities, the Durban University of Technology has been instrumental in supporting entrepreneurship and entrepreneurial behaviour amongst its students and staff

and has therefore taken various steps in that direction. As part of its *Envision 2030* strategy, DUT commits to supporting its staff and students to develop an entrepreneurial mindset and the associated behaviour. During the State of the University Address 2020, DUT's Vice Chancellor and Principal, Professor Thandwa Zizwe Mthembu stated:

> "DUT' people are passionate about its growth and development. They are creative, innovative and entrepreneurial. In these respects, they work shoulder to shoulder with its alumni, stakeholders and partners in business/industry, government and civil society who respect its values and principles" (DUT, 2020: 2).

DUT was included as a part of this research study due to its focus towards encouraging an entrepreneurial spirit amongst its university community and beyond.

Faculty of Management Sciences at the Durban University of Technology (DUT)

The Faculty of Management Sciences at DUT has a total of thirteen departments; "Applied Law; DUT Business School; Ecotourism; Entrepreneurial Studies and Management; Hospitality and Tourism; Human Resources Management; Marketing and Retail; Operations and Quality Management; Public Management; and Economics; Public Relations Management; Short Courses, Wholesale & Retail Leadership; Chair and FMS Postgraduate Studies" (DUT, 2021: 1). The Entrepreneurial Studies and Management department is a standalone department in the Faculty of Management Sciences.

Entrepreneurial Studies and Management Department.

The Entrepreneurial Studies and Management Department offers a total of five programs in 2023; "Diploma in Management Sciences (Business Administration); Advanced Diploma in Management Sciences (Business Administration); Postgraduate Diploma in Management Sciences (Business Administration); Master of Management Sciences (Business Administration); Doctor of Philosophy in Management Sciences (Business Administration)" (Department of entrepreneurial studies & management handbook, 2023: 3). DUT does not have a standalone Entrepreneurship Degree, Diploma or Certificate program but offers Entrepreneurship modules within some of the programmes listed above. Students can therefore take the entrepreneurship module as part of their undergraduate programs. The Higher Certificate in Business Administration Course offers Introduction to Entrepreneurship in the second semester (2021), a South African Qualifications Authority (SAQA) sixteen-credit point module which is equivalent to National Qualifications Framework (NQF) Level 5 (Department

of entrepreneurial studies & management handbook, 2021). However, the Department of entrepreneurial studies and management handbook (2023) indicated that the Higher Certificate in Business Administration was being phased out, therefore, no new students would be registered in 2023. The Diploma in Management Studies (Business Administration) course also offers an entrepreneurship module; Entrepreneurial Skills, a SAQA sixteen-credit module equivalent to the NQF Level 6 (Department of entrepreneurial studies & management handbook, 2023). According to the Department of entrepreneurial studies and management handbook of 2021, these two entrepreneurship courses (Introduction to Entrepreneurship and Entrepreneurial Skills) are only offered as part of the two programs; the Diploma in Management Studies (Business Administration) and the Higher Certificate in Business Administration. The department of entrepreneurial studies and management handbook (2023) indicates that the postgraduate diploma in management sciences (business administration) currently offers a 20 credit NQF level 8 Entrepreneurship course in the second semester.

Additional entrepreneurship programmes offered by DUT.

In addition to the formal entrepreneurship modules offered at DUT, the University offers further entrepreneurial support to its students and the University community. DUT has an entrepreneurship support department: the DUT Centre for Entrepreneurship and Innovation. "The centre's goal is to nurture entrepreneurial thinking and action through education, training and business start-up support measures" (DUT, 2021). The DUT Centre for Entrepreneurship and Innovation is not only open to its registered students, interested parties such as DUT alumni, the youth, community members and partners who are interested in partnering with the University in pursuing entrepreneurship goals can be a part of the centre (DUT, 2021). DUT is therefore not only committed to producing entrepreneurially sound graduates, but to seeing its communities and the nation at large progressing in the entrepreneurship field. The main aim of the DUT Centre for Entrepreneurship and Innovation is developing successful and sustainable student and community enterprises through the various training and mentorship programs they offer (DUT, 2021). The DUT Centre for Entrepreneurship and Innovation caters for every student regardless of their faculty of study, whichever faculty a student is registered in, they are free to receive services and partake in the activities offered by the Centre (DUT, 2021).

This decision by DUT to provide entrepreneurship training and mentorship to every student regardless of their faculty and degree of study through the Centre for Entrepreneurship and Innovation shows their commitment in building a community of successful entrepreneurs. It is

the researcher's assertion that every student should receive entrepreneurship training and mentorship before they leave University because viable business can be started in any field. If a student from the Health Sciences decides to start their own medical practice, they need entrepreneurship knowledge to successfully run and sustain this enterprise. They might decide to hire business experts, but it is also ideal that they have the entrepreneurial mindset and knowledge to sustain their practice. innobiz DUT Centre for Entrepreneurship and Innovation, a DUT private entity provides both theoretical and practical entrepreneurship learning and business support to their students (DUT, 2023). In 2023, more than 5000 students had been trained and 200 SMMEs developed from the initiative (DUT, 2023). According to DUT (2023:para3), innobiz offers the following services "business support, access to market, access to finance, entrepreneurial education and personal mastery, business mentorship and coaching". innobiz values innovation and creativity, finding new solutions and opportunities in solving societal problems and practicing entrepreneurship in a unique way (DUT, 2023). It can be argued that DUT draws inspiration from the Schumpeterian entrepreneurship which puts innovation and creativity at the centre of entrepreneurship.

1.3.2 University of KwaZulu-Natal (UKZN).

The University of KwaZulu-Natal is situated in the KwaZulu-Natal province of South Africa in Durban and Pietermaritzburg. UKZN was formed in 2004 after the University of Natal and the University of Durban-Westville merged into a single University (UKZN, 2021). The University has five campuses, Howard College, Edgewood, Westville, Medical School and Pietermaritzburg. UKZN is made up of four colleges: College of Law and Management Studies, College of Humanities, College of Health Sciences and College of Agriculture, Engineering and Science (UKZN, 2021). Students register in one of the four different colleges and study in one of the five campuses depending on their degree and college of registration.

College of Law and Management Studies

The College and Law and Management Studies is made up of four schools: the School of Law; the Graduate School of Business and Leadership; the School of Management, Information Technology (IT) and Governance; and the School of Accounting, Economics and Finance (UKZN, 2021). The School of Management, IT and Governance has five disciplines: Human Resource Management and Industrial Relations, Information Systems and Technology, Management and Entrepreneurship, Marketing and Supply Chain Management and Public Governance (UKZN, 2021). The School offers both undergraduate and postgraduate

programmes in the various disciplines. The following undergraduate programmes are offered in the school of management, IT and Governance: Bachelor of Administration (Public Administration), Bachelor of Business Administration (BBA) and Bachelor of Commerce – General (BCom) (UKZN, 2021). The Bachelor of Commerce- General (BCom) program offers an Introduction to Entrepreneurship course in the 2nd year of the program in the second semester (UKZN, 2021). This is the only undergraduate entrepreneurship course offered at the University at KwaZulu-Natal, other entrepreneurship courses are offered at the Honours and post-graduate level. This study focuses on entrepreneurship education offered to undergraduate students. The Bachelor of Administration (Public Administration) and Bachelor of Business Administration (BBA) do not have entrepreneurship courses though they have business courses such as Business Management, Business Accounting and Communication in Business (UKZN, 2021).

Entrepreneurship programs offered at UKZN

Like the Durban University of Technology, the University of KwaZulu-Natal offers entrepreneurship programs outside of the formal structured courses to support entrepreneurship development. The School of Management, Information Technology and Governance developed the Ezone which is an online space for aspiring student entrepreneurs to interact and engage with lecturers, industry experts and their colleagues regarding entrepreneurship and business development (UKZN, 2021). The Ezone was developed to provide students with assistance on the following issues: crafting creative business ideas, writing and presenting business plans, connecting with like-minded businesspeople, conducting feasibility analyses and starting a business venture (UKZN, 2021). Every student registered at the University of KwaZulu-Natal and external individuals can have access to the Ezone and view the programmes and information shared. Current students have the privilege to engage with lecturers, their colleagues, industry experts and receive guidance on their business exploits (UKZN, 2021). In 2017, UKZN launched an innovative entrepreneurship programme called SHAPE. The SHAPE -Shifting Hope, Cultivating Potential Entrepreneurship project was designed to run for 12 weeks starting June to November 2017 and it was run on the Westville campus of UKZN (UKZNDABAonline, 2017). “The SHAPE programme aims to instil a culture of entrepreneurial self-confidence among students through various support interventions, including forming business friendships between aspiring young entrepreneurs as well as existing entrepreneurs” (UKZNDABAonline, 2017: para3). Final year students and

entrepreneurship practitioners who have been in the field for at least three consecutive years were invited to apply for the SHAPE programme (UKZNDABAonline, 2017).

According to the researcher, the SHAPE project was well designed and implemented to achieve its main objective of cultivating an entrepreneurial mindset in students as it combined both entrepreneurship theory and practice. Students were given the opportunity to meet entrepreneurship practitioners who had practical entrepreneurship experience and probably had both success and failure stories to share to inspire and motivate students (UKZNDABAonline, 2017). The twelve weeks students had to spend doing the program were divided into four weeks of classroom learning, four weeks of professional partnership with an industry expert and a further four weeks for exploring and learning how to grow a business, which made the programme quite an innovative and creative one (UKZNDABAonline, 2017).

In 2017, the University of KwaZulu-Natal (UKZN), in partnership with the Department of Higher Education and Training (DHET) launched the Student Entrepreneurship Week (SEW) initiative (UKZN School of Management, IT and Governance, 2017). The initiative which was to run on an annual basis was aimed at equipping students with the right skills and expertise they need to consider entrepreneurship as a career of their choice. Ms Lindiwe Kunene, UKZN Entrepreneurship lecturer and Student Entrepreneurship Community of Practice National Chairperson stated that the vision and aims of the Student Entrepreneurship Week initiative are: "To create and promote awareness about entrepreneurship as a career, Equip students with basic skills and knowledge in entrepreneurship, To stimulate innovation and grow a community of young entrepreneurs" (UKZN School of Management, IT and Governance , 2017: para4). It is evident that the Student Entrepreneurship Week was launched in line with the efforts of educational institutions, government policies and the Minister of Higher Education and Training to promote entrepreneurial training and development.

Another initiative that was launched to promote entrepreneurship development at UKZN is UKZN's InQubate. UKZN's InQubate is a technology-based office that promotes entrepreneurship, innovation and business development (UKZNNDABA, 2020). According to the then UKZN InQubate manager for 2020. Mr Khutso Ramontja, the University support programme was aimed at supporting students' businesses from conception until they were fully functioning profitable businesses (UKZNDABAonline, 2020). To achieve their objectives, Mr Ramontja stated that they run two entrepreneurship development programmes: The Beneficiation challenge which is meant for students at the business development stage and the

Accelerator program which is designed for students who had already set up and started running their businesses (UKZNDABAonline, 2020). In 2018, the UKZN InQubate, under the student entrepreneurship programme ENSPIRE participated in the Student Entrepreneurship Week where they hosted the Elevator Pitch Campus Challenge (UKZNDABAonline, 2018). The Elevator Pitch Campus Challenge was designed for students with innovative business ideas to present whilst a panel of judges rated their ideas for a chance to win a business support package valued at R100 000 (UKZNDABAonline, 2018). It is clear that the University of KwaZulu-Natal is instrumental in supporting entrepreneurship and students' participation in the field. The Student Entrepreneurship Program was also launched in 2018 to promote the development of entrepreneurial activities at UKZN. Through this program, students were encouraged to participate in entrepreneurship competitions offered on campus and beyond. For example, when the programme was launched in 2018, students were encouraged to participate in the InQubate Entrepreneurship competition which sought to fund and promote students with innovative business ideas (UKZNDABAonline, 2018).

1. 4 Need/Motivation for the study

This study comes at a point in time when the country is overshadowed with unemployment more especially among the youth. According to Statistics South Africa (2023), the official unemployment rate for the first quarter of 2023 (Q1:2023) is 32.9% up from 32.7% in the fourth quarter of 2022 (Q4:2022). Even though there was a slight increase in the unemployment rate from Q4:2022 to Q1:2023, the rate is still high for a country with many universities that supply fresh graduates each year. However, it can be argued that the COVID-19 pandemic had a major negative effect on unemployment, with businesses closing and employees getting retrenched. Research conducted by Fubah and Moos (2022) on COVID-19 challenges and coping mechanisms for SMEs in South Africa revealed that some business owners lost their customers and a significant amount of income, whilst some could not afford to pay their rent and employees. It is probable that when an entrepreneurial business is faced with such challenges, it is most likely that it will collapse. Possibly, innovative, risk-taking, and resilient entrepreneurs had better chances of succeeding during and post the COVID-19 pandemic. The researcher argues that these attributes are found more in individuals who have received entrepreneurial education and training. Bowmaker-Falconer and Meyer (2022) reported a business discontinuance rate of 13.9% in 2021, a major shift from 4.9% in 2019. Again, these findings can, to a larger extent be attributed to the COVID-19 pandemic which induced lockdown restrictions and an almost economic standstill.

According to Bowmaker-Falconer and Meyer (2022), the entrepreneurial intention for the South African population aged between 18-64 years in 2021 was 20% up from 11.9% in 2019. Although, this is a significant improvement in the state of entrepreneurship in South Africa, compared with the African region average of 40.6% (Bowmaker-Falconer & Meyer, 2022), half of its score, South Africa has much room for improvement. According to Bowmaker-Falconer and Meyer (2022), the fear failure of failure rate amongst South Africans aged between 18-64 years in 2021 was 53%. Though this is a slight increase from 49.8% in 2019, this is a decline in the variable, and it calls for the attention of interested stakeholders. Most countries worldwide have resorted to entrepreneurship as a means of empowering people, more especially youths to become self-employed and help reduce unemployment. South Africa is one of the countries that have also resorted to entrepreneurship, however the 20% level of entrepreneurial intention presented by the GEM South Africa National Report (2021/2022) is not convincing. This shows that much must be done in this field to promote its growth and development, starting with research to provide empirical solutions to the gaps that exist in the body of knowledge.

From the researcher's point of view, there is a need to study the entrepreneurial intentions of the South African population more especially the youth, as the GEM South Africa National Reports have been showing relatively low levels (20% in 2021). Kong, Zhao and Tsai (2020) stated that entrepreneurship begins with the development of entrepreneurship intention which is a good predictor of entrepreneurship behaviour. This behaviour occurs when individuals develop the intention: without entrepreneurial intention, individuals may not act entrepreneurially. The researcher in turn speculates that entrepreneurship education is the main building block to entrepreneurial intentions therefore should be studied together. This is supported by Galloway and Brown (2002) as cited in Martin, McNally and Kay (2013) who concluded that people who take up entrepreneurship courses at university level or are trained in entrepreneurial education have higher intentions of starting a business than those who are not. However, the researcher feels that inadequate studies on entrepreneurship education and entrepreneurial intentions have been conducted at a tertiary institution level in South Africa.

Despite the several studies conducted in this area, there is a need to study these concepts in a South African context. The researcher argues that context specific factors determine entrepreneurial activities and success. In his speech at the 2nd South Africa Investment Conference in Gauteng in 2019, President Cyril Ramaphosa stated that "we must look at what needs to be done to promote and encourage the entrepreneurial spirit and an entrepreneurial

culture, I have long said that entrepreneurial skills should be included in the basic education curriculum" (Businesstech, 2019: para3). A thorough assessment of factors that promote entrepreneurial behaviour change is therefore important prior to the development and implementation of interventions. Targeted interventions must be implemented for an effective outcome, which, in this case, is the promotion of entrepreneurship behaviour and entrepreneurial activities. This study therefore sought to investigate the effectiveness of the entrepreneurship education offered at UKZN and DUT as the researcher believes it should be targeted to achieve some objectives, instilling an entrepreneurial mindset in University students being the most important.

1. 5 Research Problem

Bowmaker-Falconer and Herrington (2020) argued that an educated, skilled and innovative population is crucial for better output, sustainable growth and competitiveness of many countries. The GEM South Africa National Report has been consistent on the role of education for entrepreneurship and economic development. Bowmaker-Falconer and Meyer (2022) proposed that an improvement in entrepreneurship education taught in schools could have a significant positive impact on entrepreneurship in most countries. These observations concur with the findings of various researchers in different contexts, which prompted the researcher to investigate the status of entrepreneurship education offered at UKZN and DUT. Education equips individuals with the skills necessary for them to engage in productive behaviour, in other words, it is the driver of innovation and productivity.

Regarding entrepreneurship education in South Africa, literature has identified some weaknesses on its ability to develop entrepreneurship. Literature and research output from 2019 were reviewed to identify trends and developments in entrepreneurship education in South Africa. The Allan Gray Orbis Foundation (2019) stated that education is not doing much for entrepreneurs and failing them in some areas. The Allan Gray Orbis Foundation (2019) further argued that from the look of things, it is probable that there are no industries that will be able to produce much output soon considering the coming impact of the Fourth Industrial Revolution. It can therefore be argued that education is not sufficiently preparing entrepreneurs for the future of entrepreneurship in South Africa. In addition, the Entrepreneur of The Year (2020) suggested that two major barriers of doing business in South Africa are infrastructure and education. In as much as entrepreneurship education can be a driver of entrepreneurial success in a country, it can also be a stumbling block and hence the need to study this concept. According to Bowmaker-Falconer and Herrington (2020), the National Expert Survey (NES)

experts concluded that the education system in South Africa does not adequately address the needs of entrepreneurship neither does it provide support for entrepreneurial activities.

Bowmaker-Falconer and Meyer (2022) reported that on all the entrepreneurial framework conditions, entrepreneurship education at school level occupied the last position in 39 out of the 50 countries surveyed in 2021, and this includes South Africa. Although there has been and continues to be conflicting debates on the importance of education in today's economies where people value being 'street-smart' than 'being educated', education is a constant source of knowledge. It therefore raises concerns for entrepreneurship education to receive the lowest ranking amongst entrepreneurial framework conditions. The current research focuses on entrepreneurship education in higher education institutions, but it is important to consider the trends at school level for a better analysis of the status of entrepreneurship education in South Africa.

Different stakeholders in South Africa, including the government, universities and training institutions have taken steps to support the growth and development of entrepreneurship. Universities across the country such as University of Johannesburg, University of KwaZulu-Natal, Durban University of Technology, Gordon Institute of Business Science and AFDA: The School for the Creative Economy introduced entrepreneurship modules and degrees to give students the requisite entrepreneurial expertise and knowledge for them to successfully launch and manage long-term businesses. Government departments such as the Department of Trade and Industry (DTI), National Youth Development Agency (NYDA), Small Enterprise Finance Agency (SEFA), National Empowerment Fund (NEF) and the Small Enterprise Development Agency (SEDA) have been established to provide financial or technical support to upcoming entrepreneurs in South Africa. Entrepreneurs, both big and small have also given a hand to the promotion of entrepreneurship in South Africa, Patrice Motsepe and The Motsepe Foundation partnered with the Schwab Foundation to promote social entrepreneurship (Motsepe Foundation, 2020). PricewaterhouseCoopers (PwC) South Africa started a few initiatives such as the Emerging Companies Insights and the Vision to Reality Awards program launched in 2014 to provide entrepreneurial support (PwC South Africa, 2020). Given the number of initiatives, programs and policies that were introduced to support and enhance entrepreneurship in South Africa, one would expect a satisfying positive change yet growth in the discipline remains stunted. Bowmaker-Falconer and Herrington (2020) recognized the South African government's significant contribution towards entrepreneurship development and SMMEs growth through incentives and funds provision, yet according to experts, the

results have been contradictory. Similarly, the Allan Gray Orbis Foundation (2019) posited that the entrepreneurial inputs in South Africa far outweigh the outputs. There is therefore a need to investigate the role played by entrepreneurship education as one of the important antecedents of entrepreneurial activity.

Unlike some universities in South Africa, Entrepreneurship at UKZN and DUT is not yet offered as a complete stand-alone major or degree. For instance, UKZN offers entrepreneurship in the 2nd year level of the Bachelor of Commerce degree and can only be done as an elective by other degree programmes such as the Bachelor of Social Science (UKZN, 2021). The University of Johannesburg (UJ) offers a Bachelor of Commerce in Entrepreneurial Management, a three-year undergraduate degree programme whilst the Management College of Southern Africa (MANCOSA), offers Commerce in Entrepreneurship, a three-year undergraduate degree programme. Although it is a one-year programme, Cape Peninsula University of Technology the Management in Entrepreneurship programme. Though it cannot be said with certainty, it can be argued that students taking the three-year entrepreneurship degree programme would have better entrepreneurial knowledge and intention that those who would have taken a single or two modules. This is supported by Bowmaker-Falconer and Meyer (2022) who though with uncertainty proposed that the more entrepreneurship education people get, the more entrepreneurially active they become. However, it is essential to consider the quality of the education more than the duration. For this reason, the researcher recommends quality over quantity. The researcher therefore feels the urge to examine the influence of entrepreneurship education offered at UKZN and DUT more especially given the fact that it is not offered as a complete major on its own or as a complete undergraduate degree program.

According to Bowmaker-Falconer and Meyer (2022), in a survey conducted in 2021, it was concluded that only 20% of the participants had entrepreneurial intentions compared to the Africa region average of 40.6%. This is a relatively low percentage in a country with an unemployment rate of 32.9% as of the first quarter of 2023. The GEM (2021/2022) South Africa National Report indicates that 57.9% of the South African adult population surveyed in 2021 believe there are good entrepreneurial opportunities in the country, whilst 69.7% believe they can start and manage a business venture (Bowmaker-Falconer & Meyer, 2022). Regardless of a decline in the number of South Africans who perceive good entrepreneurial opportunities from 60.4% in 2019, the figure is still a good indication of entrepreneurial development in South Africa. Moreover, 69.7% had positive perceived behavioural control, a key factor in influencing behaviour as recognised by the Theory of Planned Behaviour, hence

it was included in this study. Even though this indicates a possible increase in entrepreneurial activities in the coming years, Bowmaker-Falconer and Meyer (2022) stated that the rate of fear of failure amongst these individuals was 53% compared to 49.8% in 2019. This shows that the future of entrepreneurship is unclear as fear of failure reduces the intention to engage in a behaviour. A comparison between the Established business ownership rate and the Business discontinuance shows that fewer businesses are being started as compared to those which are closing or failing, 5.2% and 13.9% respectively (Bowmaker-Falconer & Meyer, 2022). These figures are contrary to what would be expected for entrepreneurial development. However, the COVID-19 pandemic contributed significantly to the business discontinuance rate. Research conducted in 2021 revealed that 27.4% of businesses owners stated that they left their businesses because of the COVID-19 pandemic (Bowmaker-Falconer & Meyer, 2022).

The total early-stage entrepreneurial activity rate (TEA) for South Africa in 2021 was 17.5%, a significant improvement from 10.8% in 2019 (Bowmaker-Falconer & Meyer, 2022). Compared to the GEM global average of 13.5%, Africa region average of 16.6% and Level C economies average of 19.6% (Bowmaker-Falconer & Meyer, 2022), South Africa TEA rate shows a considerable number of people, given the opportunity, are eager to venture into entrepreneurship. What is then left is for a conducive environment and a firm platform to be created for these people to thrive in entrepreneurship. The researcher is therefore of the opinion that an investment in entrepreneurship education would help further entrepreneurial development in South Africa. Furthermore, according to Bowmaker-Falconer and Meyer (2022), South Africa ranked 45 out of 50 countries on the National Entrepreneurship Context Index (NECI) with a score of 3.63. These statistics indicate the slow progress of South African entrepreneurship compared to other countries. The Allan Gray Orbis Foundation (2019) stated that during the 2019 State of the Nation Address given by President Cyril Ramaphosa, he cited the non-inclusion of entrepreneurship as a national priority as one of the challenges requiring urgent attention.

Due to the significant number of issues and challenges identified in South African entrepreneurship, some of which are discussed in this research, there is a probability that the growth and development of this discipline might remain low if a lasting solution is not found. The researcher felt that a way of finding a lasting solution to these challenges is to investigate the role played by entrepreneurship education in the development of students' entrepreneurial intentions which in turn influences entrepreneurial activities. Even though there might be similar challenges in entrepreneurship development identified in other countries and studies

have been conducted to understand the issues faced in this discipline, the context and target population is different from the current research. This study makes a significant difference to the field of entrepreneurship in South Africa as it is conducted in a local context, focusing primarily on entrepreneurship education and students from DUT and UKZN. Is the entrepreneurial education offered in South African universities appropriate enough to influence entrepreneurial development amongst university students or is there a need to devise a more augmented curriculum? The latest GEM South Africa 2021/2022 Report revealed that in 2021, 17.2% of South African graduates were entrepreneurially active compared to 17.7% non-graduates, contrary to the researchers' expectations as more resources have been invested into entrepreneurship education programmes. Perhaps, further investment in entrepreneurship education would see more graduates becoming entrepreneurially active.

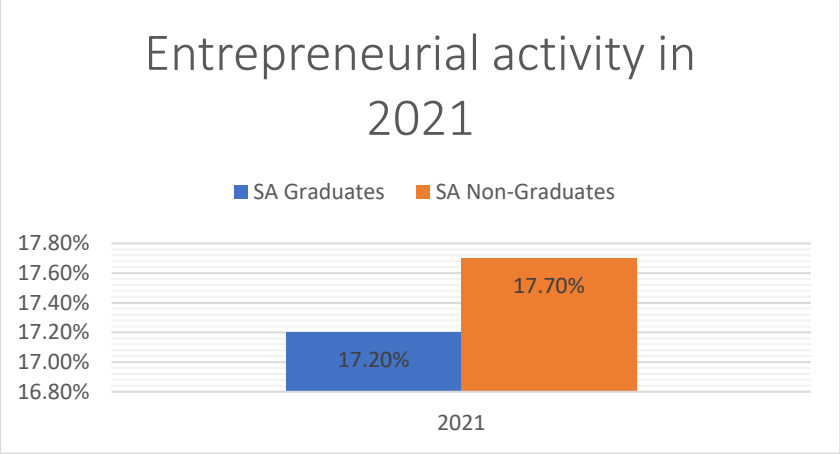


Figure 1-1: % of SA Graduates & Non-Graduates entrepreneurial activity in 2021

Source: Bowmaker-Falconer and Meyer (2022: 11).

1.6 Statement of the Problem

The problem statement of this research study therefore is: Entrepreneurship education offered to UKZN and DUT students positively influence their intentions to venture into entrepreneurship post-graduation. The claim of this statement is not known and only after conducting this study can an empirical conclusion be reached, and recommendations made to improve the statistics of graduates venturing into entrepreneurship after graduation. It is evident from the prevailing statistics which are presented in this research that more must be done to have a surge of graduates not only aspiring to be entrepreneurs but becoming successfully involved in entrepreneurial activities.

1.7 Main Research Question

What is the impact of entrepreneurship education offered at UKZN and DUT on the entrepreneurial intentions of students?

1.8 Research Sub-Questions

1. What is the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students?

2. What are the entrepreneurship intentions of UKZN and DUT students?

3. Are there any significant differences in UKZN and DUT students' entrepreneurial intentions based on demographic factors (head parent's occupation, level of study, age, race?

4. What role can entrepreneurship education play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence UKZN and DUT students' entrepreneurial intentions?

5. What recommendations can be made to the entrepreneurship curriculum developers at UKZN and DUT based on students' perceptions on entrepreneurship education?

1.9 Research Objectives

1. To investigate the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

2. To examine the entrepreneurship intentions of UKZN and DUT students.

3. To investigate the significant differences of UKZN and DUT students' entrepreneurship intentions based on demographic factors (head parent's occupation, level of study, age, race).

4. To investigate the role that entrepreneurship education can play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence UKZN and DUT students' entrepreneurial intentions.

5. To make recommendations to the entrepreneurship curriculum developers at UKZN and DUT based on students' perceptions on entrepreneurship education.

1.10 Hypotheses

$H_0$1: There is no significant relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

H_a1: There is a positive significant relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

$H_0$2: There are no significant differences in entrepreneurship intentions of UKZN and DUT students.

H_a2: There are significant differences in entrepreneurship intentions of UKZN and DUT students.

$H_0$3: There are no significant differences in UKZN and DUT students' entrepreneurship intentions based on gender.

H_a3: There exist significant differences in UKZN and DUT students' entrepreneurship intentions based on gender.

$H_0$4: UKZN and DUT students with a higher level of perceived behavioural control are not likely to engage in entrepreneurial activities.

H_a4: UKZN and DUT students with a higher level of perceived behavioural control are highly likely to engage in entrepreneurial activities.

$H_0$5: There are no significant differences in UKZN and DUT students' entrepreneurial intentions based on their ability to read/listen or look up information about entrepreneurs and entrepreneurship.

H_a5: UKZN and DUT students who read/listen or look up for information about entrepreneurs and entrepreneurship have higher levels of entrepreneurship intentions than those who do not.

$H_0$6: There are no significant differences in UKZN and DUT students' entrepreneurial intentions based on their attendance of extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus.

H_a6: UKZN and DUT students who attend extracurricular entrepreneurship programs (workshops, conferences, seminars) offered on campus will have higher levels of entrepreneurship intentions than those who do not.

$H_0$7: Entrepreneurship education has no significant impact on UKZN and DUT students' entrepreneurship intentions compared to their attitude towards entrepreneurship and subjective norms.

H_a7: Entrepreneurship education has a significant impact on UKZN and DUT students' entrepreneurship intentions compared to their attitude towards entrepreneurship and subjective norms.

$H_0$8: UKZN and DUT students' academic majors have no significant influence on their entrepreneurship intentions.

H_a8: UKZN and DUT students' academic majors have a significant influence on their entrepreneurship intentions.

$H_0$9: There is no significant relationship between UKZN and DUT students' awareness of government bodies/programs or private organisations that support entrepreneurial or small business development and their entrepreneurship intentions.

H_a9: UKZN and DUT students' awareness of government bodies/programs or private organisations that support entrepreneurial or small business development is positively related to their entrepreneurship intentions.

$H_0$10: There is no significant relationship between the degree UKZN and DUT students are registered for and their entrepreneurship intentions.

H_a10: There is a significant positive relationship between the degree UKZN and DUT students are registered for and their entrepreneurship intentions.

1.11 Aims of the study

The main aim of this study was to investigate the impact of entrepreneurship education on the entrepreneurial intentions of UKZN and DUT students. This was achieved through the collection of quantitative data that was analysed in order to make recommendations on the role played by entrepreneurship education on the development of students' entrepreneurial intentions.

Literature identifies entrepreneurship education as one of the major factors that have an influence on individuals' entrepreneurial activities and the development of a country's entrepreneurship sector. This study therefore sought to investigate the influence of entrepreneurship education offered at UKZN and DUT on the entrepreneurial intentions of

students to derive findings in a local context. The study sought to determine the extent to which entrepreneurship education can lead to the development of entrepreneurial intentions amongst the students. Furthermore, the study sought to establish the contribution made by demographic variables; gender, degree registered for, attendance of extra-curricular programs in entrepreneurship and level of study on the development of entrepreneurial intentions amongst university students. These are important demographic factors that can influence the development of students' entrepreneurial intentions therefore the study sought to investigate the variables in a local context, focusing on UKZN and DUT students. Finally, this study sought to investigate factors other than entrepreneurial education which stimulate students' engagement in entrepreneurial activities and determine their level of importance. The researcher is of the opinion that investigating university students' entrepreneurial intentions prior to graduation and leaving university helps to determine the amount of impact entrepreneurship education had on their willingness to undertake entrepreneurial activities. To what extent do university students consider venturing into entrepreneurship after being subjected to entrepreneurial education? In other words, this study aims to find out the extent to which entrepreneurial education acts as a foundation for entrepreneurial development amongst university students.

The overall aim of the study was to investigate the impact of entrepreneurship education on UKZN and DUT students' entrepreneurial intentions. Given the resources that have been invested into entrepreneurship education programmes by the two institutions, the researcher felt the need for a more comprehensive research study that would investigate the contribution of the entrepreneurship education in developing students towards entrepreneurship.

1.12 Significance/Importance of the Study

This research acknowledges the several studies that have already been conducted on entrepreneurship education. However, the researcher argues that much remains to be done in developing entrepreneurship education in South Africa as supported by the GEM 2021/2022 South Africa National Report findings. This research therefore responds to the call for more comprehensive studies on entrepreneurship education in South Africa, as it can be argued that research supports the development of new ideas and approaches. In light of the Durban sample findings, the recommendations provided may be relevant to other higher education institutions in South Africa. The findings may also provide significant insights to researchers, policy makers, training institutions, scholars and other interested stakeholders on the development of entrepreneurship. Factors that positively impact on entrepreneurial intention must be

understood to develop and promote an effective entrepreneurial education curriculum. This will aid University management, academic leaders, lecturers, and subject matter experts in designing the applicable methods of learning more effectively and efficiently. The study provides some insights into the role played by entrepreneurship education offered at UKZN and DUT in promoting students' entrepreneurial intentions and activities. With a strong speculation that entrepreneurial education provides the foundation for student's entrepreneurial intentions and development, it is worthwhile investigating the extent to which it plays this role. This is important more especially as the relationship between the variables under study, entrepreneurship education and entrepreneurial intention is investigated in a South African context. Recommendations based on the results of the study will be put forward to enhance entrepreneurship education and entrepreneurship at UKZN and DUT and other South African institutions where applicable. This study also sheds some light on the level of entrepreneurial intentions amongst UKZN and DUT students. Intention has been identified by various theorists as having a direct influence on behaviour. Results on the level of entrepreneurial intentions of UKZN and DUT students would be significant in determining how much they are likely to engage in entrepreneurial activities.

Moreover, this research study sought to investigate the contribution of factors other than entrepreneurship education that influence/motivate university students to venture into entrepreneurship. The study sought to determine other factors which influence entrepreneurial development amongst university students as the researcher believes there is more to entrepreneurial education that can influence students' entrepreneurial intentions. The study incorporated factors such as head parents' occupation, students' academic majors, knowledge of government bodies, programs or private organisations that support entrepreneurship, attendance of extra-curricular activities and students' entrepreneur role models. This study therefore provides novel empirical research results that allows interested parties ranging from the university management, researchers and scholars, societies and families to think about this phenomenon from a new and better-informed perspective. This is important to get a holistic understanding of the factors that influence the development of entrepreneurship amongst students in South African universities.

Furthermore, this study makes a valuable contribution to the literature on entrepreneurship education in South Africa. The study is amongst the few ground-breaking pieces of research conducted specifically on entrepreneurship education in South African universities, in particular at UKZN and DUT. It provides documented insights into the state of

entrepreneurship education offered at UKZN and DUT, most importantly from the students' perspectives. Through this research, interested parties can understand the level of students' entrepreneurship intentions and their thoughts on how entrepreneurship education can be improved. The results of the study, recommendations for future research, limitations and the conclusions put forward can propel further research in the discipline and related in the years to come.

1.13 Chapter outline

This section presents the way the current thesis is structured and presented.

Chapter One

Chapter one has introduced the current study. The chapter has also outlined the research problem highlighting the major issues that prompted the need to conduct this study. The research questions and objectives that the study sought to achieve, and the hypothesis were also outlined. The chapter highlighted the main research objective of the study as: To investigate the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students. The chapter concluded with the motivation and significance of the study showing the need for conducting this research.

Chapter Two

Chapter two provides a discussion of the concepts of entrepreneur and entrepreneurship. The chapter starts with definitions of the concepts and discusses the characteristics of successful entrepreneurs. The chapter outlines the role and contributions made by entrepreneurship in societies and the country and discusses the origins, growth, and development of entrepreneurship in South Africa. Furthermore, chapter two discusses the distribution of entrepreneurship in South Africa by demographic characteristics such as gender, race and age, highlighting any identified gaps.

Chapter Three

Chapter Three discusses the concept of entrepreneurship education. The chapter opens with a discussion on the definitions of the concept and the nature of entrepreneurship education. In addition, it outlines the purpose of entrepreneurship education. The chapter also discusses entrepreneurship education in selected developed and developing countries highlighting the major differences between the different curricula. Chapter Three closes with a discussion of

the model of an entrepreneurial university which explains a structure that universities which want to implement entrepreneurship effectively can follow.

Chapter Four

Chapter Four discusses entrepreneurship intention. It starts by defining the construct and proceeds to discussing the factors that contribute to its development. The role and influence of entrepreneurship intention on entrepreneurial activity and behaviour is also debated in this chapter. The chapter further discusses entrepreneurship intentions of South African and American University students and the extent to which they are influenced by entrepreneurship education.

Chapter Five

Chapter Five reviews the different entrepreneurship theories discussed across literature that are applicable to this study. The following theories are discussed in the chapter: McClelland's Achievement Motivation Theory (1961); Human Capital Theory (1962); Theory of Reasoned Action (1980); Shapero's Model of Entrepreneurial Event (1982) and the Theory of Planned Behaviour (1987). The application and evaluation of the different theories highlighting their strengths and weaknesses is also discussed in this chapter. Finally, the chapter identifies the theory that helped shape this study and explains how it informs the current study.

Chapter Six

Chapter Six discusses the research design and plan that was adopted in this current study. The chapter opens with a discussion of the research approach and plan used to execute the study and it also outlines the research strategies and identifies the research's study sites. The target population and sampling procedures are explained in detail in this chapter. Chapter Six explains the research instrument used to collect data and the different sections it is made up of including the various measurements. The data collection and quality control methods are explained highlighting how data was collected and the reliability and validity of the research instrument was ensured. Chapter Six explains the data analysis methods and the different tests that were conducted to analyse the data and closes with a discussion on the ethical considerations, how the study was conducted according to the codes and ethics of good research.

Chapter Seven

Chapter Seven outlines the research results. Tables, graphs and figures are used to present the results from the different descriptive and inferential statistics conducted to answer the research questions and test the hypothesis for the current study. The main research objective to be answered is: To investigate the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students. The chapter concludes with the motivation and significance of the study showing the importance of this research and conducting the study.

Chapter Eight

Chapter Eight discusses the results of this study in view of the research objectives and hypotheses set out in the study. The chapter compares the actual study's results with the expected results and those from past studies. The results of the study are interpreted in detail in this chapter and the theoretical and practical implications are highlighted.

Chapter 9

Chapter Nine concludes this study and presents summaries of all the chapters which make up this research thesis. The chapter also identifies the research limitations and sets out the direction for future research. Chapter Nine closes with a discussion of the practical recommendations put forward based on the results of the current study.

1. 14 Summary

This chapter introduced the concepts of entrepreneurship education and intention. It outlined background information that provides the context for this study. Furthermore, the chapter outlined the research problem discussing the various issues that prompted this study to be conducted. The chapter identified the various issues entrepreneurship in South Africa is facing, such as low levels of entrepreneurial intentions (20% in 2021), high levels of fear of failure amongst those individuals who perceive entrepreneurship to be a viable career (53% in 2021) and a business discontinuance rate of 13.9% up from 4.9% in 2019 (Bowmaker-Falconer & Meyer, 2022). The chapter also identifies the various initiatives that different stakeholders in South Africa help to foster the development of entrepreneurship. The South African government started programs such as the Small Enterprise Development Agency (SEDA) and Universities have introduced entrepreneurship courses. The chapter highlights the challenges that entrepreneurship in South Africa faces despite the various initiatives put in place to support

it, which prompted the researcher to conduct a study on students' entrepreneurial intentions. This chapter outlines the aim of the study which was to investigate the role played by entrepreneurship education in the development of entrepreneurship intentions. The chapter ends with a discussion on the significance of the study, and provides recommendations to the relevant stakeholders, more especially South African tertiary institutions and policy makers, on the effectiveness of entrepreneurship education as a potential determinant of entrepreneurial intentions.

Having outlined the direction and context of this study, the chapter that follows reviews the literature and past studies that were conducted in the field of entrepreneurship and related fields.

CHAPTER TWO

LITERATURE REVIEW: AN OVERVIEW OF ENTREPRENEURSHIP

2.1 Introduction

Chapter one introduced this study and provided background information that shows the purpose, context and direction for the study. The aims, significance and motivation for the study were outlined showing the need for and importance of this study. Finally, the chapter discussed the research questions and objectives of the study highlighting the main research questions as: What is the relationship between entrepreneurship education and entrepreneurship intention amongst university students?

The current chapter discusses the two concepts of entrepreneur and entrepreneurship. It discusses the definitions of the concepts, outlines the characteristics of an entrepreneur and the role played by entrepreneurship in societies, countries and the world at large. The chapter also looks at the development and growth of entrepreneurship in South Africa as well as the main characteristics of the South African entrepreneurs.

2.2 What is an Entrepreneur?

To better understand the concept of entrepreneurship, the author wishes to start by defining the term entrepreneur. Literature shows that there is no one definition that can be used to explain the term entrepreneur. Various definitions emerge from authors, scholars and business enthusiasts and are based on their different philosophies. However, to better understand the term entrepreneur, the researcher considers the definitions of recognised international entrepreneurship experts such as William Baumol and Joseph Schumpeter. Baumol (2008: 2) defined entrepreneurs as "individuals who create a new firm or some other economic organization or who launch some economic activity that they will carry out at least initially". Two important things emerge from Baumol's definition of entrepreneur, new firm creation and engaging in economic activities. Baumol, Schilling and Wolff (2009) defined entrepreneurs as individuals who demonstrate creativity and a strong will to engage in profitable economic activities. Contrary to Baumol (2008), Baumol et al. (2009) recognised the importance of creativity in entrepreneurship. Similarly, Schumpeter simply described entrepreneurs as innovators, who became known as the 'Schumpeterian entrepreneur' (Block, Fisch & Praag, (2016). Schumpeter's comprehensive definition of an entrepreneur was quoted by Baumol (1993:178) as

> "The function of entrepreneurs is to reform or revolutionize the pattern of production by exploiting an invention or, more generally, an untried technical possibility for producing a new commodity or producing an old one in a new way. This requires aptitudes that are present in only a small fraction of the population".

Baumol (2008) identified two types of entrepreneurs, the replicative and innovative entrepreneur. The replicative entrepreneur is an individual who starts a business that was discovered before and is not new in the market whilst an innovative entrepreneur discovers and launches a unique business (Baumol, 2008). Both Baumol and Schumpeter therefore recognised the significance of innovation in entrepreneurship. With continuous technological developments, innovation and creativity become key aspects of entrepreneurship. It can be said innovation and creativity facilitated the growth of several businesses such as Airbnb, Uber, Apple and Microsoft. However, despite the researcher believing successful entrepreneurs should be innovative, this research refers to both replicative and innovative entrepreneurs. Maritz, et. al (2016) defined entrepreneurs as people who identify and manufacture scarce products and services thereby solving market problems. Similarly, Udoye and Mba (2017) defined an entrepreneur as a person who can start a business enterprise from scratch and sustain it over a long period of time because of their innovativeness. What is common in these two definitions is individuals' ability to identify unique business opportunities. These entrepreneurs fit the description of Baumol's innovative entrepreneur and the Schumpeterian entrepreneur.

Linda Pinson a renowned author defines an entrepreneur as an individual who initiates a business venture to work on their vision, for financial gain and independence, to become their own boss and master their own destination (Pinson, 2013). It is imperative to note that all these definitions identify an entrepreneur as an individual who is business minded. Fellnhofer (2017) similarly argued that entrepreneurs are people with the ability to identify business opportunities and turn them into practical business ventures. The author defines entrepreneurs as people who start and run business ventures whether small or big to meet market demands and to gain a profit. A street vendor selling fruit and vegetables, a ***spaza- shop*** (local, convenient groceries and goods shop) owner, a large local retail shop owner and an international organisation owner are all examples of entrepreneurs albeit operating at different levels and with different levels of return on investment (ROI). From the above definitions, what qualifies all of them to be called entrepreneurs is their ability to come up with a business idea, execute it, operate and

maintain a business venture. An important question that can be asked then is: What does it take for one to be a successful entrepreneur?

2.3 Characteristics of an Entrepreneur

McIntyre and Roche (1999) argued that there is no ***magic recipe*** for successful entrepreneurs, but some traits and characteristics have been found to be common in successful entrepreneurs. Similarly, David Cummings an Atlanta-based tech entrepreneur and founder of ten (10) companies to date noted that entrepreneurs are not characterised by a single attribute, but by several attributes which have a great combined effect (Cummings, 2012). The researcher therefore identified common characteristics that are discussed across literature. Hisrich and Peters (1998) as cited in Masunda, Chitumba, Mushayavanhu and Simuka (2018: 71) suggested that entrepreneurs must possess three categories of skills which are "Technical skills (including written and oral communication, technical management and organizing skills); Business management skills (including planning, decision-making, marketing and accounting skills) and Personal entrepreneurial skills (including inner control, innovation, risk taking and innovation)". These three categories of skills cover different aspects of entrepreneurship starting from the personal qualities that the entrepreneurs themselves must display up to those they need to execute their jobs. Mark Zuckerberg, the co-founder and Chief Executive Officer (CEO) of Facebook, speaking in a live question and answer session argued that the most important thing that successful entrepreneurs must have is a vison (Elkins, 2016). He emphasised that for an individual to start a successful company they should know what change they want to make in the world and focus on building that (Elkins, 2016).

Timmons et al. (1985) as cited in Masunda at al. (2018: 71) identified 14 behaviours that are required of each entrepreneur:

> "total commitment, determination and perseverance; drive to achieve orientation to goals and opportunities; taking initiative and personal responsibility; veridical awareness and a sense of humour; seeking and using feedback; internal locus of control; tolerance of ambiguity, stress and uncertainty; calculated risk taking and risk sharing; low need for status and power; integrity and reliability; decisiveness, urgency and patience; earning from failure; and team builder and hero maker".

Rezai, Mohamed and Shamsudin (2011: 907) mentioned that some of the characteristics of an entrepreneur prevalent in much literature are "the need for achievement, the locus of control, a risk-taking propensity, a tolerance for ambiguity, innovativeness and self-confidence". Mark Zuckerberg also noted that for one to be a successful entrepreneur they should have a fighting spirit and never give up even during challenges and setbacks (Elkins, 2016). In an interesting publication, William D. Bygrave former Director of the Center for Entrepreneurial Studies at Babson College articulated ten (10) characteristics prevalent in entrepreneurs which he labelled the 10 D's. The 10 D's are illustrated in table 2-1.

Dream	Entrepreneurs have visions and big dreams for their businesses which they can successfully implement.
Decisiveness	Entrepreneurs make decisions quickly and prioritise their business.
Doers	Entrepreneurs plan and put the plans into action quickly.
Determination	Entrepreneurs are dedicated to their businesses and determined to continue beyond setbacks.
Dedication	Entrepreneurs are fully committed to their businesses. They sometimes work longer hours which negatively impacts on their work-life balance.
Devotion	Entrepreneurs are passionate about what they do. Entrepreneurs' passion for their business push them beyond setbacks and gives them the zeal to do better.
Details	Entrepreneurs pay attention to details.
Destiny	Entrepreneurs want to be their own bosses and enjoy being independent.
Dollars	Entrepreneurs are success driven and regard money as a measure of their success.
Distribute	Entrepreneurs empower their talented employees and share the responsibility of running the business with them.

Table 2-1: The 10 Ds of Entrepreneurship.

Source: Nassif, Ghobril, da Silva (2010:217).

In a similar discussion, the The UK Centre for Bioscience (in The Higher Education Academy) listed the following skills as requirements for entrepreneurs:

> "management skills- i.e. the ability to manage time and people (both oneself and others) successfully, Communication skills e.g. the ability to sell ideas and persuade others, The ability to work both as part of a team and independently, The ability to plan,

coordinate and organise effectively, Financial literacy, The ability to research effectively e.g. available markets, suppliers, customers and the competition, Being able to draw up a business plan for a new venture, Being able to market and sell a new product or idea; Financial skills, such as bookkeeping and tax calculations; and Awareness of intellectual property and possibly patent law" (Maritz et al. (2016: 23).

Table 2-2 shows the characteristics of an entrepreneur and a small business owner emphasising that being an entrepreneur demands much more as compared to being a small business owner.

Small/Medium Business Owner	Dynamic Entrepreneur
Business growth is not a priority.	Business growth is a priority
Has a limited vision and focus on the existing state of the business	Is a visionary and looks for new opportunities.
Has a local focus	Has an international focus
Growth is stifled	Has a growth potential
Self-reliance	Embraces external input
Individualism	Team-working
Does not like competition	Competitive
Does not like taking risks	Prefers risk and is a risk taker
Existence is key	Accomplishment is key

Table 2-2: Characteristics of an entrepreneur versus the small business owner.

Source: Kruger (2004: 23).

2.4 What is entrepreneurship?

Diandra and Azmy (2020) argued that entrepreneurship on its own qualifies to be a discipline. Croci (2016) added that entrepreneurship is a discipline that can function both independently and in connection with other disciplines. The authors' view of entrepreneurship is more than just a process, but a complete system of operation. Simply put, entrepreneurship is when individuals discover business ideas, turn them into viable businesses and operate them for several objectives, profit making being the main objective. No one definition can provide a comprehensive explanation of the concept of entrepreneurship as literature is inundated with different definitions. It is important to refer to some of the definitions of entrepreneurship taking note of the similarities and differences to have a good understanding of the concept. Table 2-3 highlights some of the key definitions for entrepreneurship established in the 20th century.

Author	Definition
Schumpeter (1934)	Entrepreneurship is an art of doing things in a different way. Introducing unique products and services, innovative production methods, discovering new markets and business ventures.
Kirzner (1973)	Entrepreneurship is a process of realising new opportunities to solve problems and cover gaps in the market.
Drucker (1985)	Entrepreneurship is the act of developing innovative products and services to meet emerging customers' needs and wants.
Stevenson, Roberts and Grousbeck (1985)	Entrepreneurship is the process of seizing new opportunities.
Rumelt (1987)	Entrepreneurship is the development of novel business ideas.
Low and MacMillan (1988)	Entrepreneurship is the creation of new business ventures.
Timmons (1997)	Entrepreneurship is a way of thinking; it involves creative thinking and reasoning and good leadership.
Venkataraman (1997)	Entrepreneurship research investigates how opportunities for innovative products and services are found, seized and implemented and seek to understand the results they produce.

Table 2-3: Summary of the key definitions of entrepreneurship in the 20th century

Source: Hitt, Ireland, Camp and Sexton (2002: 11).

The Business Dictionary (2020) defines entrepreneurship as the ability to start and manage a business and its risks to generate profits. The Business Dictionary (2020) recognises that entrepreneurship is not all about starting a business venture, it involves the management of the business amidst setbacks and obstacles and being able to sustain it long-term. Similarly, Kiyani (2017) argues that entrepreneurship is when individuals identify and develop new opportunities

and turn them into viable businesses even if they are operating in unfamiliar environments faced with much uncertainty. Kiyani (2017) and the Business Dictionary (2020) highlighted an important viewpoint: individuals must create opportunities and put them into action for entrepreneurship to thrive. The availability of opportunities without the ability to act upon them is not entrepreneurship and, therefore, individuals need to be taught or given the right skills to become successful entrepreneurs. In addition, Martin and Osberg (2007: 31) posited that "the term 'entrepreneurship' connotes 'a special, innate ability to sense and act on opportunity, combining out-of-the-box thinking with a unique brand of determination to create or bring about something new to the world". Martin and Osberg's (2007) definition touches on an interesting point: that entrepreneurship is for individuals with an innate ability to create and put opportunities into action. This would make one ponder on the saying: ***Entrepreneurs are born not made.***

Hisrich and Peters (2002) as cited in Ozaralli and Rivenburgh (2016: 2) comprehensively defined entrepreneurship as "the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychic, and social risks, and receiving the resulting rewards of monetary and personal satisfaction and independence". Hisrich and Peters (2002) definition identified a few themes which make up entrepreneurship: something of value must be formed, time and effort must be dedicated to the business, there are risks involved and rewards to be received. The above definition therefore went further to identify the requirements of entrepreneurship and the positive and negative aspects. Morris, Lewis and Sexton (1994) performed a content analysis of entrepreneurship journal articles and books to come up with a common definition for entrepreneurship. The following were identified as key words prevalent in most entrepreneurship definitions: "start; form; create new business; innovation; new product; new market pursuit of opportunities; risk taking; risk management; uncertainty; pursuit of profit; personal advantages; new production methods; management coordination of resources; value creation" (Morris, Lewis & Sexton, 1994: 2).

Now that entrepreneurship has been defined, the section that follows discusses the reasons why entrepreneurship is important.

2.5 Why is entrepreneurship important?

Mamun and Rajennd (2018) as cited in Farrukh, Alzubi, Shahzad, Waheed and Kanwal (2018) reported that various governments worldwide have made entrepreneurship their national and one of the top priorities. One would then ask: What is it in entrepreneurship that the

governments have chosen to devote so much in developing this field? With the extent to which entrepreneurship is being promoted and vocalised, its significance cannot go unmentioned. The researcher found it worthwhile to investigate the reasons why entrepreneurship has become a household name for many countries.

2.5.1 Eradicating Unemployment and job creation

Ikebuaka and Dinbabo (2018) noted that entrepreneurship is being used as a method to eradicate unemployment which is increasing at an alarming rate, and as a solution to poor economic growth, which is more especially true in developing countries. Many developing countries are recording high unemployment rates which are continuously on the verge of increase due to poor and weak economies. The results for the QLFS released by Statistics South Africa in 2023 shows that South Africa's official unemployment rate in Q1: 2023 was 32.9%. South Africa recorded a 0.2% increase in its official unemployment rate from 32.7% in Q4: 2022 (Stats SA, 2023). Based on the expanded definition of unemployment, South Africa's unemployment rate reduced from 42.6% in Q4:2022 to 42.4% in Q1:2023 (Stats SA, 2023). Figure 2-1 shows South Africa's unemployment rates from Q1:2022 to Q1: 2023. Although figure 2-1 indicates that South African unemployment rate is on a downward trajectory from Q1:2022 to Q1:2023, it is still high and calls for the attention of relevant parties.

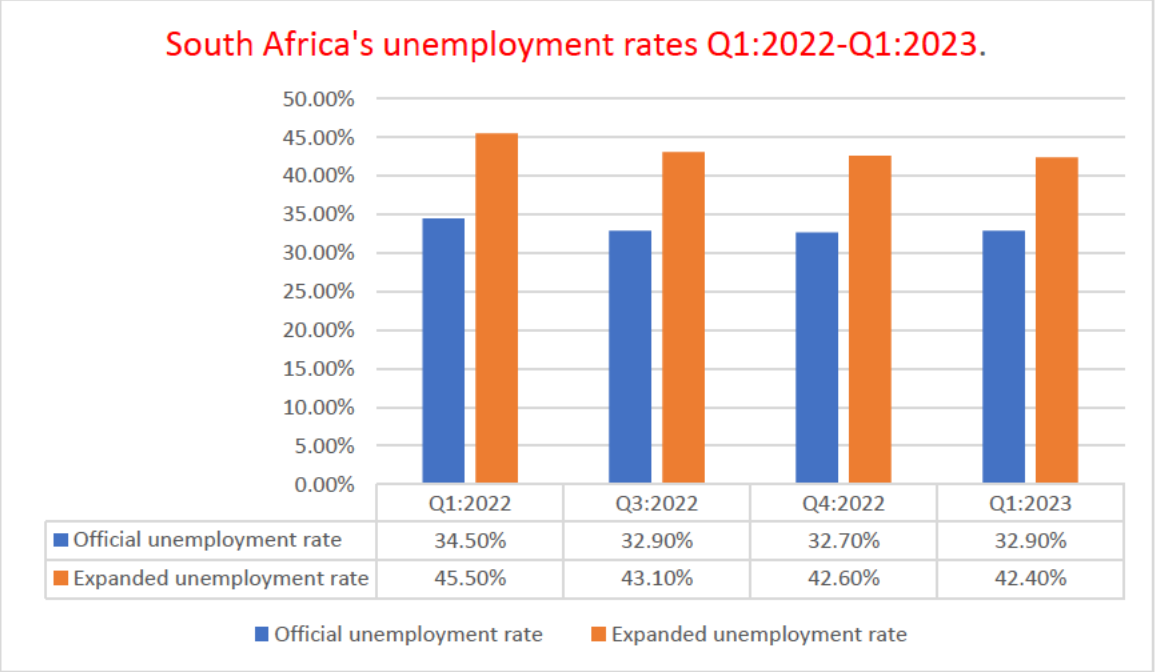


Figure 2-1: SA's unemployment rates from Q1:2022 to Q1: 2023

Source: Statistics South Africa (2022-2023)

2.5.2 Economic Advancement

It has been identified across literature and in the section above that entrepreneurship helps curb the high rates of unemployment recorded in various countries worldwide, especially developing countries. Entrepreneurship can be therefore seen as a positive solution to economic advancement as the creation of jobs leads to a healthy economy. Various authors (Farrukh et al. 2017; Kirkley, 2017; Park, 2017) reported that entrepreneurship is associated with increased production, innovation and employment which has an ultimate positive result on the economy of any country. Entrepreneurs establish competitive businesses from novel ideas generating employment and contributing to economic development and growth (FNB & Endeavor SA, 2018). An economy with numerous businesses and a lot of people in employment has a much stronger economy.

2.5.3 Reduces the number of unemployed graduates.

Many countries worldwide are faced with high unemployment rates with some being badly affected (Zimbabwe, Nigeria, the Democratic Republic of Congo). Regardless of the high unemployment rates, countries continue to produce graduates on a yearly basis, and they add on to the pool of unemployed graduates. Thousands of young people graduate from UKZN and DUT and other South African Universities each year. Instead of waiting for formal employment, these graduates can venture into entrepreneurship and in turn create jobs for the upcoming graduates and young people. The creation of a new business venture does not only see the employment of the owner/s but the creation of jobs for upcoming graduates thus reducing the number of unemployed graduates and the wastage of skills.

2.6 Entrepreneurship in South Africa

South Africa has been instrumental in entrepreneurship from as far as the 20th century having realised the enormous role it plays in the economy amongst other benefits discussed in this thesis. The Global Entrepreneurship and Development Institute (2017) recognised the South African government's efforts to include South Africans into the formal economy, for both entrepreneurship and salaried employment. Major developments have since taken place to encourage the growth of entrepreneurship in South Africa, for example in 2002 South Africa joined the Global Entrepreneurship Monitor (GEM) consortium and has ever since conducted research and published reports on the entrepreneurial behaviour and activities of the adult population (Herrington, Kew & Kew, 2009). This move has seen a lot of research being

conducted in the field of entrepreneurship both in academia and in the corporate field which has played a major role in the development and advancement of the field.

The level of entrepreneurial activity of a given country is indicated by the total entrepreneurial activity (TEA) or 'early-stage entrepreneurial activity' rate. According to GEM (2023) Report, TEA indicates the percentage of the adult population (18-64 years) that is about to start a business or have been operating one for less than 42 months. Other indicators such as the new business ownership rate, established business rate and business discontinuance rate can be used to assess the state of entrepreneurship in a country. Data from the GEM South Africa and Global Reports reveal fluctuating results from the entrepreneurship surveys conducted on the South African adult population. However, the latest GEM South Africa Report 2021/2022 reveals encouraging findings on entrepreneurship in South Africa. The figures on most indicators reveal significant improvements in South African entrepreneurship.

According to the GEM South Africa Reports, the TEA rate for South Africa has been fluctuating at a low level, between 6.5% and 11% from 2001 to 2019, with 2017 recording the highest rate of 11%. These figures could be because of several factors, availability of funding and support from the government, entrepreneurial knowledge and skills and an individual's attitude and intention towards entrepreneurship. However, the TEA rate made a significant shift in 2021 and was recorded to be 17.5% as shown in table 2-4 (Bowmaker-Falconer & Meyer, 2022). This figure would not have been expected given the devastating effects of the COVID-19 pandemic, which shows South Africa's entrepreneurial potential. Moreover, South Africa recorded improvements in both the new business ownership rate, from 3.7% in 2019 to 7.3% in 2021 and the established business ownership rate, from 3.5% in 2019 to 5.2% in 2021 (Bowmaker-Falconer & Meyer, 2022). These figures indicate the South African adult population's willingness to engage in entrepreneurial activities. Of particular interest to the researcher is the Nascent entrepreneurial rate which increased from 7.3% in 2019 to 10.5% in 2021 (Bowmaker-Falconer & Meyer, 2022). This shows that more people are prepared and in the process of starting a business and should call for various stakeholders' participation in creating more favourable conditions for entrepreneurship to thrive.

	2017	2019	2021	Africa region 2021 average
Nascent entrepreneurial rate	7.5	7.3	10.5	9.8
New business ownership rate	3.8	3.7	7.3	7.0
TEA	11.0	10.8	17.5	16.6
Established business ownership rate	2.2	3.5	5.2	5.4
Business discontinuance rate	6.0	4.9	13.9	10.6

Table 2-4: Prevalence rates (%) of entrepreneurial activity of the adult population in SA

Source: Bowmaker-Falconer and Meyer (2022: 16).

In addition to the above statistics, it is important to review entrepreneurial activity based on demographic characteristics. Distribution of entrepreneurial activities based on demographic characteristics is essential to identify gaps and inconsistencies in entrepreneurial activities. The following sections will discuss entrepreneurial activities based on demographic variables.

2.7 Entrepreneurship in South Africa and demographic factors

Having discussed the state of entrepreneurship in South Africa, it is important that we consider the characteristics of entrepreneurs in the country profiling their age and gender. The various pieces of research conducted and presented in the Global Entrepreneurship Monitor Reports include statistics on the demographic characteristics of entrepreneurs in South Africa. The Global Entrepreneurship Monitor Report (GEM) 2016/2017 (Herrington, Kew and Mwanga, 2017) argued that policy makers would be well informed of the statistics and trends therefore can select specifically targeted interventions aimed at effectively improving involvement and economic output. Policy makers and responsible authorities would be able to take note of the trends in the characteristics and identify the most participating groups and those which are not. Strategies targeted at the specific groups would then be employed to try and motivate them to venture into entrepreneurship.

2.7.1 Entrepreneurship activity distribution by gender

According to Herrington, Kew and Mwanga (2017), the GEM Reports have revealed consistent findings on entrepreneurial activities based on gender, with males performing better than females. The GEM 2022/2023 Global Report confirms the trend and reported higher TEA for males than females. These results confirm that on a global scale, the rate of female engagement in entrepreneurial activities for most economies is lower than males. Although these results shed light on the distribution of entrepreneurship activities by gender, a look at the South

African statistics would be prudent to come up with solutions that are tailor made for the South African population.

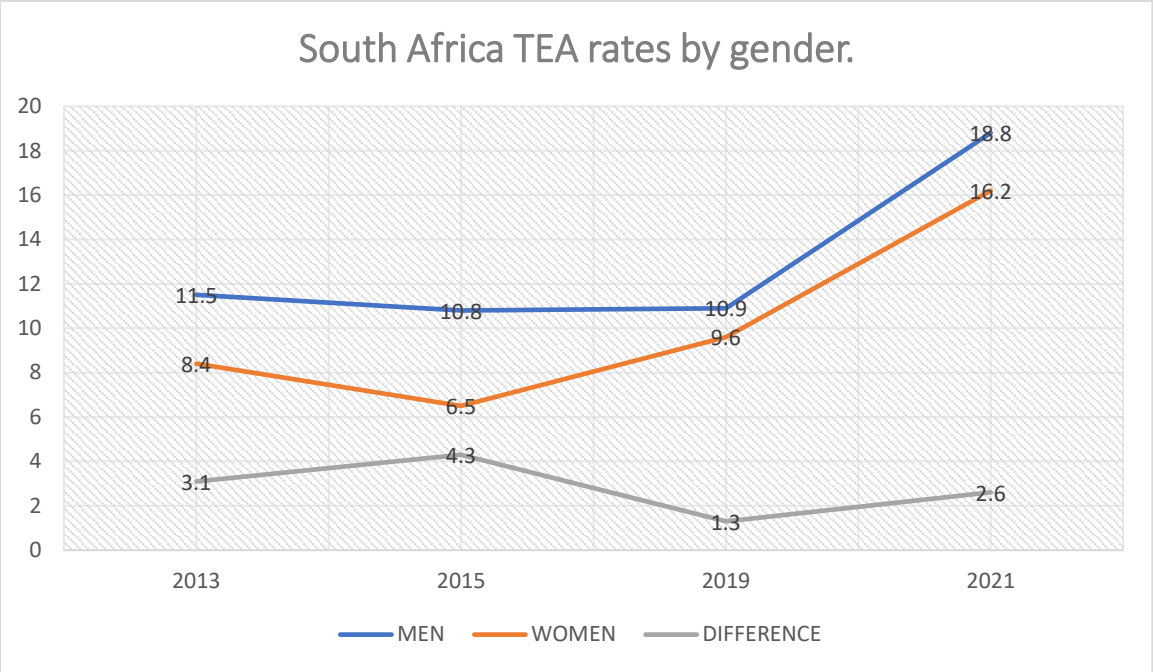


Figure 2-2: TEA rates by gender in SA 2013- 2021

Source: Global Entrepreneurship Monitor South Africa Report 2021/2022 (Bowmaker-Falconer & Meyer, 2022: 22)

Figure 2-2 shows that since 2013, men have always outnumbered women in entrepreneurship. In 2021, 18.8% of the male adult population was active in entrepreneurship in comparison to 16.2% females (Bowmaker-Falconer, 2022). Entrepreneurship education is open to everyone, and every individual is encouraged to engage in entrepreneurial activity, however, it can be noted that in South Africa, females are behind men, albeit with a small margin. This could be attributed to previously held societal beliefs that men are superior to women and can achieve more than them, hence, the boy child was given preferential treatment than the girl child from the family and society. Previously, women were said to belong to the house whilst men belong to the workplace, and this could have had long standing effects in entrepreneurship. These figures could be used to identify the inequalities in South African entrepreneurship and can serve as a foundation for future research in women entrepreneurship. However, there has been significant developments in female entrepreneurship in South Africa as shown in Figure 2-2. In 2015, there was a 4.3% difference between male and female entrepreneurship, whilst in 2021 there was only 2.6% showing. Many females, the likes of Dineo Lioma, Ntsiki Biyela, Nneile Nkholise, Arlene Mulder, Mayleen Lyster and Jean Groenewald have risen to take up space in

South African entrepreneurship. From Figure 2-2, it is also evident that female entrepreneurship in South Africa has been on an upward trajectory, from 6.5% in 2015 to 16.2% in 2021. Bowmaker-Falconer and Meyer (2022) argued that women and youth are key players in entrepreneurship and their participation is critical for economic growth and development. For this reason, it is important to pay special attention to women and youth entrepreneurship. More programmes specifically designed to promote women and youth entrepreneurship could be designed.

Figure 2-3 shows that the rate at which men are motivated to engage in entrepreneurship surpasses that of women, except in one category. Figure 2-3 indicates that 83.9% of men in entrepreneurship are motivated to make a difference in comparison to 78.6% women, whereas 65% of men are motivated by family tradition contrary to 61.3% women (Bowmaker-Falconer & Meyer, 2022). These figures highlight the constant discrepancies in the distribution of entrepreneurial activities by gender in South Africa. The differences could also be attributed to the previously held beliefs on women's capabilities and position in the society. More men (65%) are motivated by tradition to engage in entrepreneurial activities showing the widely held beliefs that businesspeople should be men. Despite these misconceptions slowly fading away, it can be concluded that there are long standing group factors preventing women to realise their full potential in entrepreneurship.

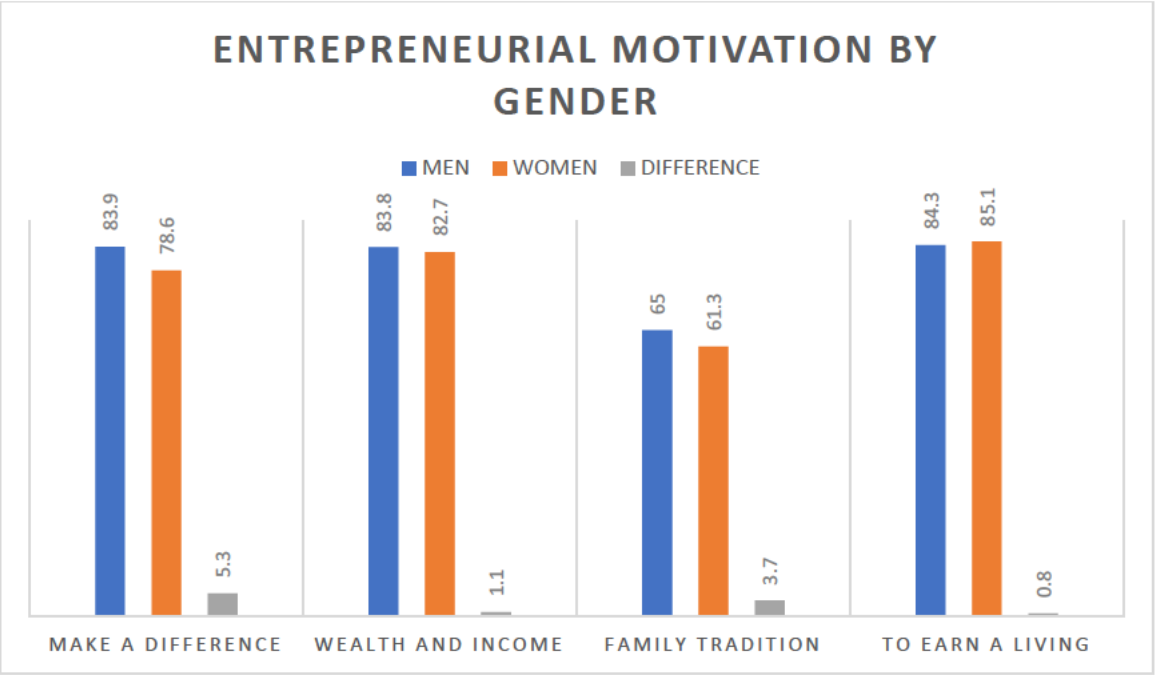


Figure 2-3: Entrepreneurial motivation by gender in SA in 2021

Source: Global Entrepreneurship Monitor South Africa Report 2021/2022 (Bowmaker-Falconer, 2022: 26).

2.7.2 Entrepreneurship distribution by age

Global Entrepreneurship Research Association (2018) reported increased entrepreneurial activities amongst the 25-34 and 35-44 age groups, in comparison to other age groups. This is what would be expected as most entrepreneurship interventions are specifically designed for the youth population, notwithstanding the participation of other age groups. An investigation of age differences amongst entrepreneurs is therefore important to see how the most targeted age group is performing. Table 2-5 shows impressive improvements in the TEA rates of all age groups from 2019 to 2021 and compared to the African region average. As indicated in Table 2-5, there has been significant improvements in the 18-24 and 25-34 years age categories from 8.4% to 19.3% and 12% to 19% respectively (Bowmaker-Falconer & Meyer, 2022). The TEA rates for both categories are above the African region average showing great entrepreneurial development effort by South Africa. It is probable that the entrepreneurship education offered in South African universities is positively influencing students' intentions to venture into entrepreneurial activities, as these categories are mainly made up of students and university graduates. However, the results could also be attributed to the growing popularity of digital technologies and their impact on teaching and learning. A considerable amount of learning is taking place on social media platforms; Tik Tok, LinkedIn, Twitter, and Facebook, and these

platforms are popular amongst the youth population, 18-34 years. While it is still learning, this can be best classified as informal learning. It can be argued that young people learn and acquire a significant amount of entrepreneurial knowledge from following successful entrepreneurs such as Vusi Thembekwayo on social media platforms. This is supported by Afawubo and Noglo (2021) who suggested that digital technologies facilitate entrepreneurial thinking and activity and create new opportunities for starting a business. The role of digital transformations in entrepreneurial development can therefore not be underestimated. In addition, the significant improvement in TEA rates could be attributed to rising unemployment in South Africa and necessity-driven entrepreneurship.

	2017	2019	2021	Africa region average 2021	Level C Economies average
18-24 years	8.8	8.4	19.3	16.6	18.6
25-34 years	14.5	12.6	19.0	18.3	22.1
35-44 years	13.5	9.2	14.8	17.3	22.0
45-54 years	7.5	14.3	16.7	15.8	18.8
55-64 years	7.0	8.5	15.1	11.2	12.1

Table 2-5: TEA distribution by age in SA and Africa 2017-2021.

Source: Global Entrepreneurship Monitor South Africa Report 2021/2022 (Bowmaker-Falconer & Meyer, 2022: 22).

2.7.3 Entrepreneurship distribution by race

Race is another important demographic characteristic that should be considered in entrepreneurship. The researcher is of the opinion that some behaviours may be chosen based on race, including entrepreneurship. As shown in Figure 2-4, all four race groups have shown a significant increase in early-stage entrepreneurial activity, more especially from 2019 to 2021. This may be attributed to rising unemployment and necessity-driven entrepreneurship. The positive trends may also be attributed to changes in individuals' personal and career goals. Of interest, however is, the Indian race has over the years maintained the top position in entrepreneurship, except for 2021 when the African race emerged on the top. Indians in South Africa have always been known as businesspeople, the majority operating family-owned businesses. Sood (2022) stated that 79% of the gross domestic product in India is from family businesses, and globally, it is ranked on 3rd position on family-owned businesses. While these

statistics refer to the Indian economy, the same attributes may be shared with Indians in South Africa. In 2021, 18.9% of early-stage entrepreneurial activity in South Africa was by the African race group whilst 15.4% was by Indians (Bowmaker-Falconer & Meyer, 2022). These findings may show the effectiveness of programmes and initiatives targeting previously disadvantaged groups for entrepreneurship support in South Africa.

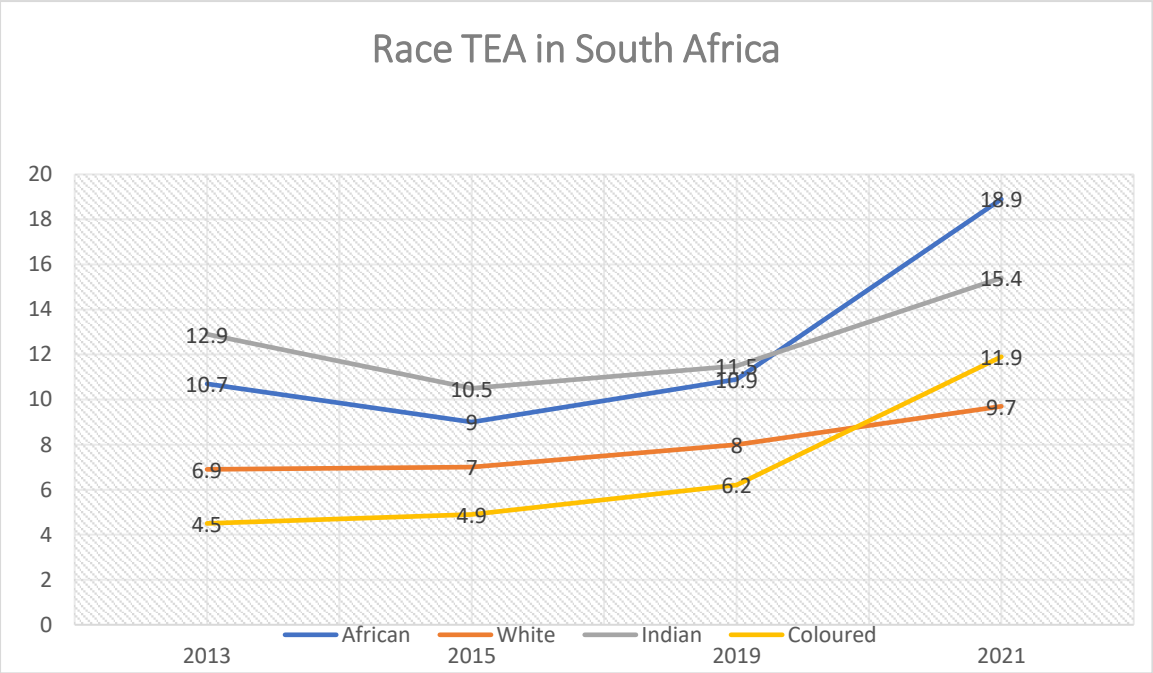


Figure 2-4: TEA distribution by race in SA 2013-2021.

Source: Global Entrepreneurship Monitor South Africa Report 2021/2022 (Bowmaker-Falconer & Meyer, 2022:22).

2.8 Summary

This chapter started with a discussion on the definitions of entrepreneur and entrepreneurship. The characteristics that define an entrepreneur were outlined and the discussion showed how they influence the growth of successful entrepreneurs. Risk taking, dedication, perseverance, determination and commitment were identified as some of the characteristics of successful entrepreneurs. The discussion also highlighted the importance and role played by entrepreneurship that has made it receive so much recognition. Entrepreneurship plays a major role in the creation of jobs, reducing graduate unemployment and bettering the economy of any country. The chapter also discussed entrepreneurship in South Africa, how it started and has developed and advanced over the years. The latest GEM South Africa 2021/2022 Report

revealed remarkable improvements in South African entrepreneurship as indicated by the TEA rate of 17.5% from 10.8% in 2019. The new business ownership rate also recorded a significant increase, from 3.7% in 2019 to 7.3% in 2021 (Bowmaker-Falconer & Meyer, 2022). The challenges that South Africa has faced in the field of entrepreneurship were also discussed. Finally, a discussion on the characterises of South African entrepreneurs closed this chapter.

The chapter that follows discusses entrepreneurship education and the topics that surround this concept.

CHAPTER THREE

REVIEW OF LITERATURE- ENTREPRNEURSHIP EDUCATION

3.1 Introduction

Chapter Two discussed literature on entrepreneurship and the various sub-topics surrounding the concept: definitions, the importance of entrepreneurship, characteristics of a successful entrepreneur and entrepreneurship in selected African and International countries.

This chapter delves into the concept of entrepreneurship education, a concept the researcher sought to investigate and understand the influence on students' entrepreneurial intentions. It discusses the definition of entrepreneurship education, the nature and objectives of entrepreneurship education. Furthermore, the chapter discusses entrepreneurship education in selected African and international countries as well as the impact of the COVID-19 pandemic on education and entrepreneurship education.

3.2 Entrepreneurship education

With the growing need for entrepreneurs in almost every country worldwide to cushion their economies, entrepreneurship education is a field that is becoming very popular. There is a widely used axiom which says, ***"Entrepreneurs are born not made".*** In opposing this saying, Polenakovikj (2015) stated that it is a fact people are not born with the same entrepreneurial spirit, however entrepreneurship skills can be learned, nurtured and improved, hence ***"Entrepreneurs are made not born".*** Rezai et al. (2011) noted that entrepreneurship is a skill therefore it can be taught and successfully learnt. Polenakovikj (2015) noted that the Macedonian government mastered this principle that entrepreneurship is a skill that can be taught and learnt and that is shown in their many entrepreneurial activities, approaches and strategic policy documents. The internet is inundated with information and material that covers many aspects of entrepreneurship. Several websites both South African (South African Institute of Entrepreneurship, SME South Africa, South Africa- Entrepreneur, Endeavor South Africa and Resources on Entrepreneurship- Bridge) and International (Global Entrepreneurship Monitor, The International Entrepreneur, Global Entrepreneurship Network, Youth Business International and Entrepreneur) have been developed to provide entrepreneurship knowledge to aspiring entrepreneurs and individuals. In addition, most educational institutions ranging from primary to tertiary have factored in entrepreneurship courses and programmes into their curriculum. What then is entrepreneurship education? Before understanding the significance

or the objectives of entrepreneurship education it is important that the construct be explained and understood in this context.

3.2.1 What is entrepreneurship education?

Literature does not identify one comprehensive definition for entrepreneurship education. Several definitions have been coined to explain entrepreneurship education and they all provide some insight into the concept. Welsh, Tullar and Nemati (2016) defined entrepreneurship education as teaching that imparts entrepreneurship attitude and skills on individuals. The authors saw entrepreneurship education as a subject that enables the development of a positive attitude towards entrepreneurship in individuals and equip them with the right entrepreneurship skills. Fayolle, Gailly and Lassas-Clerc (2006: 702) defined entrepreneurship education as "any pedagogical programme or process of education for entrepreneurial attitudes and skills, which involves developing certain personal qualities, it is therefore not exclusively focused on the immediate creation of new businesses". Fayolle et al.'s (2006) definition of entrepreneurship concurs with that of Welsh et al. (2016), however the former went on to say entrepreneurship education does not really focus on giving individuals the urgent need to start their own businesses even though it equips them with the qualities to do so.

Berchard and Toulouse (1998) as cited in Potishuk (2017: 1) defined entrepreneurship development programs as "a collection of formalized teachings that informs, trains, and educates anyone interested in participating in socio-economic development through a project to promote entrepreneurship awareness, business creation, and small business development, or to train the trainers". Even though the definition by Berchard and Toulouse (1998) explains entrepreneurship development programs, it plays a significant role in explaining education in the entrepreneurship field. Based on the definition, entrepreneurship education enlightens, teaches and equips individuals with the objective of getting them to start businesses and create employment. The latter part of the definition shows that entrepreneurship education is directed towards some behaviour and goal- starting a business venture.

Gribben (2010) as cited in Gjorgjieska, JankAni (2017:69) defined entrepreneurship education as "a type of education that is designed to change the orientation and attitude of the recipients and the process that will equip them with the skills and knowledge to enable them start and manage a business". The author defines entrepreneurship education as an academic discipline that seeks to equip learners with relevant skills and knowledge needed to start a business or practice entrepreneurial activities. Baseska-Gjorgjieska, Milevska and Jankuloski (2012: 362)

posited that "entrepreneurial learning is defined as all forms of education and training, both formal and informal, which contribute to the entrepreneurial spirit and learning with or without commercial objectives". Contrary to most definitions of entrepreneurship, Gribben (2010) posited that entrepreneurship education is not only acquired with the objective of starting and running a business, even if an individual does not look forward to starting a business, they can still receive entrepreneurship education. Gamede and Uleanya (2017: 2) defined entrepreneurship education as "the purposeful intervention by an educator in the life of a learner to impact entrepreneurial qualities and skills to enable the learner to survive in the world of business". What is remarkable in this definition is that it stresses the fact that entrepreneurship education must achieve some objectives hence it is seen as a 'purposeful intervention', it has a purpose to fulfil. Common in many definitions of entrepreneurship education is that it is a concept used to instil in learners the skills and knowledge they need to become successful entrepreneurs. Entrepreneurship education is all about instilling and cultivating the entrepreneurial mindset in individuals. What can be of interest is how entrepreneurship education is structured and offered, how do individuals receive entrepreneurship education? Therefore, the nature of entrepreneurship education must be taken into consideration, this is imperative to understand what really is involved in its offering.

3.2.2 Nature of entrepreneurship education

Gribben (2010) as cited in Baseska-Gjorgjieska et al. (2012) raised an interesting viewpoint which articulates that entrepreneurship education can be offered formally and informally and both forms of education play a remarkable role in building an entrepreneurial spirit in individuals. Potishuk (2017) argued that the specific objectives of entrepreneurship education determine the choice of delivery methods. Hytti and O'Gorman (2004) suggested that making entrepreneurship information available to students from primary, secondary and higher education and the broader population through media campaigns, seminars and lectures improves entrepreneurial awareness and understanding. This shows the different ways in which entrepreneurship education can be shared and transferred from one individual to the other. Hytti and O'Gorman (2004) further stated that to improve the efficiency of entrepreneurship education, it is important that it is offered in different forms. For this reason, Rauf, Wijaya and Tari (2021) suggested the need to incorporate information technology and social media in response to challenges such as the COVID-19 pandemic and create opportunities for entrepreneurship education and learning. Even though it appears that what is common in higher

education institutions is formal entrepreneurship education, it is important that both forms of education be addressed to show the difference and for future research purposes.

3.2.2.1 Informal Entrepreneurship education

Committee on Culture and Education of Council of Europe (2010: 46) defines informal education as "learning that goes on in daily life and can be received from daily experience, such as from family, friends, peer groups, the media and other influences in a person's environment". Integral in this definition is that an individual can learn a lot not only through enrolling for an educational programme or course. Similarly, Polenakovikj (2015: 1) defined informal education as "a spontaneous process of learning through conversation, exploration and enlargement of the experience". From these two definitions of informal education, it can be noted that an individual's experience is important for learning to take place. Eddy (2019) stated that informal education is gained when individuals are regularly informed about economic changes, technological developments and trends in any other areas related to entrepreneurship.

Various thoughts on the role played by informal entrepreneurship education have been put forward to discover the best way to offer entrepreneurship education. Iwu, Gwija, Tengeh, Cupido and Mason (2016) posited that informal entrepreneurship education is the best when it comes to enhancing the informal sector of any economy and this must be offered in the form of vocational training. Iwu et al. (2016) stated that informal entrepreneurship education can be likened to what Arko-Achemfuor (2014) described as hands on practical exercises which can also be delivered as short courses and these far outweigh formal entrepreneurship education. The practical nature of informal entrepreneurship education makes it a better option as it enables students to learn through application. Polenakovikj (2015:para4) argued that "the non-formal entrepreneurial education has some advantages, such as: flexibility, project-oriented, more interestingly implemented, but on the other hand it is dependent on available funds". The author (Polenakovikj, 2015) raised a point which concurs with Arko-Achemfuor (2014) that informal entrepreneurship education is projected-oriented which shows the practical side of this form of education. Polenakovikj (2015) also mentions that flexibility is one of the greatest strengths of informal entrepreneurship education, it is not rigid and can take any form which makes it interesting. Polenakovikj (2015) however concluded that both formal and informal entrepreneurship education is important to make a huge impact on the entrepreneurial intentions and mindsets of individuals.

3.2.2.2 Formal Entrepreneurship education

Contrary to informal education, formal education is what is offered in many universities, colleges and other forms of tertiary institutions. Eddy (2019) defined formal education as all types of learning that takes place in a university, workshop setting, e-learning portal and training-based organisation. Polenakovikj (2015) defined formal education as learning that is organized, planned and structured in a certain way. When students enrol for a degree, diploma, certificate or any type of a structured programme they are engaging in formal learning. Entrepreneurship education can also be offered formally through structured degree, diploma or certificate programs which is the type of education that this study focuses on.

Rezai et al. (2011) noted that individuals with access to formal entrepreneurship education will not always develop entrepreneurial skills and become successful entrepreneurs. The authors however did not elaborate further as to why they made this assertion. It was however supported by Fal, Daniels, Williams and Bantobetse (2011) and Arko-Achemfuor (2014) as cited in Iwu et al. (2016) who stated that education that is offered in many institutions is mostly theoretical in nature and does little or nothing to familiarize students with the practical side of entrepreneurship. Polenakovikj (2015) stated that Macedonia upholds entrepreneurial thinking immensely and uses formal education to teach young people in the country entrepreneurship in a structured and organized way. However, Ratten and Usmanij (2021) argued that entrepreneurship education is highly dependent on experience-based learning and has a good connection with the industry. The authors further argued that most often, entrepreneurship education makes use of guest speakers and industry case studies as it does not rely on conventional teaching and learning methods (Ratten & Usmanij, 2021). The authors draw educational institutions' attention to the need to adopt flexible and hybrid teaching methodologies in entrepreneurship. This is supported by Liquori and Winkler (2020) who recommended flexible entrepreneurship teaching and learning methods for quick adaptation in unforeseen situations. The authors identified the need to incorporate online learning for entrepreneurship to respond to situations such as the COVID-19 pandemic and conference presentations (Liqouri & Winkler, 2020). For this reason, educational institutions should consider both offline and online teaching and learning in entrepreneurship using digital technologies for the later, therefore, innovation and creativity are important aspects of entrepreneurship teaching and learning.

Having understood the nature of entrepreneurship education, it is imperative to discuss the objectives of entrepreneurship education. The author believes the fact that entrepreneurship

education can be offered both formally and in-formally, then both forms of education were developed to achieve certain objectives.

3.3 Objectives of Entrepreneurship Education

With the widespread implementation of entrepreneurship education in educational courses, it is imperative that its objectives be examined. What are the reasons behind teaching entrepreneurship in schools and higher education tertiary institutions? What is the rationale behind making entrepreneurship studies and courses compulsory in tertiary education institutions, an initiative that has been taken by governments of some countries in and outside Africa? Looking at these objectives will pave way for future research studies which can be conducted to ascertain the extent to which these are met and whether entrepreneurship education is serving its purpose in a practical sense. From the several objectives discussed in literature, the most prevalent were identified and will be discussed in this section.

3.3.1 Promote the creation of new entrepreneurs

Tobias and Ingrams (2010) argued that the main objective of entrepreneurship education is to develop in individuals the desire and will to become entrepreneurs. However, the authors did not specify whether this applies to all individuals or those who were already aspiring to become entrepreneurs. Timmons, Eisenman and O'Conno (2015) noted that the key objective of entrepreneurship education is to develop and nurture individuals with the ability to start a business. Arogundade (2011) posited that entrepreneurship education encourages individuals to be self-employed, in other words to work for themselves. Entrepreneurship cannot take place without entrepreneurs therefore it cannot be objected that such education must give birth to successful entrepreneurs. Mazzarol (2014) argued that entrepreneurship education must be designed and focused on developing entrepreneurial mindsets and a positive attitude towards starting a high or low-tech business enterprise. It can be concluded that entrepreneurship education's main objective is promoting the launch of new business ventures. It is however vital to concentrate on the structure and form of entrepreneurship education and develop programmes that are effective in achieving this objective. Peterman and Kennedy (2003) argued that people who receive entrepreneurship education are more capable of identifying feasible market opportunities and the associated risks. According to Kolvereid and Moen (1997) as cited in Hou, Su, Lu and Qi 2019: 1) "students in an entrepreneurship major have a higher entrepreneurial intention than those from non-entrepreneurship majors, and these students are likely to create new businesses after graduation". Students exposed to

entrepreneurship in their studies learn about businesses, successful businesspeople and their stories and this can encourage them to want to start their own businesses.

3.3.2 Basic entrepreneurial skills and knowledge

Maritz et al. (2016) noted that for one to become a successful entrepreneur they need some basic entrepreneurial skills and knowledge regardless of how goal-oriented, persistent and committed they can be. One can be committed to achieving their entrepreneurial goals but if they lack the basic knowledge in this field can they achieve their objectives? Stokes, Wilson and Mador (2010) suggested that entrepreneurship education gives individuals the relevant entrepreneurial expertise and practical skills which are essential tools for the success of Small and Medium Enterprises (SMEs). Relevant entrepreneurship knowledge is a key requirement not only in starting but also in maintaining a successful business. Alberti, Sciascia and Poli, (2005: 8-9) stated that "the most cited objectives of entrepreneurship education are to acquire knowledge relevant to entrepreneurship; acquire skills in the use of techniques, in the analysis of business situations and in the synthesis of action plans".

3.3.3 Encourage creativity and critical thinking

Chimucheka (2014) noted that entrepreneurship education encourages individuals to become critical thinkers and creative. Arogundade (2011) went a step further to state that entrepreneurship education enables individuals to be very creative in discovering innovative business opportunities. Entrepreneurs who can create unique and innovative business ideas or can find a gap to fill in a market have a better chance of succeeding.

3.3.4 Encourage individuals to be risk takers and persistent

Karimi et al. (2010: 37) strongly argued that "entrepreneurship education 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". Taking risks is a vital requirement of successful entrepreneurs as starting a business venture is something that does not have guaranteed success. Stories of individuals investing a lot of money in business ventures and failing dismally are shared across literature and social media platforms, on a brighter side to encourage new entrepreneurs to be persistent despite setbacks. Arogundade (2011) suggested that entrepreneurship education plays an important role in training tertiary institutions graduates in risk-management and to be persistent in any business venture. Potishuk (2017) reported that there are different views when it comes to the classification of entrepreneurship

education and these determine the kind of objectives to be achieved. Literature identifies everything that teaches entrepreneurship as entrepreneurship education.

Table 3-1 shows the different categories of entrepreneurship programs and the respective objectives to be achieved. Drawing from table 3-1, the researcher acknowledges that the entrepreneurship education under investigation in this research can be put in these two classifications: Entrepreneurial Education and Education for Entrepreneurship. The respective objectives therefore can be identified as follows: developing and encouraging entrepreneurial activity and building practical knowledge for self-employment. Entrepreneurship education offered in South African Universities must be aimed at providing students with practical knowledge and expertise that will enable them to start a business venture as well as encourage that behaviour, that is education for entrepreneurship. Table 3-1 identifies other classifications of entrepreneurship programs which are: Education about enterprise and Education about entrepreneurship which aim to create entrepreneurship awareness and theoretical knowledge respectively. This interesting distinction on the classifications of entrepreneurship programs and their respective objectives can be useful to universities and academics in the development of entrepreneurship curriculum and courses. Once a university identifies their classification of entrepreneurship programs, they can develop them in a way that will enable the achievement of the stated objectives. Through this study, the researcher aimed to provide recommendations about education for entrepreneurship, that is entrepreneurship education with a purpose of creating active, innovative and successful entrepreneurs.

Author	Classification	Objectives
Jamieson (1984)	Education about enterprise	Develop business awareness
	Education for enterprise	Develop practical business skills to start a business
	Education in enterprise	Advance skills to further develop a business venture
Curran and Stanworth (1989)	Entrepreneurial education	Develop real-world expertise for self-employment.
	Education for SMEs and self-employment.	Assist in starting a business with a new product/service.
	SME education	Advance business skills
	SME awareness education	Develop business awareness
Laukkennen (2000)	Education about entrepreneurship	Develop theoretical knowledge
	Education for entrepreneurship	Advance and promote entrepreneurial pursuit

Table 3-1: Types of Entrepreneurship Programs and their objectives.

Source: Potishuk (2017: 1).

The objectives of entrepreneurship education discussed above show that it plays a bigger role in the field of entrepreneurship. It is without doubt that lack of relevant knowledge and expertise in a field might serve as a barrier to an individual reaching their full potential. Albert Einstein coined a popular quote which says: ***Education is not the learning of facts but the training of the mind to think.*** Entrepreneurship need individuals to be innovative and creative individuals who can create value in the market. Having observed the objectives of entrepreneurship education, the section that follows discusses entrepreneurship education in a selection of Countries. The discussion centres on the steps taken to implement entrepreneurship education in those countries and the extent to which these have been successful. In addition, the section discusses the rate at which entrepreneurship education has been widely accepted in the selected countries.

3.4 Entrepreneurship education in developing countries

This section reviews the state of entrepreneurship education in two developing countries, South Africa and Nigeria. This research focuses on entrepreneurship education in South Africa. However, it is essential to review entrepreneurship education in another developing country to

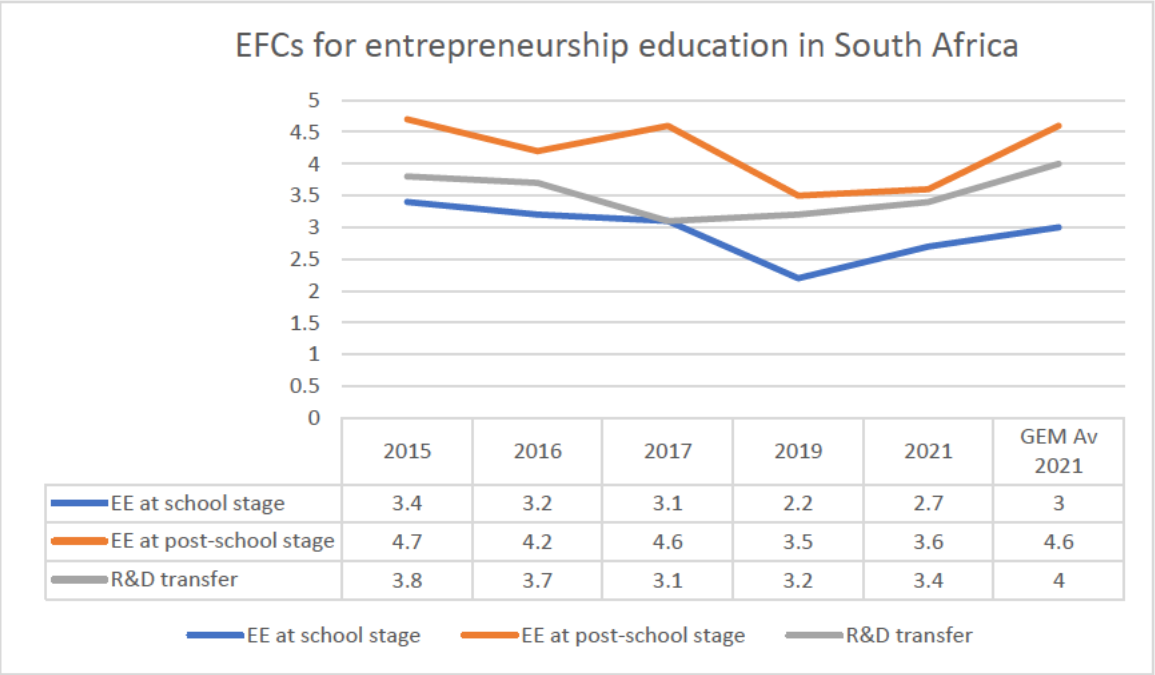
ascertain its development relative to South Africa. The GEM South Africa 2021/2022 report compares some South African entrepreneurial indicators such as entrepreneurial intentions and activity against those from Level C economies and the African region to provide a benchmark for South Africa.

3.4.1 South Africa

Contrary to most developed countries, Australia and USA included and other developing countries, the field of entrepreneurship education in South Africa started in later years, after Apartheid. Nicolaides (2011) noted that the Apartheid economic dispensation's aim was to produce graduates that are well groomed for the industry only, an available workforce that is ready to work for their 'boss'. Graduates in this era would therefore leave university with the mentality that they should look for work in large corporate organisations and work to earn a living, no thought was given to establishing and running a business venture. A turnaround was however made in 1998 when some South African higher education institutions started offering entrepreneurship education courses (Nicolaides, 2011). The number of South African Universities offering entrepreneurship education have since increased leading to the popularity of this field of study. However, it can be concluded that by 2010 there were still noticeable loopholes in the South African entrepreneurship education system as it was reported that it was one of the main factors limiting economic growth in South Africa (Fatoki and Garwe, 2010). Oni and Mavuyangwa (2019) reported that entrepreneurship education in South Africa had gained momentum in 2015 when various Universities (University of Western Cape, University of Cape Town, University of Witwatersrand, Vaal University of Technology and North West University) had established centres of entrepreneurship and innovation and identified the subject as a niche area.

In a study conducted in 2018 by Manduth Ramchander on undergraduate entrepreneurship education, it was found that some South African Universities were still behind in this field. Ramchander (2019) found that no traditional University in South Africa amongst the ones surveyed offered 1st year entrepreneurship modules. Rhodes University, University of Fort Hare and University of Western Cape had no undergraduate entrepreneurship courses whilst University of Cape Town, University of KwaZulu Natal, University of Witwatersrand, University of Free State and University of Limpopo had one entrepreneurship module in the Undergraduate level (Ramchander, 2019). The results of this study show that the development of entrepreneurship education in South Africa was a slow process, in a country with rising unemployment and a dwindling economy.

Commenting on the entrepreneurship education offered by South African Universities, Professor Dr Chris Friedrich, an extraordinary Professor at the School of Business and Finance, University of the Western Cape (UWC) noted that "first of all, it is important to acknowledge the distinction between entrepreneurship education and business management, while business management courses are about leadership, administration, sales and marketing, entrepreneurship courses deal more with innovation, personal initiative, achievement orientation and risk-taking" (Friedrich, 2017: para7). Prof. Friedrich went on to say empirical evidence point to the fact that entrepreneurship education in South Africa does not essentially achieve the objectives he stated (Friedrich, 2017). It can be deducted from the above that most entrepreneurship courses offered in South African Universities are more of business management courses.



	2015	2016	2017	2019	2021	GEM Av 2021
EE at school stage	3.4	3.2	3.1	2.2	2.7	3
EE at post-school stage	4.7	4.2	4.6	3.5	3.6	4.6
R&D transfer	3.8	3.7	3.1	3.2	3.4	4

Figure 3-1: EFCs for entrepreneurship education in South Africa.

Source: Bowmaker-Falconer and Meyer (2022: 36).

Figure 3-1 shows the Entrepreneurship Framework Conditions (EFCs) for entrepreneurship education in South Africa. The scores for entrepreneurship education at both school and post-school stage indicate that South African entrepreneurship education has been relatively insufficient since 2015, below 5. In 2021, South Africa scored lower than the GEM Average on all three EFCs shown in Figure 3-1, with a significant difference on entrepreneurship education at post-school stage. Moreover, Figure 3-1 shows that South African entrepreneurship education at post-school stage in 2015 was better than it was in 2021. The relatively low entrepreneurship education scores at both school and post-school stages call for educational institutions and various stakeholders' attention to upgrade entrepreneurship education

in South Africa. This is supported by Bowmaker-Falconer and Meyer (2022) who proposed an improvement in entrepreneurship education for possible growth in entrepreneurship. Whilst more educational institutions especially those in the higher education sector are incorporating entrepreneurship education in their curriculum, emphasis should be more on the output and effectiveness for entrepreneurial development. Current and new entrepreneurship courses should be thoroughly reviewed for their ability to develop practical entrepreneurial skills in learners. Entrepreneurship education courses could be designed with input from industry experts and successful entrepreneurs in South Africa, who can potentially serve as mentors to aspiring student entrepreneurs. Ratten and Usmanij (2021) found experience-based learning in entrepreneurship to have a significant connection with the industry. Figure 3-1 also shows continuously low scores on research and development transfer, below 4, since 2015. Significant effort has been invested in entrepreneurship research on both a local and international level, the same effort should be invested in implementing the research findings in improving the state of entrepreneurship education in South Africa. The GEM South Africa reports have over the years produced impressive research findings on the South African entrepreneurial ecosystem and these could be used to further develop entrepreneurship education for entrepreneurship develop.

Research conducted by Omotosho, Gamede, Vezi-Magigaba and Ayandibu (2022) provides some relevant insights into the state of entrepreneurship education in South Africa. These insights might help understand the relatively low scores on EFCs for entrepreneurship education. The authors argued that the methods employed in teaching entrepreneurship education in most South African universities are not really practical. The authors further argued that whilst content is important, emphasis should be on how the content is delivered to students, placing emphasis on methods that enable students to acquire the relevant practical entrepreneurial skills (Omotosho et al. 2022). Omotosho et al. (2022) added that entrepreneurship education delivery in most South African universities prefers theory to practical orientation, thereby doing little in preparing students beyond passing their examinations. Wardana, Narmaditya, Wibowo, Mahendra, Wibowo, Harwida and Rohman (2020) stated that universities should select suitable teaching methods for entrepreneurship, allowing for students to develop practical business skills and experience. The researcher concurs with Wardana et al. (2020) and argues that entrepreneurship education should look beyond knowledge acquisition and focus on skills development. Whilst entrepreneurial knowledge is an important aspect in business management, it can be argued that practical entrepreneurial skills are more important, and universities should create platforms for skills development.

Omotosho et al. (2022) reported a lack of entrepreneurial mentors and role models in some South African universities. The importance of mentorship both in and out of school cannot be undermined, more especially amongst young people who often speak about idols and inspirations. Boldureanu, Ionescu, Bercu, Bedrule-Grigoruta and Boldureanu (2020) confirmed the importance of role models in

entrepreneurship and argued that role models significantly influence people's decisions to start a business. Role models can be individuals from the students' families, societies or within and outside South Africa. Students can identify their role models on social media platforms, someone they do not personally know and get entrepreneurial inspiration from them. From the university, lecturers can be suitable role models and mentors for aspiring student entrepreneurs. Therefore, lecturers need to go beyond delivering entrepreneurship content to students and mentor them in acquiring relevant entrepreneurial skills. Industry experience is therefore crucial for entrepreneurship lecturers or educators and there is a need to identify and select the right qualifications and skills. It would make a significant difference if entrepreneurship courses were taught by experienced or successful entrepreneurs or have them as guest lecturers. This is supported by Ratten and Usmanij (2021) who identified the value of guest lecturers and industry case studies in entrepreneurship education learning for industry connection. Additionally, Omotosho et al. (2022) reported that there is overreliance on theory for entrepreneurship education, therefore, the authors proposed training for practical skills for lecturers.

3.4.2 Nigeria

Nigeria is one of the African countries that emphasizes the need for entrepreneurship education and development amongst its people more especially the youth. The need to instil an entrepreneurial mindset amongst the youth of Nigeria dates back to as far as 2001 that is almost two decades ago, and the country has never looked back. Gladys and Kyado (2012) reported that in 2001 Chief Olusegun Obasanjo a former president to Nigeria instructed the International Labour Organization (ILO) to carry out a study that sought to evaluate the entrepreneurial development needs of Nigerian youths at all levels of education. This was a major initiative that paved way for more and greater projects that sought to improve entrepreneurship education in the country. In a later development, Igbokwe, Agbodike and Osakede (2018) noted that in 2006 the National Universities Commission (NUC) decided to make entrepreneurship study compulsory for every student enrolled in a higher education institution regardless of their area of study. This move by the Nigerian Federal Government shows that every student no matter their area of study need to be exposed to entrepreneurship education to shape their career paths adequately. However, Igbokwe et al. (2018) noted that this programme was to a lesser extent successful as only a few universities acted upon the initiative.

Ikebuaka and Dinbabo (2018) stated that the Nigerian Federal Government has been active in introducing programmes that stimulate entrepreneurial development and activities in the country. Nwambam, Nnennaya and Nwankpu (2018) reported that the Nigerian government came up with an initiative called the Entrepreneurship Education Programme (EEP) which

sought to boost entrepreneurial knowledge and activity in the country. The aims of this initiative according to Nwambam et al. (2018:2) were to:

> "Identify and solve problems using critical and creative thinking, work effectively with others as a proactive team member and cultivate the ability to resolve conflict, organize and manage one-self and one's activities, collect, analyse, organize and critically evaluate information (to make decisions) that must be carried through, communicate and negotiate effectively and reflect on experiences and explore various strategies for effective learning…learning to learn at all times".

Even though Nigeria took the aforementioned solid steps in implementing entrepreneurship education in their curriculum, critics can be seen emerging from literature and recent studies being conducted across the country. Nwambam et al. (2018) stated that entrepreneurship education in Nigeria's higher education institutions is mostly theoretical and done by the book thereby lacking practical application.

3.5 Entrepreneurship Education in Developed Countries

This section reviews entrepreneurship education in two developed countries, Australia and the United States of America. Literature reveals that entrepreneurship education has received better recognition in most developed countries, and its inclusion in higher education curriculum is better than most African countries. For this reason, this section reviews the development and state of entrepreneurship education in Australia and America relative to South Africa.

3.5.1 Australia

Australia is one of the countries with a robust view on entrepreneurship education. Literature shows that the country has been implementing entrepreneurship education programmes from as far back as the 1990s. Mazzarol (2014) stated that in the 1990s Australia adopted the USA and UK's pattern of having the federal and state government invest in entrepreneurship programmes, an initiative that was welcomed by universities and they responded with increased research and teaching in entrepreneurship. Scanlon and McCormack (2018) noted that Australian universities introduced the first entrepreneurship postgraduate course in the 1990s and more have been introduced since then. By 2014, the majority of Australia's 39 Universities had business schools with entrepreneurship and small business management courses and academics undertaking research in the respective fields (Mazzarol, 2014). Scanlon and McCormack (2018) further established that a review in entrepreneurship education conducted in 2014 concluded that over 95% of Australian Universities teach entrepreneurship at

undergraduate level whilst over 90% was recorded at postgraduate level. These statistics show how much Australia believes in entrepreneurship education as a vehicle to entrepreneurship and business development. However, Scanlon and McCormack (2018) in the same review of Australian entrepreneurship education that was conducted in 2014 argued that, it was found that the programs which were only found in business schools were mainly centred on producing publications and teaching and to a lesser extent inclined on engaging with the industry and establishing business enterprises. Entrepreneurship education was therefore evaluated negatively in this regard despite being widely offered in universities.

To explore the current state of entrepreneurship education in Australia, and the distinctive approach of UTS, Maya Marcus IEU's Entrepreneurship Education Manager conducted an interview with Dr Martin Bliemel from UTS Faculty of Transdisciplinary Innovation. In the interview, Dr Martin Bliemel noted that every University in Australia has an entrepreneurship program either on a smaller or larger scale and recognises that students must be offered something to support their entrepreneurial mindset (Bliemel, 2019). Scanlon and McCormack (2018) however argued that extending entrepreneurship education beyond business schools was a difficult initiative which was met with mixed feelings when it was introduced. Commenting on how well entrepreneurship education is understood in Australia, Dr Martin Bliemel noted two main approaches used to offer entrepreneurship education: the specialisation approach where the entire program is entrepreneurship (like [UTS'] MBA in Entrepreneurship or the Honours in Entrepreneurship) and the other where there is entrepreneurship content within a core degree (Bliemel, 2019). La Trobe University is a good example of one University that has taken the latter approach into practice and embedded entrepreneurship essentials in every degree and has managed to embed the subject in disciplines such as law, engineering, social sciences and health sciences (La Trobe University, 2019). A number of Universities in Australia have successfully implemented the specialisation approach and offer degree programs in entrepreneurship: RMIT and Torrens University: Bachelor of Business Entrepreneurship; University of Adelaide: Bachelor of Innovation and Entrepreneurship; and Western Sydney University: Bachelor of Entrepreneurship. These are all three-year degree programs with entrepreneurship courses throughout.

3.5.2 United States of America

United States of America (USA) has an entrepreneurship education history that dates back to the 1940s, when the Harvard Business School introduced an entrepreneurship course in 1945 in support of the economy that had been shattered by the World War 11 (McIntyre and Roche,

1999). Entrepreneurship education however only gained momentum in the 1970s when a total of sixteen Universities were already offering entrepreneurship programs (McIntyre and Roche, 1999). Yu (2018) noted that in 2001 entrepreneurship education was already offered in more than 1,500 baccalaureate degree-granting universities and colleges. Landstrom, Harichi and Astrom (2012) stated that an estimate of more than 2 200 entrepreneurship courses were being offered across 1 600 business schools, 44 peer reviewed academic journals and over 100 specialist research centres were in operation. This shows that for more than two decades entrepreneurship education has been receiving much recognition in the USA. Laws and regulations were put in place in the USA to promote entrepreneurship education. Zinth (2007: 2) noted that "Illinois' Institute for Entrepreneurship Education was created to foster growth and development of entrepreneurship education, address deficiencies in the preparation of entrepreneurship education teachers, increase the quality and quantity of entrepreneurship education programs, improve instructional materials, and prepare personnel to serve as leaders and consultants in the field of entrepreneurship education and economic development".

3.6 The Entrepreneurial University

Entrepreneurship education is becoming a popular and growing field in universities worldwide. As was observed from the discussion on entrepreneurship objectives, there are different classifications of entrepreneurship education which give birth to varied objectives. There are therefore many approaches to entrepreneurship education depending on the objectives to be achieved. However, this study aimed to provide recommendations that support the development of education for entrepreneurship. Streeter, Jaquette and Hovis (2002) suggested a model for an entrepreneurial university as shown in Fig 3-2, a structure that Universities which want to implement education for entrepreneurship effectively can follow. According to Streeter et al. (2002) the model indicates that the entrepreneurial University must have a three-fold approach: internal, external and operational approaches. Various stakeholders from these three environments (internal, external and operational) must come together to build the entrepreneurial University. "The model highlights the importance of each of these three dimensions, acknowledging the need of having the appropriate infrastructure and creating a space for students to meet, interact and foster creativity and innovation" (Grecu & Denes, 2017: 4). From the model it can be noted that stakeholders in the external environment (community, social events, mentors, invited speakers, corporations and partnerships with organisations) play an important role in building the entrepreneurial university. Mentors and invited guests can have a profound impact on the entrepreneurial intentions and drive of University students, in

most cases these are people who are actually involved in entrepreneurship and can, therefore, provide first-hand and practical information. The University must have a relationship with the business environment and the local community to build an effective entrepreneurship environment.

According to Streeter et al. (2002), the operational approach is divided into three components: teaching, research and extra-curricular. These three environments summarise the activities of the University that will lead to the development of an effective entrepreneurship environment. From the model it can be noted that it is not only the teaching of entrepreneurship courses that is mandatory, but the research and extra-curricular components are also important. Research uncovers new and innovative ways of delivering entrepreneurship as well as providing solutions to unanswered questions or gaps. Teaching and facilitation practices need to be upgraded and adjusted from time to time and this can be achieved through research. Extra-curricular activities (conferences, summer schools, programs and workshops, competitions, networking between students and staff) are important to instil the entrepreneurial mindset practically in university students. These extra-curricular activities can complement in-class teaching and provide a platform for students to demonstrate practically their learned skills or knowledge gained over time.

Furthermore, the model presents the six steps to be followed in the process of implementing an entrepreneurial University. “The model presents also the steps that need to be followed in order to implement the entrepreneurial mind-set across the campus for achieving the radiant model of an entrepreneurial university, it all starts with the commitment of the leadership (university administrators)” (Grecu & Denes, 2017: 5). The remaining steps as presented in the model are as follows: “Centre for entrepreneurship (GLEA), Raising awareness, Employee engagement, Mechanism for Execution and Performance management” (Streeter et al. 2002: 50). Step two (Centre for entrepreneurship (GLEA) is the creation of a structure that enables the facilitation and coordination of entrepreneurial activities. A centre for entrepreneurship enables the creation of goals and objectives and these can be delegated to the responsible individuals and authorities. Some Universities have stand-alone departments for entrepreneurship to provide full support and concentration to the field. Making the importance of entrepreneurship known for the sake of the economy and the University’s future must be a continuous process specifically designed for learners, alumni, faculty, administrative staff, entire community and business fraternity (Streeter et al. 2002). The importance of entrepreneurship must be clearly communicated to all the stakeholders more especially students so that they understand why

they should be doing entrepreneurship. Different sources are used to raise entrepreneurial awareness, social media, the internet, journal articles, books, magazines and any other relevant sources.

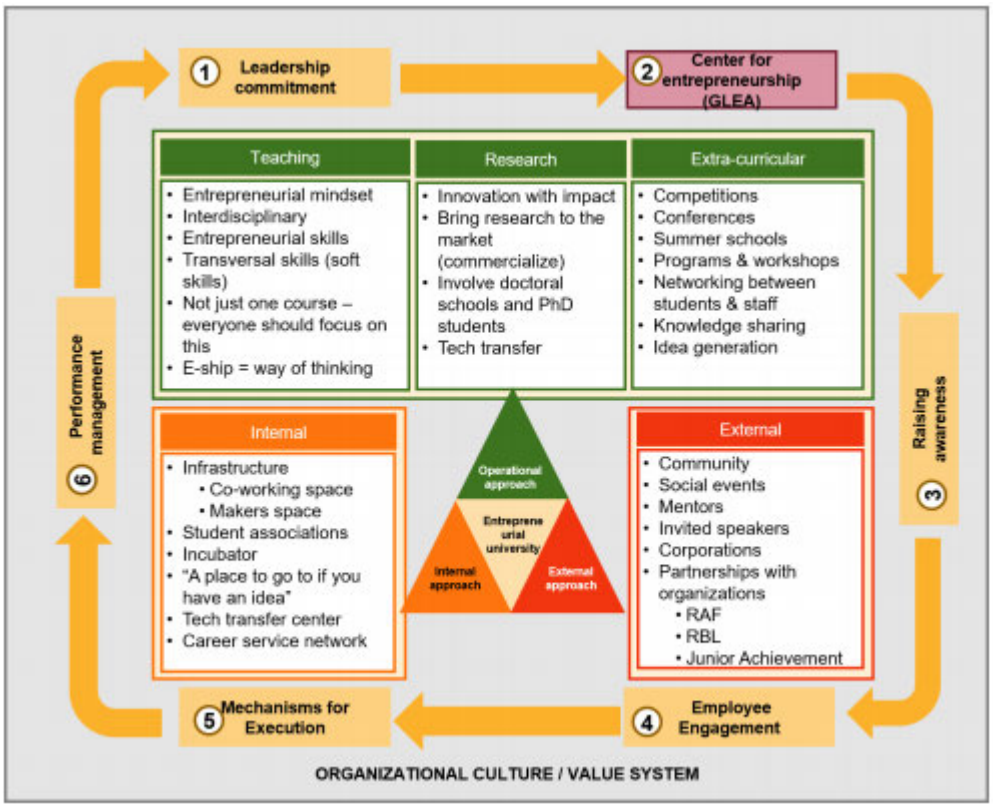


Figure 3-2: Model of the Entrepreneurial University

Source: Grecu and Denes (2017: 5)

3.7 Impact of COVID-19 on education

The COVID-19 pandemic which started during mid to late 2019 in China and early 2020 in most parts of Africa including South Africa, brought several changes in communities and countries on a global scale. The restrictions put on travel, both local and international and mass gatherings meant a disruption to the normal way of life and introduced what was referred to as *'the new normal'* which continued for almost three years. Governments of various countries including South Africa, introduced laws and regulations to help curb the negative effects of COVID-19 which were catastrophic. The restrictions on travel and mass gatherings affected the education sector as students could not travel to their institutions and attend physical classes. Furthermore, governments enforced the rule of social distancing and restricted mass gatherings indoors, which put a further strain on the education systems of various countries. Several researchers and authors (Brammer & Clark, 2020; Marshall & Wolanskyj-Spinner, 2020;

Ratten, 2020; Krishnamurthy, 2020; Donthu & Gustafsson, 2020; Bacq, Geoghegan, Josefy, Stevenson, & Williams, 2020), acknowledged and highlighted the negative effects of the COVID-19 pandemic on education, and how institutions responded to them.

Marinoni, van't Land and Jensen (2020) stated that according to United Nations Educational, Scientific and Cultural Organization (UNESCO), as of 1 April 2020, 185 countries across the world had closed their schools and higher education institutions affecting 1 542 412 000 learners which was approximately 84.9% of registered leaners. The authors further stated that by the beginning of May 2020, according to UNESCO, schools and higher education institutions were still closed in 177 countries affecting 1 268 164 088 learners, approximately 72.4% of the registered learners (Marinoni, van't Land & Jensen, 2020). These figures are indicative of the magnitude of disruption on the global education system by the COVID-19 pandemic. South African universities, including UKZN and DUT, like any other institutions globally, stopped physical classes and went into a shutdown for a few months before resuming online classes. Liguori and Winkler (2020) stated that in dealing with the COVID-19 pandemic, educational institutions initially implemented precautionary measures such as mandatory washing of hands, social distancing and encouraging students to stay at home, cancelling public events such as career exhibitions and conferences until they eventually stopped physical classes and implemented online learning.

Beech and Anseel (2020) argued that the main disruption of the COVID-19 pandemic on the education sector was the abrupt end to face-to-face teaching and moving online. Similarly, Ratten and Jones (2021) argued that despite the significant advances in digital technology, higher education institutions had not planned and were not prepared for a sudden shift to online learning. However, Ratten and Jones (2021) acknowledged the shift to online learning allowed students to continue with their studies from their various locations, amidst the COVID-19 pandemic which later continued for almost three years. UKZN and DUT adopted digital technologies such as ZOOM, Microsoft TEAMS and Moodle for their online teaching and learning. Students also made use of WhatsApp groups to stay updated on course specific developments and updates and to stay in touch with their friends and colleagues thereby reducing the negative impact of the physical distance between them. Tarkar (2020) posited that the biggest challenge for most schools and higher education institutions was not adopting online teaching and learning but ensuring that it runs smoothly for quality teaching and learning. Tarkar (2020) stated that most higher education institutions had to adopt online teaching methodologies, learning management software and digital learning solutions for the

first time during the pandemic which slowed down the transition from offline to online learning. Krishnamurthy (2020) also noted that lecturers and faculty members had to adjust their courses and curriculum to align with the demands of online learning in a short period of time and with little to no formal training. Some lecturers and educators learnt for the first time to use applications such as ZOOM, Microsoft TEAMS, Google classrooms and Google meet which put a lot of pressure and stress on them.

Schleicher (2020) went on to identify the inequalities in access to education amongst privileged and underprivileged students, underprivileged students were mostly disadvantaged as they could hardly afford either digital devices or data for the lecturers. Tadesse and Muluye (2020) concurred with Schleicher (2020) and reported on the social inequalities heightened by the COVID-19 pandemic. Tadesse and Muluye (2020) argued that most children from advantaged backgrounds attend schools that are well equipped with digital technologies and infrastructure with educators with advanced digital technology skills and could offer better online teaching and learning to their students than those from disadvantaged backgrounds. UKZN identified the gap and supplied all registered students with monthly data and assisted some to buy laptops at a cheaper price. Ratten and Jones (2021) stated that the COVID-19 pandemic affected the movement of international students who could either not travel back to the countries where they were studying or back home. For instance, some international students registered at UKZN and DUT could not travel back to college as the borders were closed which also necessitated the need for online and distance learning.

3.7.1 Impact of COVID-19 on entrepreneurship education

Hamburg (2021) argued that the COVID-19 pandemic revealed that entrepreneurship education can positively influence students' entrepreneurial intentions and activities, however, there is a need to follow innovative rather than traditional models and approaches. Hamburg (2021) went on to say emerging and advanced forms of technologies call for educators to teach students and young entrepreneurs to develop innovative products and services, develop and use different forms of innovation and to withstand crisis and difficult situations such as the COVID-19 pandemic. Advanced digital technologies saw the rise of digital products and services such as UBER, Bank Zero, ZOOM, Microsoft Teams, Checkers Sixty-60 delivery, Netflix and Podcasts. These products and services were created by creative and innovative entrepreneurs which universities like UKZN and DUT should produce, showing the need for educators and students to embed technology and innovation in entrepreneurial education. The

COVID-19 pandemic accurately shows the need for students to learn about digital technologies in entrepreneurship for new product and service development.

Liguori and Winkler (2020) stated that the COVID-19 pandemic brought both challenges and opportunities to entrepreneurship education. The authors stated that the major challenge is that the effectiveness and quality of education in online learning is not yet clear and entrepreneurship learning is mostly practical which cannot be taught online (Liguori & Winkler, 2020). "We posit that some aspects of entrepreneurship education lend themselves nicely to online instruction, whereas others require much more planning and deliberate thought to execute effectively" (Liquori & Winkler, 2020: 348). On the contrary, Maritz (2020) argued that educators are too reliant on traditional forms of teaching in delivering entrepreneurship education which limits students' entrepreneurial learning and development. Technology keeps advancing at a rapid pace which can be seen from the emerging forms of digital media and communications and new products and services infiltrating today's markets. These developments call for universities and educators to pay attention to the manner in which the entrepreneurship education curriculum is developed and offered to students. What courses and extra-curricular activities make up the entrepreneurship education curriculum and how is it delivered to students? What learning outcomes and objectives should be achieved at the end of the courses and how should they help entrepreneurship students grow in the careers.

Isenberg and Schultz (2020) argued that the COVID-19 pandemic should be seen as an opportunity to use online platforms to effectively engage and teach students for entrepreneurship in digital technologies. Similarly, Ribeiro, Ferragi, Trivinho-Strixino and Cardoso (2021) noted that the COVID-19 pandemic has placed two demands on higher education institutions regarding entrepreneurship; developing technologically advanced methods to fight the virus and to produce talented entrepreneurs for better equipped and prepared societies. The demands identified by Ribeiro et al. (2021) were highly relevant in an African context as African countries relied on importing vaccines from European and Asian countries. It was until early 2022 when the Word Health Organisation (WHO) announces that six African countries; Egypt, Kenya, Nigeria, Senegal, South Africa and Tunisia would receive the needed technology to produce their own mRNA vaccines to fight against the COVID-19 virus (United Nations, 2022). The WHO Director-General Tedros Adhanom Ghebreyesus was quoted saying "No other event like the COVID-19 pandemic has shown that reliance on a few companies to supply global public goods is limiting, and dangerous" (United Nations, 2022; para3). As Ribeiro et al. (2021) highlighted, indeed the COVID-19 pandemic called for higher

education institutions more especially those in African countries to produce talented entrepreneurs for better-prepared societies. The pandemic served as a wake-up call for educators to consider digital technology and innovation in entrepreneurship. Entrepreneurship education must be adapted to embrace the latest and emerging forms of technologies, however, research could play a significant role in supporting higher education institutions in embedding digital technologies and innovation in entrepreneurship education. Further research could investigate the challenges of using digital technologies to deliver entrepreneurship education and how best educational institutions can navigate the challenges. Research could also develop frameworks for the implementation of digital technologies in entrepreneurship to serve as a guide to educators and students. The COVID-19 pandemic helped reveal a gap which calls for the attention of researchers, academics and educators for the betterment of entrepreneurship education.

3.8 Summary

This chapter focused on the discussion of entrepreneurship education. It started with a discussion on the concept of entrepreneurship and its nature. Entrepreneurship education was basically identified as the acquisition or transfer of the knowledge and skills required for people to initiate and operate business enterprises which could be offered formally and informally. The chapter discussed the objectives of entrepreneurship education which are, amongst others, fostering the creation of a new venture, encouraging creativity and risk taking and instilling an entrepreneurial mindset in individuals. A discussion on the entrepreneurship education in developing (South Africa and Nigeria) and developed countries (Australia and United States of America) was done highlighting the discrepancies between the different education systems. The chapter also discussed the entrepreneurial university that is a model designed to support the introduction of an effective entrepreneurial education system in universities. Finally, the chapter discussed the impact of the COVID-19 on education and entrepreneurship education. The chapter highlighted the influence of digital technologies in the development and delivery of the entrepreneurship education curriculum in higher education institutions, a gap that was revealed by the COVID-19 pandemic.

The chapter that follows discusses entrepreneurship intention which is another major construct in this research study.

CHAPTER FOUR

ENTREPRENEURSHIP INTENTION

4.1 Introduction

The previous chapter discussed the concept of entrepreneurship education. The chapter discussed the nature and objectives of entrepreneurship education underlining the difference between education *about* entrepreneurship and education *for* entrepreneurship. Furthermore, the chapter discussed entrepreneurship education in selected developing and developed countries, highlighting the differences in its structure and delivery to students. Finally, chapter three discussed the impact of COVID-19 on education and entrepreneurship education showing the need to embed digital technologies in the design and delivery of the entrepreneurship education curriculum more especially where it lacks. Entrepreneurship education is a key concept in this study as the study sought to understand the role it plays in enhancing entrepreneurial intentions in university students.

This chapter discusses another key concept of this study, entrepreneurship intention. The discussion will focus on the influence of entrepreneurship education on students' entrepreneurial intentions. However, the chapter starts by explaining entrepreneurship intention and the level of university students' entrepreneurial intentions and discussing the factors influencing it. How does entrepreneurship intention develop amongst university students and what is the role of entrepreneurship education?

4.2 Entrepreneurship intention defined

Entrepreneurship intention is a concept that is popular in the field of entrepreneurship. It is a concept that has received strong recognition among researchers and theorists in the field of entrepreneurship most probably owing to its strong association with entrepreneurship development. It is important that the meaning of entrepreneurship intention be discussed before looking at how it is influenced by entrepreneurship education which is the focus of this study. To better understand entrepreneurship intention, it is important to define the term 'intention' first. Bird (1988: 442) defined intentionality as "a state of mind directing a person's attention, and therefore experience and action, toward a specific object (goal) or a path to achieve something (means)". Similarly, Fayolle et al. (2006) suggested that intention shows an individual's determination to engage in a certain behaviour and this is as a result of their cognition. Ajzen (1991: 181) defined intentions as "indications of how hard people are willing to try, of how much of an effort they are planning to exert in order to perform the behaviour".

Bird (1988) and Ajzen (1991) showed that behaviour takes place when people channel their minds, effort and attention towards achieving a specific desired objective. If the outcome of the behaviour is desirable, people will invest considerable effort and attention to perform it. The researcher describes intention as the ambition or desire to act upon something which can be positive or negative. A positive intention produces positive results whilst a negative intention produces negative results.

Literature discusses various definitions of entrepreneurship intention as it is a concept that can be explained in different ways. Thompson (2009: 676) defined entrepreneurial intention as "a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future". Entrepreneurship intention can be identified when an individual practically demonstrates that they would want to start a business venture in the future. Guerrero et. al. (2008) as cited in Remeikiene, Startiene and Dumciuviene (2013) defined entrepreneurial intention as an individual's cognitive perception that they want to start a new business enterprise or be innovative in an already established organisation, that is become an intrapreneur. The above definition indicates that entrepreneurship intention does not only lead to the creation of a new business from scratch but can also be creating a new venture within an existing organisation. This is contrary to a popular belief that entrepreneurship occurs when individuals start an entirely new business venture. The Global Entrepreneurship Monitor (GEM) 2017/2018 Report defines entrepreneurial intention as "the percentage of the population aged 18–64 (individuals already engaged in any stage of entrepreneurial activity excluded) who are latent entrepreneurs and who intend to start a business within the next three years" (Global Entrepreneurship Association, 2018: 18).

Having defined entrepreneurship intentions, it is imperative to investigate the factors which might influence the phenomena to develop and apply effective strategies and policies that are targeted at boosting entrepreneurship. Ozaralli and Rivenburgh (2016) reported that in a desktop research study they conducted, it is evident across management and economics literature that entrepreneurial intention is significantly correlated with starting and running a business. However, it is not clear which factors (personal, environmental, social and cultural) have a significant positive impact on entrepreneurial intentions. What is more important therefore is the identification of those factors that develop and nurture entrepreneurial intentions in individuals. The section that follows discusses the factors identified in literature as having a relationship with entrepreneurship intention.

4.3 Factors contributing to Entrepreneurial intentions

This section discusses the factors that lead to the development of individual entrepreneurial intentions. The researcher believes several factors contribute to the development of entrepreneurial intentions., therefore, the section discusses both individual and group factors that promote the development of entrepreneurial intentions.

4.3.1 Personality factors

The American Psychological Association (2020) described personality as differences in thinking, feeling and behaviour that occur across individuals. People demonstrate different personalities and characters, and these determine whether they will be able to engage in some kind of behaviour or not. It has been noted across literature that the field of entrepreneurship equally requires some personality factors that work as drivers to increased entrepreneurial activity. Belas and Klujnikov (2016) as cited in Herdjiono, Puspa, MauLany and Aldy (2017) concluded that the most important personal factors recognised by entrepreneurs are: expertise, responsibility perseverance, skills, propensity to risk, and decisiveness. When entrepreneurs possess all or any of these factors their level of entrepreneurial intention increases which in turn gives them an urge to venture into new business creation. Farrukh et al. (2018) reported that the research that was conducted in earlier years only concluded that personality qualities were the only contributors to entrepreneurial intentions with an emphasis on achievement and motivation. Kadir, Salim and Kamarudin (2010) stated that personality traits and factors were gaining in popularity in determining entrepreneurial intention and subsequent behaviours, and identified the following as having a greater contribution: risk taking, achievement motivation and locus of control. Remeikiene et al. (2013:302) reported entrepreneurship intention is mainly developed by personality factors and pointed out the following as having a significant contribution: “risk taking, self-efficacy, attitude, behavioural control, need for achievement, proactiveness and locus of control”. These authors however further reported that these personality factors can be developed if one acquires entrepreneurship education (Remeikiene et al. 2013).

Rauch and Frese (2000) as cited in Ozaralli and Rivenburgh (2016: 8) noted that “it is now well accepted that personality is an important predictor of entrepreneurial behaviour and continues to be of interest in entrepreneurship research”. It can be confirmed that personality has been playing a key role in shaping entrepreneurial intentions in individuals. Ozaralli and Rivenburgh (2016) went on to specify the personality traits that nurture student’s

entrepreneurial intentions and identified the following: optimism, innovativeness, risk-taking propensity and competitiveness.

4.3.2 Family environment

Amongst the factors identified as having an impact on entrepreneurial intentions, the family environment was pointed out as having a significant contribution. Aldrich & Cliff (2003: 589) developed a conceptual framework which shows the role of the family in creating a new venture and it emphasises that, "the characteristics of entrepreneurs' family systems (transitions, resources, norms, attitudes, and values) can influence the processes involved in venture creation (i.e., opportunity recognition, the launch decision, resource mobilization, and the implementation of founding strategies, processes, and structures)". Some families have a strong history of establishing and running businesses which are affectionately known as family businesses. Children who grow up in such families have a greater likelihood of continuing with the same businesses or starting their own. This happens as a result of seeing the benefits of owning business ventures or the parents instilling the entrepreneurial mindset in their children. Fatoki (2014) and Lindquist et al. (2015) concluded that family environment coupled with parental support significantly contribute to the development of entrepreneurial intentions. Parents are usually involved in the career guidance of their children and their contribution plays a greater role in shaping their children's careers. Herdjiono et al. (2017) stated that socialisation is a process that is very important in improving entrepreneurial intentions of children who learn to develop and run businesses from their parents. The Global Entrepreneurship Monitor 2019/2020 Global Report noted that "access (by entrepreneurs) to a knowledgeable and motivated network of other entrepreneurs is an important promoting factor for the spread of entrepreneurship" (Global Entrepreneurship Research Association, 2020: 14).

4.3.3 Entrepreneurship education

Entrepreneurship education is another factor that is widely recognised as having an influence on entrepreneurial intentions. Many researchers and theorists have conducted research and developed theories around the topic of entrepreneurship education and the role it plays in developing entrepreneurship. Feder and Nițu-Antonie (2017) reported that entrepreneurial higher education and training is a direct predictor of entrepreneurial intentions. People who are subjected to entrepreneurship education and training have a potential for venturing into entrepreneurship because of the entrepreneurial mindset instilled in them. "Entrepreneurship education is all about the development and improvement of entrepreneurial inspiration, awareness, knowledge and skills that are much needed to successfully establish and run an

entrepreneurial venture" (Ozaralli and Rivenburgh, 2016: 10). Entrepreneurship education seeks to bring awareness to students and equip them with the skills of starting and running a business venture. It is possible that all some students know is upon graduation they must look for work in big companies and earn a salary and usually they do not have any intentions of starting and running a business venture. Entrepreneurship education therefore develops within these students the will and desire to start their own businesses. If it happens that these students fail to get employment it might be easier for them to venture into the world of entrepreneurship.

Grecu and Denes (2017) noted that entrepreneurship education develops in individuals entrepreneurial intentions as it encourages them to find new business and prepares them to run the businesses and to be critical thinkers. Entrepreneurship education teaches students about starting and running businesses, when effectively structured and taught it can develop in students the intentions to start a business. Hou et al. (2019: 1) noted that "the entrepreneurship atmosphere created by schools and the support of entrepreneurship activities will affect the attitude of university students toward entrepreneurship and entrepreneurship education resources; the development of entrepreneurship courses could improve entrepreneurial intention.". Universities can create an atmosphere that would be able to develop in students the zeal to become entrepreneurs. A well thought out curriculum that is combined with entrepreneurship activities would be able to achieve the stated objectives.

It can be concluded that literature identifies several factors that have an impact on entrepreneurial intentions. Remeikiene et al. (2013) reported that the factors influencing entrepreneurial intentions discussed across literature are so many that discussing all of them will be a daunting process, however there are some common and frequently discussed factors. Table 4-1 summarises the factors influencing entrepreneurial intentions as discussed across literature dating back to 2009 a period where entrepreneurship had already gained momentum in some countries more especially the developed ones. From Table 4-1, it can be noted that entrepreneurship education has been pointed out as having an influence on entrepreneurial intention from as early as 2005 (Lee et al. 2005) and was further identified in succeeding years (Turker and Sonmez Selcuk, 2009; De JorgeMoreno et. al. 2012). It is suitable therefore that the role of entrepreneurship education in influencing entrepreneurship intention be measured giving attention to the context as it can be noted that entrepreneurship education is structured differently in different countries.

Author, Year	Factor	Description
Pruett et al. (2009)	Culture/Country	Individualism/Collectivism, power distance, uncertainty avoidance, femininity/masculinity.
	Personal role models	Support from family, close friends, and colleagues
	Entrepreneurial disposition	Self-belief and motivation
	Perception of motives	Confidence in self and desire to act.
	Perception of barriers	Start-up barriers, lack of funds, expertise, and support.
Lee at al. (2005)	*Entrepreneurship education*	*Business expertise and skills*
Giacomin et al. (2011)	Motives	Motivation to start and run a business venture
	Barriers	Lack of start-up capital, business expertise and skills, economic situation
Falck et al. (2012)	Peers	Close people
Shook and Bratianu (2010); Guerrero et al. (2008); Linan et al. (2011)	Feasibility Desirability	Ability to start and run own business. Own abilities. Will power to start a venture
Turker & Selcuk (2009)	*Educational support*	*Nature of education*
	Structural support	Type of organisations
	Relational support	Support from close people
De Jorge-Moreno et al. (2012)	*Education programmes* Perceived desirability Personal feasibility of starting a business	*Business studies, economics* Desire to start a business Desire to start a business, self-actualization, freedom

Table 4-1: Factors influencing entrepreneurial intention.

Source: Remeikiene et al. (2013: 301).

4.4 Model of Entrepreneurship Intention

Kadir et al. (2010) developed a model which depicts the factors that contribute to entrepreneurial intention development, as shown in figure 4-1. Based on this model, Kadir et al. (2010) argued that entrepreneurial intention is as a result of three main factors: attitudinal and behavioural factors and educational support (Kadir et al. 2010). The authors proposed these factors positively influence entrepreneurial intention which in turn is a predictor of entrepreneurial behaviour. The model lends support to various studies which identified entrepreneurship education as a predictor of entrepreneurial intentions, including current research. This research also investigated the impact of demographic factors (gender, degree registered for and parent's occupation), attitude towards behaviour and the perceived behavioural control on entrepreneurial intentions, which was included in Kadir et al. (2010) model of entrepreneurial intentions. It is probable the factors identified in figure 4-1 are predictors of entrepreneurial activity, which will be investigated in this research study.

Of interest to the researcher, Kadir et al. (2010) further reported that when investigating entrepreneurship education, focus should be on the following components: Syllabus, Pedagogy and Co-Curriculum. Kadir et al. (2010) proposed that these components are mandatory in entrepreneurship education courses therefore should be given attention in curriculum development. However, the current study only focused on empirically investigating the impact of entrepreneurship education as a whole rather than the sole contribution of each component (Syllabus, Pedagogy and Co-Curriculum). Further research could focus on the relative contribution of the individual components on students' entrepreneurial intentions.

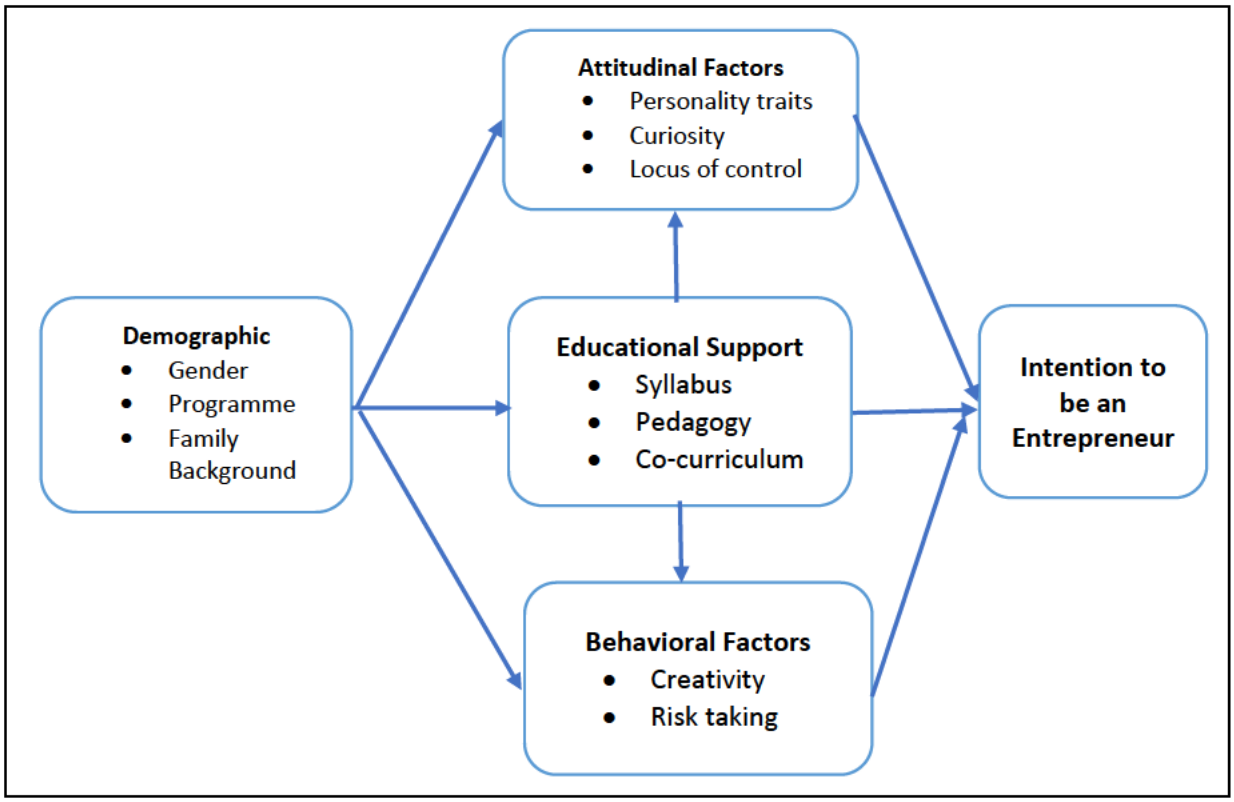


Figure 4-1: Model of entrepreneurial intentions

Source: Kadir et al. (2010: 24).

4.5 Role of Entrepreneurship Intention

Entrepreneurship intention is a construct that has received and continues to receive tremendous recognition in the field of entrepreneurship. This recognition has been followed by a variety of studies conducted worldwide with the aim of understanding this construct. What is the role played by entrepreneurship intention that warrants it to receive so much recognition? Sharaf, El-Gharbawy and Ragheb (2018) stated that the role played by entrepreneurial intention in the development of entrepreneurship is a pivotal one. In other words, entrepreneurial intention is at the core of entrepreneurship development. Al-Shammari and Waleed (2018) noted that a fundamental attribute in the growth and development of entrepreneurship is entrepreneurship intention, it promotes self-sufficiency and new venture creation. Entrepreneurship intention is a construct that is directly related to entrepreneurship. Entrepreneurship intention can have a positive or negative impact on entrepreneurship development. The higher the level of entrepreneurship intention in an individual the greater their chances of engaging in entrepreneurship, the lesser their intent, the lower their chances. Ozaralli and Rivenburg (2016) reported that a strong intention is more likely to result in an attempt to start a business as compared to a weak intention, even though immediate circumstances may hinder the process.

Due to the fact that intention develops prior to acting upon a certain behaviour, entrepreneurial intentions are a good predictor of a society's entrepreneurship potential. (Steffens and Omarova, 2019). The study of entrepreneurial intention is therefore vital in understanding how to encourage entrepreneurial activity and behaviour to emerge. This is the reason behind the influx of studies investigating the factors that have an impact on entrepreneurship intentions: once these factors are known, effort can be channelled in the right direction.

4.6 Entrepreneurship intentions of South African university students

Entrepreneurial intention is the key driving factor for entrepreneurship behaviour. It is therefore important that the entrepreneurial intentions of university students be measured so that corrective measures and strategies will be implemented if low levels are recorded. Oni and Mavunyangwa (2019) conducted a study in which they investigated the entrepreneurial intentions of students from a previously disadvantaged University in South Africa. The study was conducted with students from four different faculties (health sciences, management and law, and humanities as well as science and agriculture) and it was concluded that there are significant differences in the entrepreneurial intentions of students in these faculties (Oni and Mavuyangwa, 2019). Students in the faculty of law and management recorded high levels of entrepreneurial intentions whilst the students in the other three faculties (health sciences, humanities, science and agriculture) recorded low levels of entrepreneurial intentions (Oni & Mavuyangwa, 2019). The difference in the levels of entrepreneurship intentions could be attributed to the fact that students in the management and law faculty were exposed to entrepreneurship education which created in them the desire to venture into entrepreneurship. This points to the gap that entrepreneurship education has the potential to fill, the lack of entrepreneurial zeal amongst university graduates.

Bux and Van Vuuren (2019) conducted a study in which they sought to examine the impact of entrepreneurship education on the development of self-efficacy in South African high school students aged 15 to 18. Furthermore, the study sought to investigate if the duration of the entrepreneurship programme taken by students would have any impact on the development of self-efficacy and the relationship between self-efficacy and students' entrepreneurial intentions (Bux & Van Vuuren, 2019). The study concluded that both sets of students, those put under the long and short entrepreneurship intervention programmes, recorded high levels of entrepreneurial intentions, however those under the long programme recorded higher levels of entrepreneurship intention (Bux and Van Vuuren, 2019). The study however compared results between these two groups only and no control group was used (students not introduced to

entrepreneurship education programmes). Comparing these results with those of students not exposed to any entrepreneurship program would have enabled a comparison to be done between the three groups (exposed to short entrepreneurship programme intervention, exposed to long entrepreneurship programme intervention and those not exposed to any programme). It would be of value to ascertain any difference in entrepreneurial intention levels between those students who received entrepreneurship education and those who did not.

Figure 4-2 shows the entrepreneurship intentions of the South African population aged 18-64 years from 2015 to 2021. Figure 4-2 also shows the Africa region and Level C economies average for 2021. Entrepreneurship intentions of the adult population in South Africa have been on the rise since 2015, with a significant increase between 2019 and 2021. Bowmaker-Falconer and Meyer (2022) reported that in 2021, 20% of the South African adult population had intentions to start a business, recording a significant increase from 11.9% in 2019. This significant increase in just two years could be attributed to both internal and external pressures. Some individuals want the rewards that come with entrepreneurship, such as financial freedom and independence, therefore make the decision to leave their formal employment and start their own business. On the other hand, job scarcity and the highly competitive labour market could push some individuals into starting a business. Bowmaker-Falconer and Meyer (2022) attributed the increase to the push and pull factors of the COVID-19 pandemic. The authors argued that the high levels of employee retrenchment and unemployment, and, on the other hand emergence of new markets and opportunities during the pandemic could have resulted in many people wanting to start a business (Bowmaker-Falconer & Meyer, 2022). Compared to the Africa and level C economies averages of 40.6% and 38% respectively, South Africa is behind with a bigger margin. This is a cause for concern as the conclusion can be that the adult South African population is not sufficiently motivated to engage in entrepreneurship, this is the category (18-64 years) which university students fall into. This is a call for research to ascertain why a relatively small number of the South African adult population is intentional about starting a business. Findings from research could be used to develop tailor made strategies targeted at increasing entrepreneurial awareness and intentions amongst individuals.

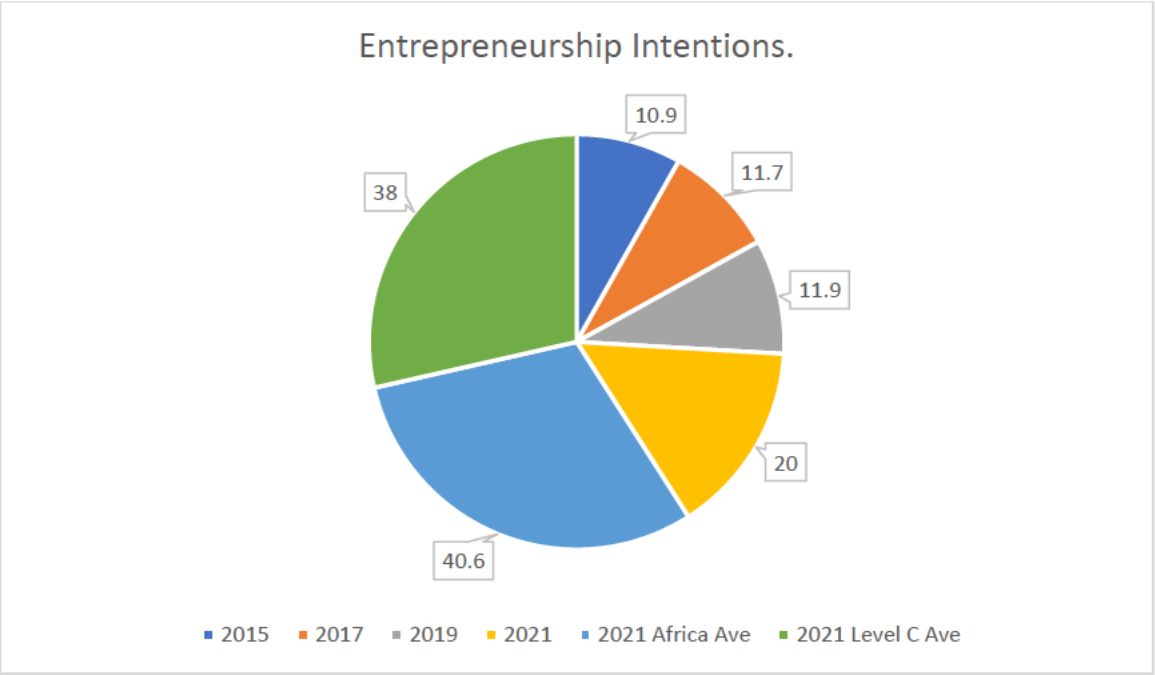


Figure 4-2: SA entrepreneurship intentions, 2015-2021.

Source: Bowmaker-Falconer and Meyer (2022).

According to Figure 4-3, the percentage of the South African adult population who perceive good entrepreneurial opportunities increased from 2017 to 2021, despite the small decline from 2019 to 2021. In 2021, 57.9% of the South African adult population perceived good entrepreneurial intentions compared to 43.9% in 2017 (Bowmaker-Falconer & Meyer, 2022). Although this figure is lower than the Africa region and Level C economies averages, South African entrepreneurship is progressing, hence more people perceive good entrepreneurial opportunities. Furthermore, there is a significant increase in the percentage of people who believe they have the entrepreneurial knowledge, skills and experience, from 39.9% in 2017 to 69.7% in 2021. Even though South Africa ranks lower compared to the Africa region and level C economies averages, it is possible there has been an increase in the South African entrepreneurship education as indicated by more people with a positive perception of their entrepreneurial capabilities. The increase in the percentage of the adult population perceiving good entrepreneurial opportunities and capabilities help explain the significant increase in entrepreneurial intentions, from 11.9% in 2019 to 20% in 2021. More people are becoming confident in their entrepreneurial abilities and positive about entrepreneurship. However, there has been a steady increase in the fear of failure rate since 2017 as shown in figure 4-4. Bowmaker-Falconer and Meyer (2022) reported a significant increase from 31.3% in 2017 to 53% in 2021 in fear of failure. This fear of failure rate is too high considering 57.9% of the

adult population perceive good entrepreneurial opportunities, more people would be discouraged from starting businesses in anticipation of negative results. With 69.7% of the adult population believing in their entrepreneurial capabilities, one would expect a low fear of failure rate. If one believes in their ability to engage in a behaviour, they are motivated to act and will do so with confidence. However, the fear of failure could possibly be attributed to external factors such as stories from colleagues or friends who have failed before, lack of support from family and close friends, poor business networks and connections and lack of industry knowledge. The fear of failure rate could also be attributed to individual factors such as reluctance towards risk taking and unwillingness to move out of their comfort zone. Ndofirepi (2020) found risk-taking propensity to be positively related to students' entrepreneurial goal intentions. It is possible entrepreneurship education can improve these attributes in individuals.

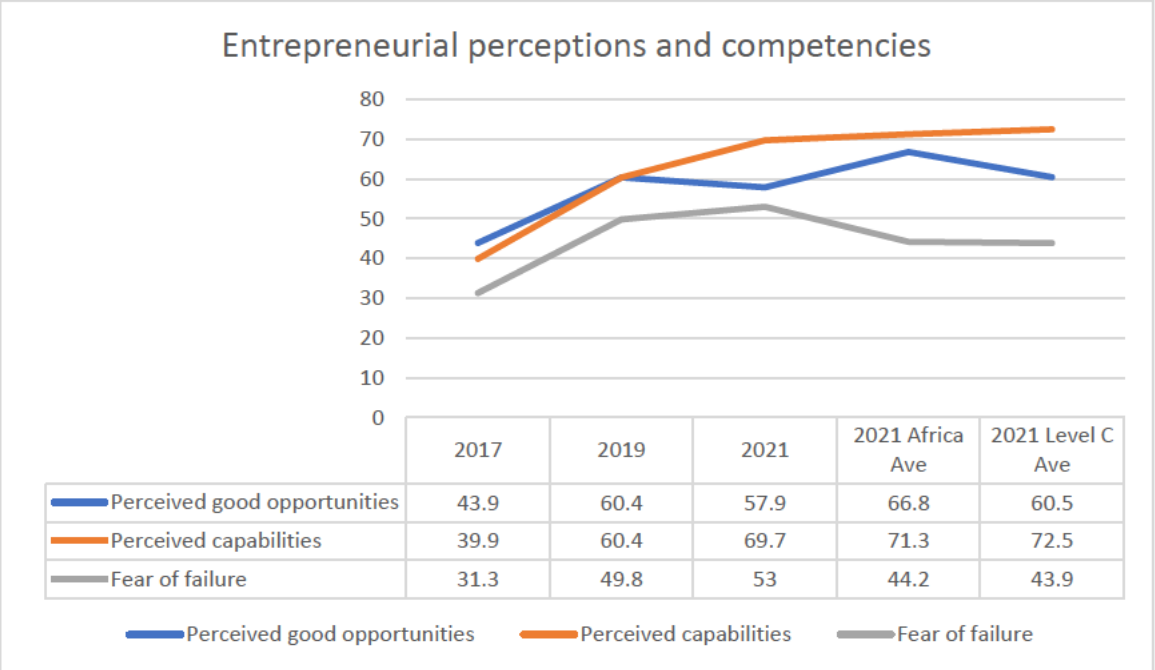


Figure 4-3: Entrepreneurial perceptions & competencies 2017-2021

Source: Bowmaker-Falconer and Meyer (2022).

4.7 Entrepreneurship intention of Australian university students

The Global Entrepreneurship Monitor (GEM) (2017/2018) Australian National Report defines entrepreneurial intentions as the proportion of people who believe they can initiate a business venture anytime within a period of three years, however, this percentage does not include individuals who are already involved in entrepreneurial activities (Steffens and Omarova,

2019). Table 4-2 shows the entrepreneurial intentions of the Australian population aged between 18-65. The researcher believes that Australian university students fall into this category of the population. According to the Global Entrepreneurship Monitor 2019: Australia Report, of the 50 countries surveyed, Australia occupied the 34th position with an entrepreneurial intention score of 13.4% (Renando & Moyle, 2021). The 2019 entrepreneurship intention score of the Australian adult population recorded a 0.2% increase from 13.2% in 2017 showing the country's significant efforts in entrepreneurship development. However, when compared to other countries which were part of the survey, Australia was ranked on number 34 out of 50 showing that many countries have recorded better entrepreneurial performance and results.

Table 4-2 also shows that 66.8% of the Australian adult population believed it is easy to start a business whilst 56.0% believed they have the skills and knowledge required to start a business (Renando & Moyle, 2021). These results could be attributed to the entrepreneurship education support offered in the country; some Australian universities have pure entrepreneurship degrees solely focused on teaching entrepreneurship as discussed earlier in this thesis. This entrepreneurship education can be described as education for entrepreneurship. Students are taught and educated for entrepreneurship from the commencement to the final year of their programmes and there are most probably vigorous practical and training sessions embedded in the programme. The total early-stage entrepreneurial activity for 2019 was 10.5% with a ranking of 27 out of 50 countries, showing the positive contribution of Australian entrepreneurship education towards entrepreneurial activities (Renando & Moyle, 2021).

		%Adults	Rank/50
Attitudes/Perceptions	It is easy to start a business	66.8	10
	Fear of failure (opportunity)	47.4	13
	Know someone who has started a new business	55.9	18
	Have the skills and knowledge	56.0	30
	Entrepreneurial Intentions	***13.4***	*34*
	Good opportunities to start a business	47.5	36
Activity	Entrepreneurial Employee Activity	8.3	1
	Total early-stage Entrepreneurial Activity	10.5	27
	Establishes Business Ownership rate	6.5	29

Table 4-2: Perceptions of entrepreneurial opportunities, abilities and intentions amongst the adult population (18-65 years) in Australia in 2019.

Source: Renando and Moyle (2021:12) Global Entrepreneurship Monitor 2019: Australia Report.

4.8 Entrepreneurship intention of USA university students

		%Adults
Can I start a business?	I have the knowledge, skills and experience to start a business.	66
	Fear of failure (opportunity)	43
	Expecting to start a business in the next 3 years	***13***
	In my country, it is easy to start a business	67
	Know someone who has started a business in the last two years	55
	In the next six months there will be good opportunities to start a business in my area	47
Entrepreneurial Activity	Total early-stage entrepreneurial activity (TEA)	18
	Established business ownership (EBO)	8

Table 4-3: Entrepreneurial perceptions of the USA adult population in 2022.

Source: GEM (Global Entrepreneurship Monitor) (2023:38-43).

Table 4-3 shows the results from a survey conducted in 2022 as published in the Global Entrepreneurship Monitor 2022/2023 Global Report. The results showed that 13% of the United States of America adult population which may include university students intend to start a business in the next three years (GEM, 2023). The results are similar to those reported by Australia in 2019 (13.4%) showing America's significant effort in entrepreneurship development. According to table 4-3, 66% of the American adult population believed they have the skills, knowledge and experience to start a business whilst 67% believed it is easy to start and run a business (GEM, 2023). These results show the role played by America's entrepreneurship education in developing entrepreneurial intentions. It is probable that America's entrepreneurship education is effective enough to give the adult population confidence in starting and running a business. Furthermore, 67% of the adult population believed they had the right skills and education in starting and running a business which they could have gained from the entrepreneurship education offered in American universities. The total early-stage entrepreneurial activity for the USA was recorded to be 18% compared to 10.5% for Australia in 2019 (GEM, 2023). Again, USA's results could be attributed to the entrepreneurship education offered in their universities. However, the results could also be attributed to factors such as unemployment, need for achievement, an individual's personal goals and objectives and informal education shared through the internet and digital technologies.

A review and analysis of Australia and the USA population's entrepreneurship intentions is essential to providing a frame of reference for entrepreneurship education offered at UKZN and DUT. Whilst a comparison of entrepreneurship education between local higher education institutions remains important, it is also worthwhile to refer to entrepreneurship education offered in universities in other continents and draw upon international standards. The goal is to improve entrepreneurship education offered to UKZN and DUT students for effective entrepreneurship development and output.

4.9 Entrepreneurship education and entrepreneurial intention

This study assesses the influence entrepreneurship education has on the entrepreneurial intentions of students. To what extent are UKZN and DUT students likely to venture into entrepreneurship post-graduation? Do students have the intentions of creating and running their own businesses or it is something that does not cross their minds? Whilst Liñán, (2004) articulated that the purpose of entrepreneurship education is to give the recipients the intent to act entrepreneurially, entrepreneurship expertise and the desire to practice entrepreneurship,

the researcher saw it fit to conduct a review of past studies and research to ascertain to what extent this has been achieved. From the discussion on the factors contributing to entrepreneurial intentions, it is probable that entrepreneurship education has a huge role to play as it was positively identified by several studies (Kadir et al. 2010).

A study conducted by Boldureanu et al. (2020) on entrepreneurship education in higher education institutions found a significance positive influence of entrepreneurship education on students' entrepreneurial intentions and attitudes. However, this study was based on students' knowledge of successful entrepreneurship role models and a specific entrepreneurship course, Business creation. The moderating effect of students' knowledge of successful entrepreneurship role models could have strongly influenced the results of this study. However, the study provides significant insights into entrepreneurship education, using role models and referring to case studies of successful entrepreneurs can potentially motivate students' entrepreneurial behaviours. This was also supported by Omotosho et al. (20222) and Ratten and Usmanij (2021) who suggested the use of entrepreneurial role models and case studies in entrepreneurship education. Mei, Lee and Xiang (2020) in their study on entrepreneurship education and students' entrepreneurial intention in higher education in China found a positive relationship between the two variables. This study adds to the many that confirmed a positive effect of entrepreneurship education on students' entrepreneurial intentions. Met et al. (2020) added that their study revealed that taking courses in entrepreneurship enhanced students' ability to make decisions in entrepreneurship. Research conducted by Martinez-Gregorio, Badeness-Ribera and Oliver (2021) on the effect of entrepreneurship education on entrepreneurship intention found a positive but insignificant effect of entrepreneurship education. Even though entrepreneurship education can potentially motivate entrepreneurship behaviour, its role is insignificant. These findings imply that overreliance on entrepreneurship education for entrepreneurship development might be short-sighted and ineffective. Different strategies, such as increased government support and funding and business mentorship services could be used to improve entrepreneurship development. Martinez-Gregorio et al. (2021) however reported that prolonged entrepreneurship programs significantly improved students' entrepreneurial intentions. Entrepreneurship degrees in both undergraduate and post-graduate studies could do better than isolated entrepreneurship courses. It can be argued that students opting for a three or four year degree in entrepreneurship would be more entrepreneurially inclined. It is also possible those students will start businesses during their studies, however, this would depend on the structure of the degree programe and the methods of delivery. Ratten

and Usmanij (2021) argued that despite receiving entrepreneurship education, some people still fail in entrepreneurship.

Ogbari, Olokundun, Uzuegbunam, Isiavwe, llogho, Obi and Moses (2018) did a research study to ascertain the value of university entrepreneurship education on the performance of aspiring entrepreneurs in selected Nigerian Universities. The study was conducted with students from selected universities across Nigeria (Covenant University, Landmark University and University of Lagos) and concluded that university entrepreneurship education plays a major role in positively impacting the performance of aspiring entrepreneurs (Ogbari et al. 2018). The study however focused on entrepreneurship education as the only independent variable, and therefore from these results no comparisons could be made to ascertain the position of entrepreneurship education in influencing the entrepreneurial performance of University students. Furthermore, the study concluded that university entrepreneurial education has a significant positive effect on students' product development, the skills gained from the courses gives the students the ability to develop products (Ogbari et al. 2018).

Hou et al. (2019) conducted a study on the impact of four variables (entrepreneurial passion, entrepreneurship education, entrepreneurship self-efficacy and role models) on the entrepreneurial intentions of University students in the Pearl River Delta of China. The study concluded that there is a positive relationship between entrepreneurship education and entrepreneurial intentions which concurs with the conclusion made by Ogbari et al. (2018). Moreover, the outcomes of Hou et al. (2019) study revealed that amongst the four variables (entrepreneurial passion, entrepreneurship education, entrepreneurship self-efficacy and role models), entrepreneurship education is the second greatest contributor of entrepreneurial intention after entrepreneurship passion (Hou et al. 2019). Ozaralli and Rivenburgh (2016) conducted a study on the factors impacting on entrepreneurship behaviour with attention to social (experience and education), societal (economic and political) and personal factors (optimism, innovativeness, risk-taking propensity and competitiveness). Contrary to the study conducted by Hou et al. (2019), Ozaralli and Rivenburgh (2016) concluded that taking a course that discusses entrepreneurship did not have a significant impact on the entrepreneurial intentions of both American and Turkish students. Ozaralli and Rivenburgh (2016) further reported that these results might be in line with the theory put forward by Kirby (2005) which states that entrepreneurship courses educate students *about* entrepreneurship rather than *for* entrepreneurship. This shows that entrepreneurship courses are not doing much to prepare students practically for the entrepreneurship field, instead they are just getting them to know

about entrepreneurship. University management and academic staff must view this as a gap that needs to be filled by developing entrepreneurship courses and curriculums that are best suited for the development of entrepreneurship intentions.

In a study conducted by Remeikiene et al. (2013), it was concluded that entrepreneurial education has a positive influence on the entrepreneurial intentions of Kaunas University of Technology students in Lithuania. The sample for this study consisted of economics and engineering students and a noticeable difference was recorded on their perception towards education preparing them for the field of entrepreneurship. "The students of economics are of the opinion that economic education not only provides useful knowledge about business start-up, but also contributes to the development of the personality traits mentioned above (self-efficacy, risk-taking, need for achievement, proactiveness, attitude towards entrepreneurship, behavioural control and internal locus of control) while the opinion of the students of mechanical engineering is the opposite – education does not provide useful information about business, does not encourage young people's creativity for business start-up, does not contribute to the development of particular personality traits (favourable attitude towards entrepreneurship and the initiative to start-up business)" (Remeikiene et al. 2013: 299). The results of this study do not only confirm a positive relationship between entrepreneurship education and the intentions of university students but went further to identify the personality and behavioural traits that entrepreneurship education develops in them which the engineering students did not mention or confirm. It was therefore concluded that the programme chosen by students has a different degree of influence upon their entrepreneurial intentions.

Bux and Van Vuuren's (2019) study on the relationship between entrepreneurship intervention programmes and self-efficacy amongst South African high school students (ages 15 to 18) found a significant positive relationship between the two variables (entrepreneurship education and self-efficacy). "We noted our finding with particular interest for the South African context, where, given the immature state of entrepreneurship, self-efficacy may well be one of the key factors that would motivate and encourage youth to continue in the face of an immature state of entrepreneurship", (Bux and Van Vuuren, 2019: 12). Entrepreneurship education increases students' self-efficacy which in turn motivates them to engage in entrepreneurial activities. Although this study did not investigate the actual relationship between entrepreneurship education and entrepreneurial intentions, it shows the role of entrepreneurship education in making students believe that they can engage successfully in entrepreneurship education. The following items are three of the six that made up the self-efficacy scale: "I am prepared to do

anything to become an entrepreneur; I believe that I have acquired the required knowledge and skills to become an entrepreneur through the programme; and I will seek further knowledge and skills through other entrepreneurship education if the programme does not fulfil this need" (Bux and Van Vuuren, 2019: 7). The above statements which ranked mostly on 4 and 5 shows the degree of strength that entrepreneurship education has in influencing students' entrepreneurship activities.

Manyaka-Boshielo (2019) conducted a study which sought to investigate the influence of entrepreneurial education in township communities in South Africa. In concluding the study, Manyaka-Boshielo (2019:6) stated that "indeed, in order for the township economy to be realised, training must be effected as an empowering tool". The results of this study lend support to the study by Bux and Van Vuuren (2019) which also concluded that entrepreneurship education plays a major role in positively impacting students' self-efficacy which in turn influences entrepreneurial intentions in a positive way. Furthermore, the study concluded that the culture of entrepreneurship must be introduced early to the people living in township communities and this can be achieved through entrepreneurship education programmes (Manyaka-Boshielo, 2019).

4.10 Head parents' occupation and students' entrepreneurial intentions

In a study conducted by Soetano, Pribadi and Widyadana (2010), the trio concluded that children of entrepreneurial parents are most likely to venture into entrepreneurship. This could be explained by the enculturation process, where children learn how to run businesses from their parents. Soetano at al.'s (2010) findings supported Shane (2003) and Wang and Wong (2004) who all concluded that children with entrepreneurial parents are most likely to have higher levels of entrepreneurial intentions. These results corroborate those of several other researchers (Ahmed et al. 2010; Ariff, Bidin, Sharif and Ahmad, 2010) who concluded a positive correlation between parents' involvement in entrepreneurial activities and their children's level of entrepreneurship intentions. However, contrary to the results of several researchers (Shane, 2003; Wang and Wong, 2004; Soetano at al. 2010; Ahmed et al. 2010; Ariff et al. 2010), Kakkonen's (2010) study concluded that the presence of an entrepreneur in the family or amongst close associations does not influence students' entrepreneurial intentions. Similarly, Farrington et al. (2012) stated that parents' employment status does not influence their children's entrepreneurial intentions. Kakkonen (2010) and Farrington et al. (2012) however did not provide further explanation to support their results.

4.11 Level of study and students' entrepreneurial intentions

In a study conducted by Terjesen, Bosma and Stam (2016), the findings concluded that individuals with a higher level of education are more likely to start social ventures as compared to those with lower levels of education. However, Kakkonen (2010) argued that there are no significant differences in students' entrepreneurial attitudes and intentions based on their level of education. Although Terjesen et al. (2016) shed light on the role played by education on students' entrepreneurial intentions, they did not provide specifications on the particular type of education. A student might have a higher level of education but without the ideal business knowledge and know-how necessary to venture successfully into entrepreneurial activities. Further research was necessary to provide clarity, and, therefore, this research can only draw little from the results of Terjesen et al. (2016). Similar to Terjesen et al. (2016), Ahmed et al. (2010) state that students' year of study is a good predictor of their entrepreneurial intentions with senior students having more entrepreneurial intentions than the junior ones. These results are supported by a study conducted by Farrington et al. (2012) at Nelson Mandela Metropolitan University (NMMU), Rhodes University and Stellenbosch University in South Africa who found significant differences in students' entrepreneurial intentions based on their level of study. The researcher argued that the acquisition of the exact business knowledge, skills and mindset is important to the successful execution of entrepreneurial activities. A higher level of knowledge without the much-needed entrepreneurial knowledge might not make much difference.

4.12 Attitude for entrepreneurship, subjective norms, entrepreneurial intentions

Ajzen's (1991) Theory of Planned Behaviour states that attitude towards a behaviour and subjective norms influences the intention to engage in a behaviour. This theory could be used to explain the development of entrepreneurial intention, hence it was selected as the one that underpins and provides direction to this research. In a study conducted by Muhammad, Aliyu and Ahmed (2015) on entrepreneurial intentions amongst Nigerian University students, the study concluded that attitude towards entrepreneurship and subjective norms has a direct positive effect on entrepreneurial intentions. In contrast, Ozaralli and Rivenburgh (2016) upon investigating USA and Spain students' entrepreneurial intentions found that they had positive attitudes towards entrepreneurship but low levels of entrepreneurship intentions. These results could be as a result of challenges and obstacles such as lack of business knowledge, financial resources and support from relevant parties. It is because of these external factors that Ajzen saw the need to adjust the 1980 Theory of Reasoned Action and include the perceived

behavioural control factor. A study conducted by Marire (2015) concluded that students' attitudes towards entrepreneurship positively impact on their entrepreneurial intentions whilst no effect was found from subjective norms. However, in contrast, some literature (Aldrich & Cliff, 2003; Fatoki, 2014; Lindquist et al. 2015; Herdjiono et al. 2017; Soetano et al. 2010, Shane, 2003; Wang and Wong, 2004, Ahmed et al. 2010) highlights a positive influence of family support on students' entrepreneurial intentions, which forms part of subjective norms. Bagheri and Pihie (2015) noted that subjective norms have a positive influence on entrepreneurial intentions as it gives individuals the confidence that they can perform entrepreneurial tasks with ease and a positive attitude towards entrepreneurship. Several studies investigating the influence of attitude towards entrepreneurship and subjective norms were conducted in contexts other than the South African context, hence the need for this study.

4.13 Extra-curricular activities and students' entrepreneurial intentions

In a study conducted by Haliimah (2010) to investigate the management and provision of extracurricular programmes in inner city secondary schools in Pretoria, the study revealed positive benefits for students who attended extracurricular programmes. Even though this study was conducted in a secondary school context, the results help shed light on the contributions made by extra-curricular activities. It can be assumed that attendance at extra-curricular activities (workshops, conferences, seminars) in entrepreneurship have the same positive benefits for university students, thereby improving their entrepreneurial intentions. In a study conducted by Arranz, Ubierna, Arroyabe, Perez and Fdez. de (2017) to examine the effect of curricular and extracurricular activities on the entrepreneurial motivation and competences of university students in Spanish institutions, the findings concluded that the activities develop students' positive attitudes towards entrepreneurship. According to Ajzen's (1991) Theory of Planned Behaviour, behavioural intention is as a result of a positive attitude towards the behaviour. Arranz et al. (2017) study could therefore explain a positive correlation between attendance at extra-curricular activities and students' entrepreneurial intentions. Studies conducted within the South African context would provide much better insights into students' entrepreneurship education needs, which makes this research a necessity. Research designed by Parimala and Ilham (2016) to assess the effectiveness of entrepreneurship education in developing entrepreneurial intention among Malaysian University students concluded a positive significant impact of co-curricular entrepreneurship programmes outside of the classroom.

4.14 Perceived behavioural control and students' entrepreneurial intentions

Perceived behavioural control was identified as a crucial factor in Ajzen's (1991) Theory of Planned Behaviour. In a study conducted by Marire (2015) on a comparison of entrepreneurial intentions of Generation Y Students in South Africa and Zimbabwe, the study concluded that perceived behavioural control has a positive impact on students' entrepreneurial intentions. Similar to the results of Marire (2015) and the current study, Bagheri and Pihie (2015) concluded that Malaysian University students' entrepreneurial intentions are largely detected by attitude (attraction) towards entrepreneurship and perceived behavioural control. The contexts within which these studies were conducted are different from the South African context, and hence the need for this study which investigates the influence of perceived behavioural control on South African University students' entrepreneurial intentions. However, the findings of Marire (2015) and Bagheri and Pihie (2015) provide insight into the role played by perceived behavioural control on students' entrepreneurial intentions.

4.15 Students' academic majors and entrepreneurial intentions

In a study conducted by Iwu, Ezeuduji, Eresia-Eke and Tengeh (2016) to investigate the entrepreneurial intentions of students in a University of Technology in South Africa, the results indicated that there are no statistically significant differences between entrepreneurship intentions of students from both the entrepreneurship and business management courses and from non-business management related courses. Dao et al. (2021) conducted a study on the influence of academic majors on the entrepreneurial intentions of engineering and business studies students in the context of Vietnam and concluded that engineering students displayed higher entrepreneurial intentions as compared to business studies students. Dao et al. (2021) findings corroborate Iwu et al. (2016): both did not confirm statistically significant differences in students' entrepreneurial intentions based on their academic majors. A medical student can have higher entrepreneurially motivated with the intention of starting their own medical practice, the same applies to a motor mechanics student who might be intending to start their own motor repairs firm.

4.16 Awareness of government bodies and entrepreneurial intentions

Saeed, Yousafzai, Yani-De-Soriano and Muffatto (2013) reported that positive perception of entrepreneurial support increases individuals' entrepreneurial self-efficacy and entrepreneurial intentions. Saeed et al. (2013) however did not specify the type of support that would increase individuals' entrepreneurial self-efficacy and entrepreneurial intentions. Nabi, Holden and

Walmsley (2006) suggested that the provision of entrepreneurial support impacts positively on individuals' perceived attractiveness, perceived feasibility, self-efficacy, and propensity to act on entrepreneurial behaviour. Malebana (2014) investigated the influence of knowledge of entrepreneurial support on South African students' entrepreneurial intentions and its antecedents; the attitude towards becoming an entrepreneur and perceived behavioural control. The findings concluded that knowledge of entrepreneurial support is significantly correlated with students' intention to start a business (Malebana, 2014). Malebana's (2014) study lends support to Nabi et al.'s (2006) and Saeed et al.'s (2013) studies. Further research conducted particularly on students' awareness of government bodies/programmes or private organisations that support entrepreneurial/small business development would be necessary to reach an empirical conclusion in the South African context. There is a scarcity of such studies, and hence the need for this study.

4.17 Degree registered for and entrepreneurial intentions

Kautonen, van Gelderen and Fink (2015) together with Maresch et al. (2016) proposed that business studies students' entrepreneurial intentions are more than those from other faculties. In a study conducted by Oni and Mavuyangwa (2019) to assess the differences in entrepreneurship intentions of students from four different faculties (health sciences, management and law, and humanities as well as science and agriculture) in a South African University, the findings indicated significant differences in students' entrepreneurial intentions. Similar to the findings of Kautonen et al. (2015) and Maresch et al. (2016), Oni and Mavuyangwa (2019) concluded that students from the management and law faculty demonstrate higher levels of entrepreneurial activity. This can be explained by the fact that students from the management and law faculty are exposed to entrepreneurial education in courses such as management of business, marketing, supply chain management, business ethics, management and accounting. Aulia and Hadi (2018) noted that most studies conducted in the field of entrepreneurship only include students from the management faculty and related faculties therefore not much comparison can be made. This is contrary to Oni and Mavuyangwa's (2019) study which also included students from other faculties (health sciences, humanities, science and agriculture). However, the current study followed to fill the gap identified by Aulia and Hadi (2018) as students registered for an entrepreneurship course at UKZN can be from the college of Humanities.

4.18 Summary

This chapter was focused on discussing entrepreneurship intention which is a major construct in this study. Entrepreneurship intention was discussed as the desire in individuals to engage in entrepreneurial activities. The discussion went on to identify the factors that influence entrepreneurship intention and the role it plays in relation to entrepreneurship. Personal and environmental factors such as self-efficacy, family environment and education were identified as the factors that have an influence on entrepreneurship intention. The chapter also discusses the entrepreneurship model highlighting the major factors that have an influence on entrepreneurship intention. The entrepreneurial intentions of South African university students were discussed as well as those of the adult population (ages 18-64) in South Africa a category which the university students fall into. The chapter also looked at the entrepreneurial intentions of Australian and American university students.

The next chapter discusses the theories that are related to this study and pinpoints the one that shapes and provides direction to it.

CHAPTER FIVE

A REVIEW OF THEORIES AND THE THEORETICAL FRAMEWORK

5.1 Introduction

The previous chapters reviewed literature in the areas of entrepreneurship, entrepreneurship education, entrepreneurship intention and related. The definition and role of entrepreneurship and the rationale behind the growth of the field was discussed. Chapter three discussed entrepreneurship education and topics surrounding this concept: the nature and objectives of entrepreneurship education, entrepreneurship education in South Africa and selected international countries (Australia and United States of America). Chapter four discussed entrepreneurship intention, entrepreneurship intentions amongst university students and the relationship between entrepreneurship intention and education.

This chapter discusses theories and models that are relevant in the study of entrepreneurship and entrepreneurial intentions. The chapter discusses the McClelland's Achievement Motivation Theory (1961); Human Capital Theory (1962); Theory of Reasoned Action (1980); Shapero's Model of Entrepreneurial Event (1982) and the Theory of Planned Behaviour (1987) which is the theory that shapes and supports this study.

5.2 Theories to explain entrepreneurship

Just like any field of study, there is a relentless effort by researchers and theorists to develop a framework that can explain entrepreneurial behaviour adequately. Various theories and models have been developed from as far back as the 18th century and new ones keep emerging as limitations from the previous theories are identified and adjustments applied. However, it seems there is no one theory or model that can provide the best explanation for entrepreneurial behaviour. Theories and models are developed based on the researchers' views towards entrepreneurship. This research study would not be complete without a discussion of theories and models that attempt to explain the development of entrepreneurship behaviour and are therefore relevant in understanding the study. The following theories and models are discussed; McClelland's Achievement Motivation Theory (1961); Human Capital Theory (1962); Theory of Reasoned Action (1980); Shapero's Model of Entrepreneurial Event (1982) and the Theory of Planned Behaviour (1987).

5.3 Martin Fishbein and Icek Ajzen's Theory of Reasoned Action (TRA)

The Theory of Reasoned Action (TRA) developed by Martin Fishbein and Icek Ajzen in 1980 has its roots in the Theory of Attitude which was founded in the 1960s following some research on the association between attitude and behaviour (Mwange, 2018). Hale et al. (2002) as cited in Mwange (2018: 135) stated that "the theory was born largely out of frustration with traditional attitude–behaviour research, much of which found weak correlations between attitude measures and performance of volitional behaviours". Past research found that attributing behaviour performance to attitude only had a weak correlation and therefore saw the need for further research.

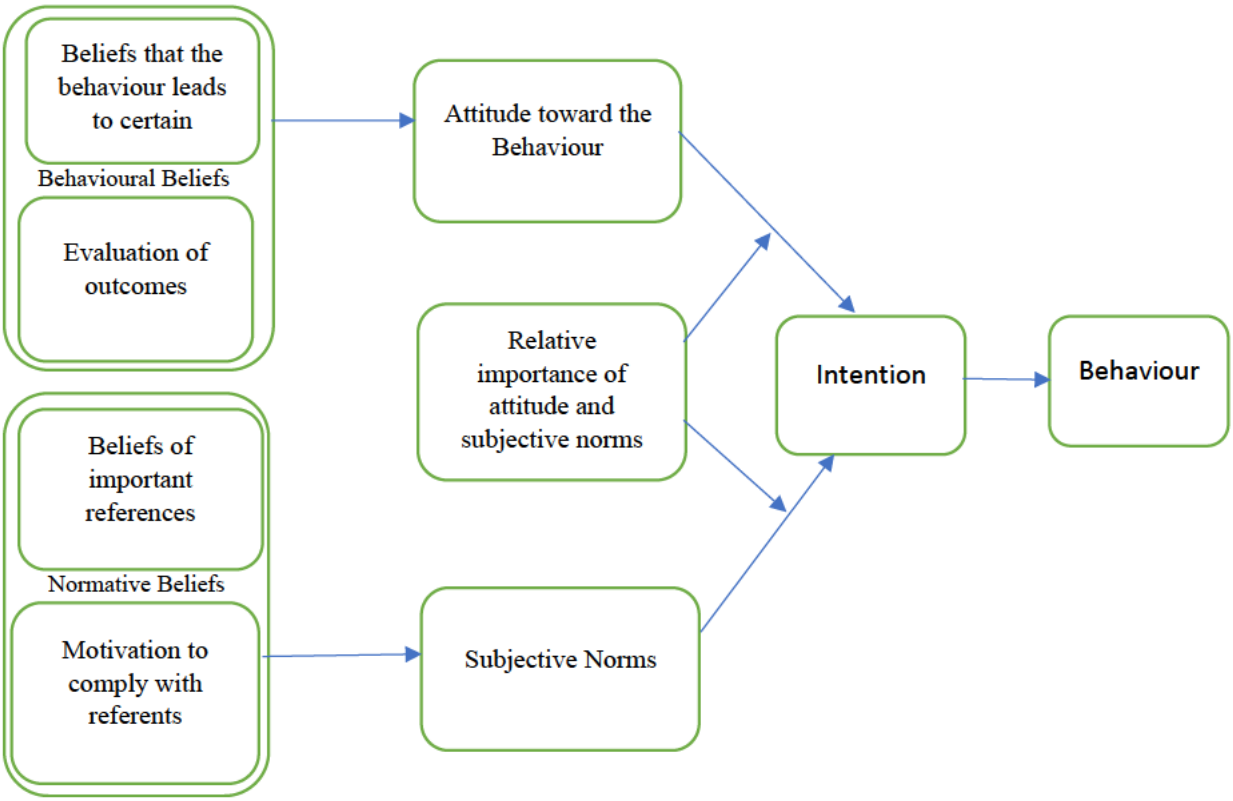


Figure 5-1: Theory of Reasoned Action

Source: Kan and Fabrigar (2017)

According to the Theory of Reasoned Action, the best predictor of whether an individual will engage in a certain behaviour or not is intention, and this forms the foundation of the theory (LaCaille, Gellman and Turner, 2013). The degree of intention, that is the desire or ambition to engage in a behaviour, determines the extent to which the individual is willing to execute the behaviour. Kan and Fabrigar (2017) however reported that the only behaviours referred to

in the Theory of Reasoned Action are volitional, those that are performed at will or based on an individual's deliberation. Langer (1989) as cited in Mwange (2018: 135) proclaimed that "TRA was designed to predict and explain human behaviour in specific contexts –behaviours that were volitional in nature and excluded those behaviours that are nonvolitional (impulsive, habitual or cravings)". Therefore, the major assumption of this theory is that when individuals develop the intention to perform some behaviour, they can freely act upon them without any limitation.

Thrasher, Andrew and Mahony (2007) posited that the Theory of Reasoned Action emphasises that an individual's behavioural intention is as a result of two elementary elements: attitude which is personal in nature and subjective norms which is influenced by social factors. The Theory of Reasoned Action is therefore developed from two constructs, attitudes and subjective norms, as shown in Figure 5-1. How individuals evaluate a certain behaviour (positive or negative) and their attitudes towards it is personal in nature, whilst their perception on the pressures put on them by those around them whether to engage in the behaviour or not is social in nature (Thrasher et al. 2007). The level of an individual's intention is therefore dependent on their feelings towards the behaviour, positive or negative and the opinions of people around them as shown in Figure 5-1. Furthermore, Figure 5-1 shows that the relative importance of subjective norms and attitude towards the behaviour predicts the individual's level of intention to engage in the behaviour.

Mwange (2018) stated that there are different types of individual beliefs that influence the attitudes and normative beliefs that in turn influence entrepreneurial behaviour. Ajzen and Fishbein (1980) as cited in Mwange (2018: 136) stated: "each attitude and subjective norm is affected by a set of noticeable beliefs, an individual may have a large number of beliefs about a given behaviour, but he/she can only attend to a relatively small number of beliefs at a specific moment". Individuals take into consideration those beliefs that are important to them and have a greater impact on their attitudes and subjective norms. Kan and Fabrigar (2017) suggested that beliefs that affect an individual's attitudes are behavioural beliefs whereas normative beliefs affect their subjective norms. Individuals evaluate behaviours based on their results or consequences, what they get from engaging in the behaviour and whether people close to them approve of the behaviour and support them. If individuals perceive a positive outcome from a certain behaviour the intention to act upon the behaviour is elevated, and the same applies to when they have the support of close friends and family.

5.4 Application of the Theory of Reasoned Action to Entrepreneurship.

The Theory of Reasoned Action recognises intention as the most effective determinant of behaviour. In entrepreneurship, the intention to engage in entrepreneurial behaviour therefore determines whether an individual will engage in entrepreneurship or not. An individual with a higher level of entrepreneurial intention will more likely engage in entrepreneurial behaviour such as starting a business venture as compared to those with no or lower levels of intentions. From this background, an investment in individuals' entrepreneurial intentions becomes significant, which leads to an inquiry on the factors that affect intentions. As noted from the discussion on the Theory of Reasoned Action, intentions are affected by attitude toward the behaviour and subjective norms. Mwange (2018) claimed that an individual's attitude towards a behaviour results in them questioning the outcome: whether there will be a positive or negative outcome. The same applies to entrepreneurship, a positive attitude towards entrepreneurship results in an individual's positive evaluation of the outcomes which leads to them engaging in or promoting entrepreneurial behaviour. On the other hand, a negative attitude towards entrepreneurial activities will be accompanied by a negative evaluation of the outcome - a process that thwarts entrepreneurial behaviour. An individual that does not see entrepreneurship as having a positive outcome will seldom promote anything to do with entrepreneurship. This could be the reason why successful entrepreneurs across the globe have embarked on initiatives and programmes that support entrepreneurial development; Mark Zuckerberg, Bill and Melinda Gates, Jeff Bezos, Strive Masiyiwa and Patrice Motsepe amongst others.

Ajzen and Fishbein (1982) stated that subjective norms is another construct that influences intentions, and from it emanates beliefs about an individual's social influence. An individual that is surrounded by people with an entrepreneurial mindset is more likely to venture into entrepreneurship as compared to those who are not. It is usually the norm that children raised by parents who are successful entrepreneurs and businesspeople end up becoming entrepreneurs due to enculturation, this usually results in family owned and run business. According to the Theory of Reasoned Action, it is therefore important to focus on the drivers of entrepreneurial intention (attitudes and subjective norms), and find out what exactly positively impacts on entrepreneurial intention which is an important predictor of entrepreneurship behaviour. This study seeks to investigate the influence of education on entrepreneurial intentions of University students which is why the applicability of the Theory of Reasoned Action has been considered.

5.5 Evaluation of the Theory of Reasoned Action

Even though the Theory of Reasoned Action was successful in explaining behaviour and covering the gaps created by the Theory of Attitude, it was faced with criticism due to some noticeable limitations. Kan and Fabrigar (2017) stated that "one somewhat controversial assumption of the TRA is that external variables can only influence behavior indirectly through the influence on behavioral beliefs (which influence attitudes toward the behavior), normative beliefs (which influence subjective norms)". How external variables influence behaviour has no rigid pattern as their influence is situational and depends on the prevailing circumstances (Kan and Fabrigar, 2017). Another limitation of the Theory of Reasoned Action is its inability to include behaviours that individuals do not have total control over. It is unrealistic to conclude that when individuals intend to perform some certain behaviour there are no external factors that hinder their intentions. There are a lot of constraints that hinder individuals from performing behaviours even if they have intention to act upon them. This is in line with the contributions of Kan and Fabrigar (2017) who reported that the two constructs (attitudes, subjective norms) are insufficient in fully explaining behaviour. Unavailability of resources, time and environmental constraints are some of the limitations that deter individuals from acting upon certain behaviours. According to Thrasher et al. (2007), the objective of the TRA is to forecast, understand and explain individuals' behaviour and this has been made applicable in different fields in order to understand and encourage positive behaviour on a wider range. The Theory of Reasoned Action was therefore widely accepted and used by many researchers and not only played an instrumental role in understanding behaviour but also necessitated the promotion of desired behaviour. Furthermore, the theory paved way for the development of the Theory of Planned Behaviour after Ajzen made some revisions and saw it fit to add a third construct.

5.6 Icek Ajzen's Theory of Planned Behaviour (TPB)

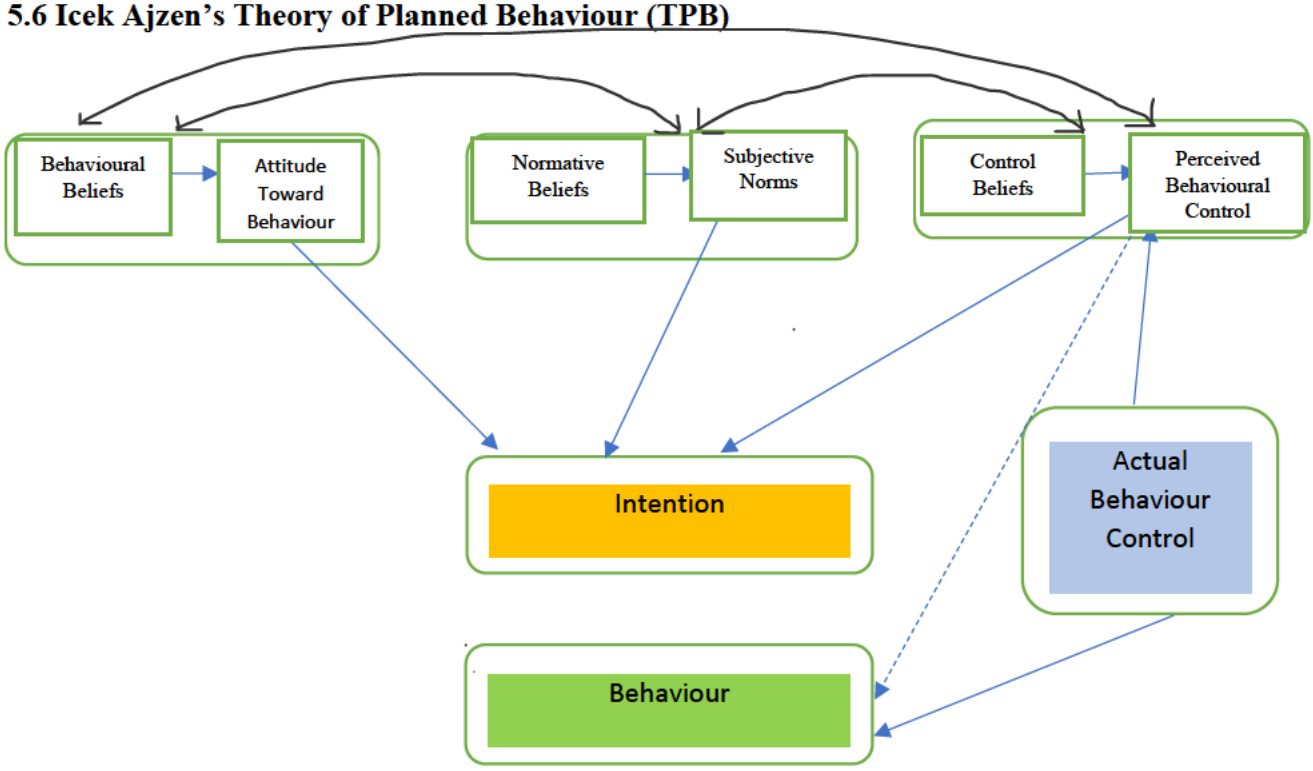


Figure 5-2: Theory of Planned Behaviour

Source: LaMorte (2019: para2).

According to Kan and Fabrigar (2017), The Theory of Planned Behaviour (TPB), which is an extension of the Theory of Reasoned Action (Ajzen and Fishbein 1980) was developed by Icek Ajzen (1985, 1991). Ajzen (1991: 181) noted that "the Theory of Planned Behaviour is an extension of the theory of reasoned action (Ajzen & Fishbein, 1980) made necessary by the original model's limitations in dealing with behaviours over which people have incomplete volitional control". The Theory of Planned Behaviour was therefore born out of the revisions made by Ajzen to the Theory of Reasoned Action. Like the Theory of Reasoned Action, The Theory of Planned Behaviour is used to understand how certain behaviours occur, that is predict and explain behaviours. According to Mwange (2018), as in the original Theory of Reasoned Action, central to the Theory of Planned Behaviour is intention, the individual's intention to perform behaviours motivates them to act upon the behaviours and this determines how hard they are willing to try and the effort they put in. Kan and Fabrigar (2017) defined the Theory of Planned Behaviour as a theory used to understand behaviour which is as a result of behavioural intentions, which is however sometimes controlled by external factors. What differentiates the Theory of Planned Behaviour from the Theory of Reasoned Action is the addition of a third construct to the former theory. Miller (2005) as cited in Mwange (2018: 136)

posited that “this addition was made to account for times when people intend to carry out behaviour, but the actual behaviour is thwarted because they lack confidence or control over behaviour”.

There are three factors that influence behavioural intentions; attitudes toward the behaviour, subjective norms, and perceived behavioural control (Kan & Fabrigar, 2017). The model as shown in Figure 5-2 therefore shows that intention is influenced by three independent variables; attitudes, subjective norms and perceived behavioural control. Attitude refers to the feelings the individual has towards the behaviour in question, this can be a favourable or unfavourable attitude (LaMorter, 2019). A favourable evaluation will result in the individual executing the behaviour whilst an unfavourable evaluation does not lead to action. Mwange (2018:138) suggested that subjective norms refer to “a student's perception about the particular behaviour in form of mode of livelihood (employer or employee), which is influenced by the judgment of significant others (e.g., parents, or relevant others' like lecturers)”. Subjective norms refer to how individuals seek approval of the behaviour from people around them, family, work colleagues or friends. People tend to engage in behaviour that gets approval from people around them more especially those close to them. Perceived behavioural control is the individual’s perception on the complexity of the task, how difficult or easy is the execution of the task (LaMorter, 2019). “Perceived behavioural control of the behaviour therefore is the extent to which a person feels able to enact the behaviour based on a consideration of internal control factors (e.g. skills, abilities, information) and external control factors (e.g. obstacles, or opportunities) – both of which are related to past behaviour” (Mwange, 2018: 139). Individuals are usually discouraged by difficult tasks that require them to put more effort as compared to easy tasks. Behavioural intention is greater when individuals have the perception that the task to be performed is easy. Perceived behavioural control plays an important role in this theory as it distinguishes it from the Theory of Reasoned Action. The addition of the construct of perceived behavioural control is therefore the major revision that was done to the Theory of Reasoned Action after it was discovered that it is lacking in this area. It was recognised that behaviour does not just happen but there are some factors that act as mediators between intention and behaviour.

As in the Theory of Reasoned Action, the Theory of Planned Behaviour stipulates that people have beliefs that influence their attitudes, subjective norms and perceived behavioural control. As shown in Figure 5-2, an individual’s attitude is influenced by their behavioural beliefs, subjective norms by normative beliefs and perceived behavioural control by control beliefs. As

has already been discussed under the Theory of Reasoned Action, behavioural beliefs emanate from an individual's perceived outcome from the behaviour, positive or negative. "Normative beliefs are a student's perception of social normative pressures (from parents, or relevant others' like lecturers) beliefs that he or she should or should not perform such behaviour adopting the mode of livelihood (employer or employee)" (Mwange, 2018: 138). If individuals perceive support from people around them their intention to engage in a certain behaviour increases as compared to when they are not interested in supporting them. Ajzen (1991: 196) reported that "among the beliefs that ultimately determine intention and action there is, according to the Theory of Planned Behaviour, a set that deals with the presence or absence of requisite resources and opportunities". These beliefs give individuals an impression that there are factors that promote or hinder the performance of a certain behaviour. When individuals perceive a lot of factors that hinder their performance of intended behaviour, they withhold from engaging in the behaviour. Ajzen (1991) noted that these control beliefs emanate from various sources; the individual's own experience with the behaviour, close family and friends' experiences and other factors that increase or supress the perceived difficulty of acting upon the intended behaviour. Ajzen (1991: 196) "the more resources and opportunities individuals believe they possess, and the fewer obstacles or impediments they anticipate, the greater should be their perceived control over the behaviour".

5.7 Evaluation of the Theory of Planned Behaviour

Like any other theory, the Theory of Planned Behaviour has its criticisms. LaMorte (2019) proclaimed that the theory did not provide clarification on the time between the development of the intention and the execution of the behaviour. This is important because the time between when intention is developed and the behaviour, is important, the shorter the time the greater the intention. Sheeran et al. (2014) reported that the Theory of Planned Behaviour is weak as it only concentrates on rational reasoning ignoring unconscious influences on behaviour. In other words, the Theory of Planned Behaviour is said to focus on well thought out determinants of behaviour and ignores the unplanned ones. Those unconscious influences might have a major impact on behaviour which might result in the interruption of the behaviour of intention. Similarly, LaMorte (2019) stated that the Theory of Planned Behaviour ignores other factors that might have an impact on the intentions and motivation of behaviour; examples of such factors are fear, threat, mood, or past experience. In addition, Conner et al. (2013) as cited in Mwange (2018) reported that the role played by emotions in the Theory of Planned Behaviour is not accounted for. Emotions have an impact on the behavioural intentions of individuals,

negative emotions thwart the performance of behaviour whilst positive emotions promote performance. Ajzen (1991) posited that the theory points out a connection between the three constructs (attitude, subjective norms and perceived behavioural control) and some beliefs about the behaviour, however the connection is not profound and there is little evidence to support it.

LaMorte (2019) stated that the Theory of Planned behaviour makes unfounded assumptions on the availability of resources and opportunities that individuals need to execute the behaviour. The theory assumes that the individual would have already identified the opportunity and acquired the resources needed to successfully tackle the behaviour (LaMorte, 2019). Behavioural intention without the right resources and opportunities will not result in the behaviour being executed. This is therefore a critical issue that was not addressed by the Theory of Planned Behaviour. Despite the criticism attached to the Theory of Planned Behaviour, its role in explaining behaviour cannot go unmentioned. According to Ajzen (1991: 206), "The theory incorporates some of the central concepts in the social and behaviour sciences, and it defines these concepts in a way that permits prediction and understanding of particular behaviours in specified contexts". The Theory of Planned Behaviour has been widely used by researchers and academics to understand and explain behaviour; and has been used in various studies and quoted in various pieces of literature and publications. It has therefore not only been instrumental in explaining behaviour but has contributed immensely to the literature on understanding behaviour.

5.8 Shapero's (1982) Model of Entrepreneurial Event (SEE).

Shapero and Sokol (1982) developed a model to explain the factors that have an impact on entrepreneurship intentions. In this model which they named the Model of Entrepreneurial Event (SEE), Shapero and Sokol (1982) identified three constructs that have an influence on entrepreneurial intentions. Mwange (2018: 148) stated that "Shapero's entrepreneurial event model, developed by Shapero and Sokol, defines the interaction of cultural and social factors that can lead to a firm's creation by influencing individual's perceptions". As indicated in Figure 5-3, Shapero claimed that perceived desirability, perceived propensity and perceived feasibility are the three factors that have a major influence on an individual's intention to start a business venture (Ngugi, Gakure, Waithaka and Kiwara, 2012). The SEE model is therefore an interaction of one dependent variable (entrepreneurial intention) and three independent variables (perceived desirability, perceived propensity and perceived feasibility).

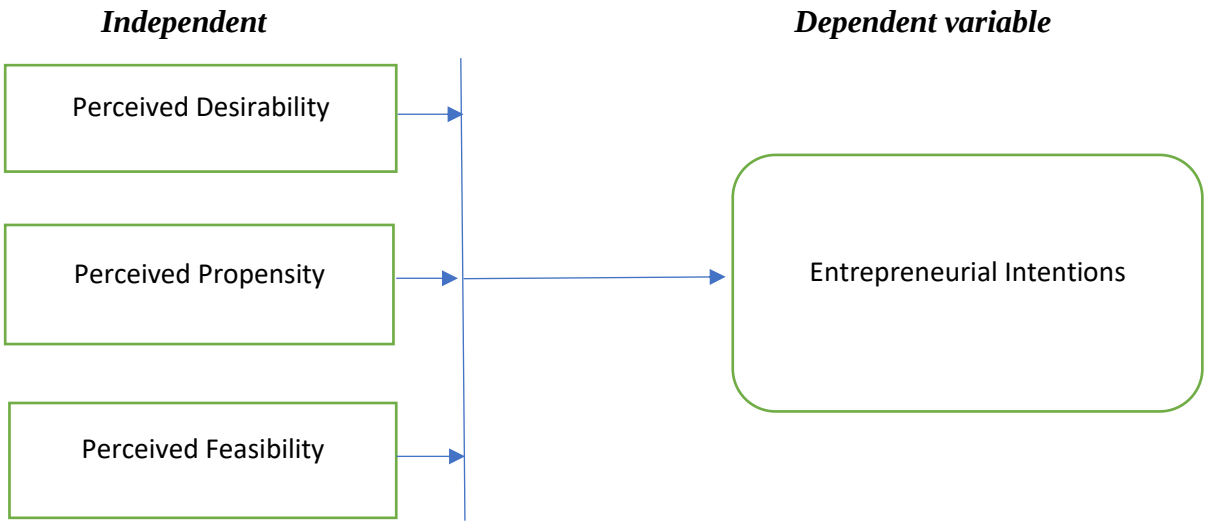


Figure 5-3: Shapero's Model of Entrepreneurship Intentions

Source: Van Auken (2006) as cited in Ndaghu, Gwems, Wajiga and Augustine (2016:20).

Davids (2017) posited that the SEE entails that for individuals to start a business venture, two conditions must be met. Mwange (2018) stated that the first condition is that the individual intending to start a business venture must see the idea as a viable one, they must have confidence in the business venture and see it as a reliable one without which they will not have the motivation. The second condition according to Davids (2017) is that, "secondly, starting a business is initiated by some type of displacing event which can take the form of neutral, negative or positive experiences". According to the SEE, for an individual to start a business, something or an event that acts as a motivating factor must happen. Mwange (2018) proposed that a negative displacement even can be in the form of a job loss or divorce and positive displacement can be in the form of receiving an inheritance or winning a lottery. The high unemployment rates prevalent in most countries worldwide more especially the developing ones (e.g. Zimbabwe, Nigeria, Mozambique, Lesotho) is a negative displacement factor that is making many graduates think entrepreneurship. Davids (2017) claimed that the displacement experienced facilitates the change in behaviour and, if an individual sees the idea of starting a new venture as a viable one, they pursue it. This is referred to as the Entrepreneurial event. According to Mwange (2018), the choice of behaviour is an interplay of factors such as trustworthiness in the behaviour and the propensity to act upon it, the absence of which results in no action. "According to the authors, the entrepreneurial event is denoted by initiative-taking, consolidation of resources, management, relative autonomy and risk-taking" (Rai, Prasad and Murthy, 2017: 1).

5.8.1 Perceived desirability

According to Shapero and Sokol's Entrepreneurial Event Model (SEE), perceived desirability influences individual's entrepreneurial intentions. Krueger (1993) as cited in Wang, Lu and Millington (2011: 36) described perceived desirability in the SEE model as "the degree to which one finds the prospects of starting a business to be attractive; in essence, it reflects one's affection toward entrepreneurship". Perceived desirability shows the extent to which an individual views starting a business as viable and it determines whether they are willing to venture into entrepreneurship or not. Krueger (1993) as cited in Wang et al. (2011) posited that these perceptions of desirability are as a result of an individual's attitudes and beliefs which are in turn influenced by several factors. Mwange (2018) stated that perceived desirability is influenced by the social environment and system the individual is subjected to, this includes family, peer groups, ethnic groups, and educational and professional contexts. Entrepreneurship education was identified as one of the factors that has a profound influence on an individual's attitudes and beliefs and therefore influences the individual's entrepreneurial intentions (Gorman, Hanlon & King, 1997). Similarly, Wilson, Marlino and Kickul (2004) noted that the desirability to venture into entrepreneurship can be positively influenced by the inspiration drawn from successful businesspeople and role models, when they share their success stories and knowledge. In cases where individuals have positive attitudes and beliefs drawn from their social settings or inspiration from their role models, they desire to engage in entrepreneurship increases which in turn increases their entrepreneurial intentions.

5.8.2 Perceived Feasibility

Krueger (1993) defined perceived feasibility as an individual's evaluation of their capacity and capability to start a business venture. This shows the extent to which an individual believes in themselves and their ability to start a business. Wang et al. (2011) stated that both perceived desirability and perceived feasibility are shaped by social and cultural environments. Shapero and Sokol (1982) posited that perceived feasibility refers to whether the individual perceives the availability of funding to start a business or people who can give him/her financial and moral support, the required skills or shared risk. According to Davids (2017: 19), "education could allow individuals to learn the skills required to start a business, when an individual has knowledge about business operation and understands entrepreneurship, this may increase entrepreneurial self-efficacy, and in turn, change his or her perceptions". It is therefore evident that the role of entrepreneurship education on entrepreneurial intentions cannot be

underestimated. Perceived feasibility in the SEE model resonates with the element of self-efficacy (Davids, 2017; Mwange, 2018; Wang et al. 2011).

5.8.3 Propensity to act

"Shapero conceptualised *propensity to act* as the personal disposition to act on one's decisions, thus reflecting volitional aspects of intentions (I will do it), It is hard to envision well informed intentions without some propensity to act", Mwange (2018: 151). Propensity to act shows how an individual is determined to act upon a certain behaviour despite external environmental influences. Shapero (1975) as cited in Davids (2017) stated that propensity to act was identified as an important attribute of entrepreneurs before perceived desirability and perceived feasibility. Mwange (2018) highlighted that propensity to act upon a behaviour is heightened by the desire to take control of a situation which can only be accomplished through action. According to Shapero (1975) as cited in Davids (2017), propensity to act can be equated to the element of internal locus of control which refers to the extent to which individuals believe they have total control of their lives and the events in their lives. Shapero and Sokol (1982) argued that "propensity to act not only has a direct effect on entrepreneurial intention, but also acts as a moderating variable between the other predictors (perceived desirability and perceived feasibility) and entrepreneurial intentions". Propensity to act therefore has a controlling effect on the entire SEE model such that if it is low, the will to engage in entrepreneurial behaviour will be low.

5.9 Evaluation of Shapero's Entrepreneurial Event Model (SEE).

Like the Theory of Reasoned Action and the Theory of Planned Behaviour, Shapero's Model of Entrepreneurial Event (SEE) also identifies an individual's intention as having a major influence on their ability and extent of engaging in a behaviour. However, whilst the Theory of Reasoned Action and the Theory of Planned Behaviour focus on explaining behaviour in general, Shapero's Model of Entrepreneurial Activity (SEE) was developed specifically for explaining entrepreneurship intention and hence it has been used in many entrepreneurship research articles (Krueger, 1993; Krueger, Reilley & Carsrud, 2000; Ang & Hong, 2000; Frank, Lueger & Korunka, 2007; Godsey & Sebora, 2010; Byabashija & Katono, 2011; Garg, Matshediso & Garg, 2011). Davids (2017) reported that like the Theory of Planned Behaviour, researchers have questioned the adequacy of the SEE model in predicting behaviour giving reference to the role of control behaviours. Researchers (Luthje & Frank, 2003; Schlaegel & Koenig, 2013; Turker & Selcuk, 2009) argued that the elements of the SEE model (perceived desirability, perceived feasibly and propensity to act) are not the only determinants of

entrepreneurial intentions and more variance can be explained in entrepreneurial intention when more variables are added to the model. According to Shapero and Sokol (1982), "external variables are also taken into account by the EEM, the predicting variables are shaped by these external variables, and thus it is not required to include additional variables within the model analysis and testing".

5.10 David McClelland's Achievement Motivation Theory

The Achievement Theory also known as the McClelland's Theory of Needs, Acquired Needs Theory or the Learned Needs Theory was developed by David McClelland in 1961 and further revisions of the theory were done in 1975 and 1985 (Royle and Hall, 2012). The McClelland Achievement Motivation theory is grounded upon Henry Murray's theory of personality which identified achievement as a major source of behavioural motivation (Osemeke & Adegboyega, 2017). Like the Theory of Reasoned Action and Theory of Planned Behaviour, McClelland's Achievement Theory was developed to explain and predict individual behaviour. Lussier and Achua (2007) posited that the Achievement Motivation Theory stipulates that an individual's behaviour can be explained and predicted by the need for achievement, power and affiliation. The theory is therefore developed on these three constructs.

5.10.1 Need for Achievement

McClelland (1961) defined the need for achievement as an individual's desire to accomplish beyond some set standards of excellence or goals. Individuals usually set their own goals or develop benchmarks of achievement and compare their achievement relative to those goals. McClelland et al. (1958) as cited in Moore, Grabsch and Rotter (2010: 25) suggested that "competition with a standard of excellence was most notable when an individual was in direct competition with someone else but that it can also be evident in the concern for how well one individual performs a task". When setting their standards of excellence, individuals usually do so using another individual/s as their point of reference, these are usually their role models or people they draw inspiration from.

5.10.2 Need for Power

McClelland (1961) as cited in Royle and Hall (2012: 26) stated that "the need for power denotes individuals' desires to be influential, this could manifest itself in attempts to make others behave, as one would like, or in a manner that they might not have otherwise". The need for power can be equated to an individual's need to have control over others and their environment. Lussier and Achua (2007) stated that individuals who seek to achieve the need for power

usually seek higher positions that are associated with authority. These individuals always want to work their selves up to gain authority and power over others. According to Osemeke and Adegboyega (2017: 169), the characteristics inherent in individuals with a high need for power are "a desire to influence and direct somebody else, a desire to exercise control over others, a concern for maintaining leader-follower relations".

5.10.3 Need for Affiliation

The need for affiliation is when individuals want to belong to a group in the society or want to have membership in a class. McClelland (1961: 160) stated that "Affiliation…establishing, maintaining, or restoring a positive affective relationship with another person, this relationship is most adequately described by the word friendship". Individuals who score high in the need for affiliation prefer working in a team as compared to individually. Individuals who prefer friendship and teamwork over competition, are ready to adhere to communicated standards of behaviour and are accountable to the actions of others are used as benchmarks of courteousness desired in organisations (McClelland, 1961).

5.11 Application of David McClelland's Achievement Motivation Theory

McClelland (1987) as cited in Mwange (2018: 144) stated that "according to its traditional definition, the need for achievement is the impetus that forces the person to struggle for success and perfection". Individuals who are driven by the desire to achieve and register some form of achievement in their name will always strive to work and achieve regardless of challenges. In entrepreneurship, individuals who are driven by the desire to own a business venture will have more entrepreneurial intentions than those not driven by the desire to own a business. Some individuals, more especially those who draw inspiration from successful entrepreneurs regard starting and owning a business as a form of achievement. These individuals will have more entrepreneurial intentions in starting a business as compared to those who do not see starting and owning a business as a form of achievement. McClelland (1961) argued that individuals with a higher level of need for achievement prefer situations in which they can demonstrate their creativity, ability to develop innovative solutions to problems and accountability. Individuals who have the desire to achieve are usually motivated by difficult tasks and unique challenges, something that is familiar with entrepreneurs. Entrepreneurs look for gaps or problems in the market and provide solutions in the form of product or service offerings. Stewart et al. (2003) as cited in Mwange (2018) posited that even though Murray identified achievement as a major source of behavioural motivation, McClelland was the first to position the achievement construct in the field of entrepreneurship. He (McClelland) suggested that the

need for achievement pushes young people to look for entrepreneurial opportunities as they believe they can find a better level of achievement and satisfaction than anywhere else (Mwange, 2018).

The other two constructs suggested by McClelland are the need for power and the need for affiliation. It is a general belief that successful people possess some form of power in the society, referent power. According to Royle and Hall (2012), individuals who score high on the need for power construct usually want to be in higher positions so that they can control the actions of others. Such individuals more often do not like working for people and choose to be their own bosses through starting and owning a business venture. They have higher entrepreneurial intentions as compared to those with lower levels of the need for power. Individuals who score high on the need for affiliation often want to be associated with a group and in society that is usually the higher class. Some people aspire to be part of a group of entrepreneurs and they can only achieve that by starting and owning business ventures. Individuals with higher levels of the need for affiliation score higher on entrepreneurial intentions as compared to those with lower levels of the need for affiliation. McClelland's Achievement Motivation Theory can therefore be used to predict entrepreneurial behaviour, individuals who score high on the need for achievement, power and affiliation might have a better potential for venturing into entrepreneurship.

5.12 Evaluation of the McClelland's Achievement Motivation Theory

McClelland's Achievement Motivation Theory has played a key role in explaining behaviour, highlighting that individuals are driven by three basic needs; achievement, power and affiliation. Similarly, the theory has been contributory in the field of entrepreneurship, McClelland identified the need for achievement as having a significant impact on entrepreneurship. Mwange (2018) stated that in a comparison of studies (Hansemark, 1998; Littunen,2000; Scott and Twomey,1988) conducted amongst entrepreneurs and non-entrepreneurs, it was concluded that the need for achievement has the greatest influence on entrepreneurship and personality as compared to other characteristics. Robbins et al. (2009) as cited in Osemeke and Adegboyega (2017) claimed that McClelland's Achievement Motivation theory is less practical as it is difficult to know in which stage an individual is high in any or all of the three needs (power, achievement and affiliation) as it happens subconsciously. Osemeke and Adegboyega (2017) reported that the entire theory only focuses on three constructs (power, achievement and affiliation) and ignores other factors such as gender, culture, religion and other factors as influencing behaviour. In addition, there is no direct

relationship between a need and behaviour, a behaviour might be as a result of different types of needs and a need might cause different types of behaviours.

5.13 Human Capital Theory by Gary Becker (1962)

The Human Capital Theory came into existence in the 20th century as a result of a quest by Mincer (1958), Schultz (1961) and Becker (1962) to understand personal income (Fix, 2018). The Human Capital Theory as the name implies, was developed to explain how the productivity of individuals can be enhanced and to trace the pattern of an individual's lifetime earnings. Kolomiiets and Petrushenko (2017) posited that an investment in people is the surest and most effective way that individuals and the society can yield economic benefits. This is a popular assertion which could be the reason why organisations through the human resource function invest in their employees, through various methods such as training and development and compensation and benefits. According to Almendarez (2010: para 5), "Human Capital Theory (HCT) concludes that investment in human capital will lead to greater economic outputs, however, the validity of the theory is sometimes hard to prove and contradictory". Bell and Stevenson 2006 as cited in the Human Resource Management in Education (2020) posited that when individuals obtain the right skills, knowledge and expertise, human capital is produced. It is within this background that the theory recognises the contribution of education (as shown in Figure 5-4) in human capital investment, which is the construct this discussion will focus on.

"Human capital theory rests on the assumption that formal education is highly instrumental and necessary to improve the productive capacity of a population, in short, human capital theorists argue that an educated population is a productive population", (Almendarez, 2010: 4). Similarly, Margison (2017) noted that the Human Capital Theory assumes that education influences productivity which has a direct bearing on salary, the more educated an individual is, the more productive they are and the more they earn. "Human capital theory assumes that individuals are motivated to increase their human capital by obtaining relevant qualifications and experience, because this will most likely increase their future earnings" (The Human Resource Management, 2020: para1).

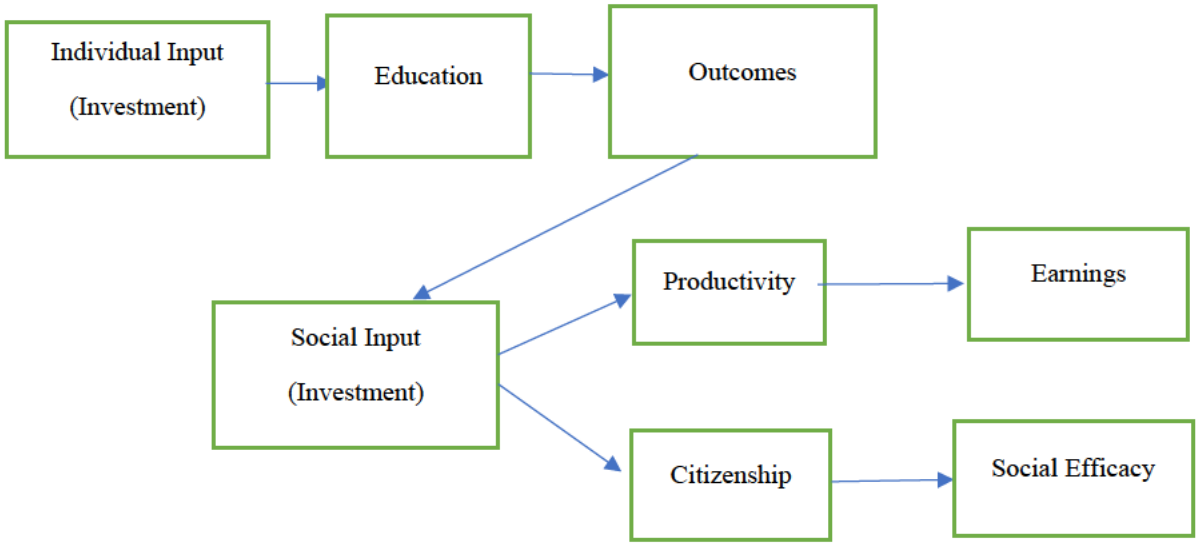


Figure 5- 4: Human Capital Theory

Source: Swanson and Holton (2001: 110).

5.14 Application of the Human Capital Theory to Entrepreneurship

Ployhart and Moliterno (2011) as cited in Martin, McNally and Kay (2013) stated that when it comes to performance, people who have the right skills, knowledge and expertise often outperform those who have little or none - which is the key assumption of the Human Capital Theory. Education has therefore been regarded as a form of individual empowerment, a strategy that can be used to yield the highest level of productivity from individuals. Human Capital Theory can be a useful tool in interpreting entrepreneurial behaviour. Individuals who receive entrepreneurship education and training can have better prospects of venturing into entrepreneurship than those who do not. Exposure to entrepreneurship education might develop an entrepreneurial mindset in students which would result in higher levels of entrepreneurial intention. Martin, McNally and Kay (2013) suggested that "common measures of human capital include level of education, work experience, upbringing by entrepreneurial parents, and other life experiences". Entrepreneurship education can therefore be a significant determinant of entrepreneurship behaviour. In support of this view, Unger et al. (2011) as cited in Martin, McNally and Kay (2013) concluded that successful entrepreneurs are usually those individuals exposed to entrepreneurship education. Martin, McNally and Kay (2013) in their analysis of entrepreneurship education and its outcomes divided entrepreneurship-related human capital assets into three broad areas which are entrepreneurial knowledge and skills, positive perceptions of entrepreneurship and intentions to start a business. The researcher is of the opinion that what should be of utmost importance in entrepreneurship education is the

structure, content and design of the curriculum. The entrepreneurship education curriculum must be designed in a way that would be effective in instilling an entrepreneurial mindset in the recipients. The Human Capital Theory supports the development of this research study which sought to understand the role played by education in the growth of the entrepreneurship field.

5.15 Evaluation of the Human Capital Theory

Like any other theory, the Human Capital Theory was criticised across literature. Almendarez (2010) stated that the Human Capital Theory emphasises the importance of education and training as measures of recognition and participation in the global economy. The Human Capital Theory played a major role in making education stand out as an important element for individual production and development, many countries today promote education and the development of their educational systems. This is supported by the Human Resource Management in Education (2020: para1) which stated that "the Human Capital Theory is an adequate driver of education policy". The theory centres on education as a driver of human capital, an educated people are a productive people. Margison (2017) stated that the major weakness of the Human Capital Theory is that it does not explain how education enhances individual productivity. This is however contrary to the conclusions drawn by some authors (Almendarez, 2010; Ployhart and Moliterno, 2011; The Human Resource Management, 2020) who suggested that when an individual attains the relevant qualifications, knowledge and expertise they increase their chances of performing well in their area of study.

Fix (2018) stated that the Human Capital Theory is based on insufficient assumptions and concluded that education is a poor determinant of income. He went on to say that other factors and skills could provide a better explanation of income distribution therefore the Human Capital Theory should not be seen as the central theory of explaining income distribution (Fix, 2018). It is seen in today's economies that some people who are educated are leaving or earning less than the less educated; factors such as work experience, availability of opportunities and recognition play a huge role in determining one's salary. According to the Human Resource Management in Education (2020: para2), "it is hard to predict what knowledge and skills might be needed in 30- or 40-years' time, meaning that today's school-leavers can never be fully prepared for tomorrow's jobs". This is a short-sighted conclusion to some extent as individuals are always enrolling for new courses and qualifications due to their career demands.

5.16 Application of the Theory of Planned Behaviour to the current research.

The Theory of Planned Behaviour was identified as the one that supports the development of this research study. The study sought to investigate the role played by entrepreneurship education in the development of entrepreneurial intentions of UKZN and DUT students. As has already been discussed, the Theory of Planned Behaviour was developed to predict and explain behaviour and it recognises intention as a strong determinant of behaviour. Entrepreneurial intention is a prerequisite to entrepreneurial behaviour, based on the Theory of Planned Behaviour. This would mean that entrepreneurial intention is the best predictor of entrepreneurship behaviour. Ajzen (1991) noted that intention is influenced by three constructs; attitude, subjective norms and perceived behavioural control which are in turn influenced by a set of beliefs. These factors, attitude, subjective norms and perceived behavioural control determine the level of an individual's intentions towards behaviour.

An individual's attitude towards entrepreneurship, positive or negative, influences their level of intention to engage in entrepreneurship behaviour. A positive attitude towards entrepreneurship is accompanied by a positive evaluation of the outcomes of entrepreneurship which results in the individual pursuing entrepreneurship. A negative attitude on the other hand discourages entrepreneurship behaviour as the individual sees no value in engaging in entrepreneurship. Subjective norms refer to how people perceive support from their social settings, how their family, friends, colleagues and those around them support a certain behaviour. An individual who perceives positive support from those around them on their entrepreneurial activities have better intentions to venture into entrepreneurship as compared to those who do not. Similarly, a student who perceives positive support and guidance from their lecturer or career coach might record a better level of entrepreneurial intention which activates their desire to venture into entrepreneurship.

Perceived behaviour control refers to an individual's perception of the availability of factors that have a controlling effect on their behaviour. These factors develop an individual's perception on the execution of the behaviour, how difficult or easy it seems. When individuals think about venturing into entrepreneurship, they take into consideration factors such as the availability of funding and opportunities, whether they have the relevant skills and expertise and experiences of family and friends amongst other things. If an individual thinks they have the relevant knowledge and necessary entrepreneurial skills, they are more likely to take up entrepreneurship as compared to when they think of themselves not suitably qualified and

skilled. This is the reason why the researcher postulates that entrepreneurship education plays an eminent role in developing entrepreneurial activities. Similarly, the availability of funding and opportunities intensifies an individual's intention to be entrepreneurially active.

Figure 5-5 presents a theoretical model developed by Ajzen (2019). The model shows factors that can influence the three constructs that Ajzen (1985) identified as having an impact on behavioural intentions; attitude towards the behaviour, social norms and perceived behavioural control. As can be seen from Figure 5-5, education is amongst the factors that can influence an individual's attitude, social norms and perceived behavioural control which will in turn influence their level of entrepreneurial intentions. This research sought to investigate the impact of entrepreneurship education on the entrepreneurial intentions of UKZN and DUT students. In this research it is expected that there is a positive and significant relationship between entrepreneurship education and entrepreneurial intentions of university students. The researcher assumes that entrepreneurship education develops in individuals/students a positive attitude towards entrepreneurship and gives them the confidence that they have the necessary knowledge and skills needed to become successful entrepreneurs. Once an individual feels they have the relevant subject knowledge and skills, their intentions to engage in the behaviour are enhanced and they feel motivated to start. Furthermore, the model shows age, gender, knowledge and media intervention as factors that influence the three constructs of the Theory of Planned Behaviour, the influence of these factors was also investigated in this current study.

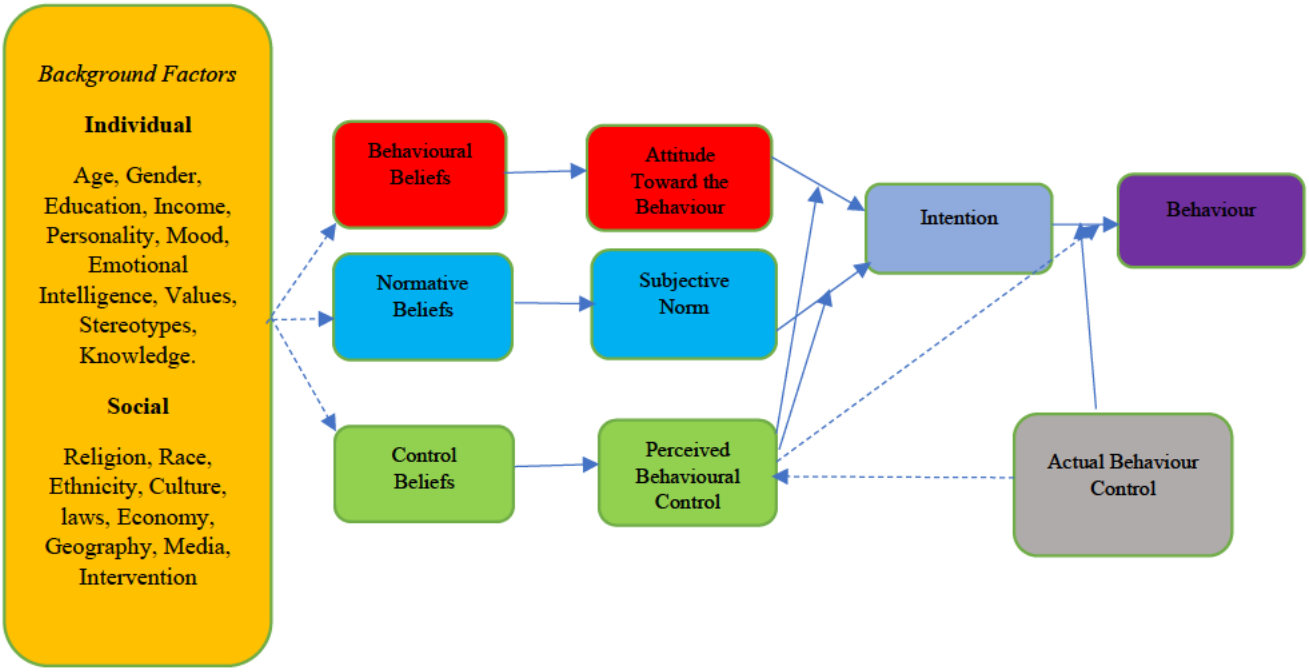


Figure 5-5: Theory of Planned Behaviour with Background Factors

Source: Ajzen (2019)

As has been discussed in this section, the Theory of Planned behaviour identifies individual factors (attitudes towards behaviour, subjective norms, perceived behavioural control) that influence people's intention to perform the desired behaviour. Furthermore, the theory can be used to investigate the ability or usefulness of various behaviour change interventions, as shown in Figure 5-1. These interventions are believed to have the potential to influence behavioural, normative and control beliefs. Due to the usefulness and widespread use of the Theory of Planned Behaviour to predict behaviour, it was used in this study to predict students' intentions to engage in entrepreneurial activities. The constructs of the Theory of Planned Behaviour (attitude toward the behaviour, subject norm, perceived behavioural control) were all used to predict students' entrepreneurial intentions and the questionnaire was used to measure these constructs.

Entrepreneurship education and entrepreneurship intention are the two main constructs in this current study. Figure 5.1 recognises education as one of the interventions that could potentially motivate behaviour as it could influence the behavioural, normative or control beliefs. The current study recognised entrepreneurship education as a variable that could potentially have a positive influence on students' entrepreneurial intentions, which would in turn influence

entrepreneurial behaviour which is the desired behaviour in the case of this study. The current study therefore sought to investigate the impact of entrepreneurship education on students' entrepreneurial intentions, forming the main objective of the study.

Furthermore, Figure 5.1 recognises age, gender, knowledge, media intervention and race as interventions that could potentially motivate the desired behaviour. The current study sought to investigate the influence of age, gender, race, level of study and head parents' occupation on entrepreneurial intentions and show if any significant differences exist on students' entrepreneurial intentions based on these variables. These interventions were thought to have the potential to motivate students' entrepreneurial behaviour. Additionally, the study sought to determine whether students' awareness of government or private bodies and programmes that support entrepreneurship, attendance of extra-curricular entrepreneurship programmes and ability to read or listen to entrepreneurship information would potentially influence their entrepreneurial intentions. The study also sought to investigate the impact of the degree of study and academic majors on students' entrepreneurial intentions. All these hypotheses were developed based on the assumptions of the Theory of the Planned Behaviour which recognises interventions that can potentially influence people's intentions and ultimately behaviour. The research questions and hypotheses sought to investigate the ability of the various behavioural change interventions and constructs identified by the Theory of Planned Behaviour to motivate students' entrepreneurial behaviour.

5.17 Summary

This chapter reviewed theories and models that help explain entrepreneurship behaviour. The discussion centred on the following theories; McClelland's Achievement Motivation Theory (1961); Human Capital Theory (1962); Theory of Reasoned Action (1980); Shapero's Model of Entrepreneurial Event (1982) and the Theory of Planned Behaviour (1987). The Theory of Planned Behaviour, which is an extension of the Theory of Reasoned Action was identified as supporting the development of this research study and a theoretical model adapted from Ajzen (2019) was presented. The Theory of Planned Behaviour was mainly developed to predict and explain behaviour. According to Ajzen (1985), central to the Theory of Planned Behaviour is intention, the best determinant on behaviour. An individual's level of intention determines their willingness to engage in a specific behaviour. Intention is in turn influenced by attitude towards the behaviour, subjective norms and perceived behavioural control. Several factors influence these three constructs and amongst them is education, a key variable under investigation in this

current study. The study therefore identified the Theory of Planned Behaviour as providing a better insight into explaining entrepreneurial behaviour.

The following chapter outlines in detail how primary research for this study was conducted. The following topics amongst others will be covered; research design, target population, sample selection, research instrument and data analysis procedures.

CHAPTER SIX

RESEARCH METHODOLOGY

6.1 Introduction

The previous chapter reviewed theories that help delineate the context of this study and discussed the one that lends support to the study. The chapter discussed the McClelland's Achievement Motivation Theory (1961); Human Capital Theory (1962); Theory of Reasoned Action (1980); Shapero's Model of Entrepreneurial Event (1982) and the Theory of Planned Behaviour (1987) as theories relevant in this research study. The chapter further discussed the Theory of Planned Behaviour as the one that helps develop and shape this study. The theory identifies intention as the greatest contributor of behaviour, whilst, subjective norms, attitude to behaviour and perceived behavioural control are factors that influence intention. The main research question for this study is: What is the impact of entrepreneurship education offered at UKZN and DUT on the entrepreneurial intentions of students?

This chapter discusses the research design that was employed to answer the research questions and achieve the objectives of the study. The chapter opens with a discussion on the research philosophy and paradigm that informs this study. It discusses the quantitative research approach and the survey research strategy which were implemented to collect data from the study participants. In addition, the study population and sampling methods are discussed showing how the respondents were chosen. The chapter closes with a discussion on data analysis and the steps taken to ensure that research ethics and standards were followed in conducting the study.

6.2 Research Design

Sekaran and Bougie (2016: 95) defined research design as "a blueprint or plan for the collection, measurement and analysis of data created to answer your research questions". The research design explains the practical aspect of the research, how the actual research was conducted from the field to the analysis of data. The research design is an important element of a study as it explains the different steps that were taken by the researcher in collecting data from the study participants to analysing it and answering the research questions. Odoh and Chinedum (2014: 17) went on to say that a research design provides answers to the following key questions; "How was the data collected or generated? How was it analysed? In other words, it shows the reader how the results were obtained and why?" The research design therefore is a discussion of data collection and analysis methods, research instruments used to collect data,

the population and sample of study, the study site and the research approaches. Figure 6-1 illustrates the key components of the research design. The Research Onion which was developed by Saunders, Lewis and Thornhill (2009) shows the key issues that must be considered when choosing data collection and analysis methods, a decision that lies at the centre of the Research Onion. Saunders, Lewis and Thornhill (2009) posited that when choosing the data collection and analysis methods, researchers need to identify the steps taken and thereby explaining the important outer layers of the onion. The different layers of the Research Onion will be discussed in this chapter to show how the researcher selected the data collection and analysis methods and developed knowledge for this study.

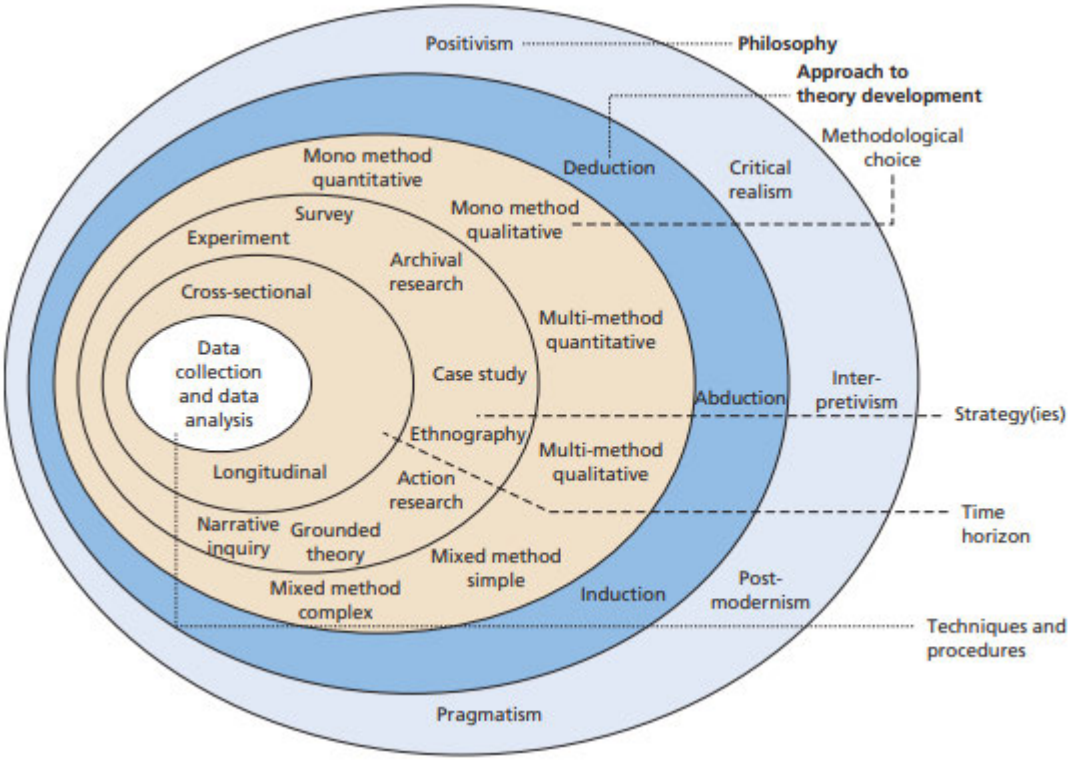


Figure 6-1: The research Onion

Source: Saunders et al. (2009: 108).

Sekaran and Bougie (2016) stated that each section covered in the research design has different options and there is not one that provides the best fit in all research circumstances. A researcher therefore chooses the options that are applicable and suitable to answering their research questions. "The quality of a research design depends on how carefully you choose the appropriate design alternatives, taking into consideration the specific objectives, research questions, and constraints of the project, such as access to data, time, and/or money" (Sekaran

and Bougie, 2016: 96). The sections that follow discuss the key components of the research design chosen by the researcher to answer the following research questions and test the hypothesis:

Research Questions

1. What is the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students?

2. What are the entrepreneurship intentions of UKZN and DUT students?

3. Are there any significant differences in UKZN and DUT students' entrepreneurial intentions based on demographic factors (head parent's occupation, level of study, age, race).

4. What role can entrepreneurship education play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence UKZN and DUT students' entrepreneurial intentions?

5. What recommendations can be made to the entrepreneurship curriculum developers at UKZN and DUT based on students' perceptions on entrepreneurship education?

Hypothesis

H_a1: There is a positive significant relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

H_a2: There are significant differences in entrepreneurship intentions of UKZN and DUT students.

H_a3: There exist significant differences in UKZN and DUT students' entrepreneurship intentions based on gender.

H_a4: UKZN and DUT students with a higher level of perceived behavioural control are highly likely to engage in entrepreneurial activities.

H_a5: UKZN and DUT students who read/listen or look up for information about entrepreneurs and entrepreneurship have higher levels of entrepreneurship intentions than those who do not.

H_a6: UKZN and DUT students who attend extracurricular entrepreneurship programs (workshops, conferences, seminars) offered on campus will have higher levels of entrepreneurship intentions than those who do not.

H_a7: Entrepreneurship education has a significant impact on UKZN and DUT students' entrepreneurship intentions compared to their attitude towards entrepreneurship and subjective norms.

H_a8: UKZN and DUT students' academic majors have a significant influence on their entrepreneurship intentions.

H_a9: UKZN and DUT students' awareness of government bodies/programs or private organisations that support entrepreneurial or small business development is positively correlated to their entrepreneurship intentions.

H_a10: There is a significant positive correlation between the degree UKZN and DUT students are registered for and their entrepreneurship intentions.

6.3 Research Philosophy

According to Saunders et al. (2009: 124), research philosophy is defined as "a system of beliefs and assumptions about the development of knowledge. Although this sounds rather profound, it is precisely what you are doing when embarking on research: developing knowledge in a particular field". A research philosophy determines the researcher's position in the study and how they approach knowledge development. Dudovskiy (2018) stated that a research philosophy shapes the development of knowledge as well as determining its source. There are several philosophies that researchers can use depending on their purpose and nature of enquiry. Pragmatism, positivism, critical realism, postmodernism and interpretivism are the major research philosophies open to researchers. Of importance is the distinction between the positivism and the interpretivism which are the major and frequently used research philosophies. The major difference between the two philosophies is that in the positivism approach the researcher takes an objective and independent approach whilst the researcher's involvement and subjective interpretation is key in the interpretivism approach.

This study adopted the Positivist research philosophy. According to Žukauskas, Vveinhardt and Andriukaitienė (2018: 123), the positivist research philosophy "claims that the social world can be understood in an objective way, in this research philosophy, the scientist is an objective analyst and, on the basis of it, dissociates himself from personal values and works independently". The positivist philosophy implies that the researcher assumes an unbiased and neutral position in the process of developing new knowledge. Analysis of the results of the study occurs in an objective as compared to a subjective manner which is the main characteristic of the Interpretivist philosophy. Saunders et al. (2009) posited that the positivist

philosophy emphasises the collection of accurate data and the generation of knowledge free from the influence or interpretation of the researcher. The positivist philosophy is common with quantitative studies and large samples. This was supported by Thakurta and Chetty (2015) who stated that data collected using the positivist philosophy is quantitative in nature and analysed using statistical methods. The positivist philosophy is common with a structured methodology that provides the researcher with a step-by-step approach in conducting the study. Saunders et al. (2009) further stated that positivist researchers use existing theory to develop and test hypothesis leading to the generation of new knowledge. Because the positivist approach implies an objective position of the researcher, hypothesis developed is tested against existing theory and the results are further used to develop theories. Saunders et al. (2019) stated that positivist researchers usually seek to generalise the results of their study to populations represented by large samples.

Drawing from the work of Saunders et al. (2009), the research philosophy forms the outer layer of the Research Onion. Dudovskiy (2018) stated that the Research Philosophy is one of the key topics to be discussed first in research methodology as it determines how data must be collected, analysed and used in the research. The research philosophy is therefore important as it determines the research approach, research strategy and the data collection and analyses methods. The researcher chose the Positivist philosophy as the current study takes the quantitative research approach. This philosophy enabled the researcher to calculate a sample of 278 students that would enable the results to be generalised to the entire population of UKZN and DUT students. The positivist philosophy allowed the researcher to collect large amounts of data with a questionnaire following a structured research methodology. In addition, the positivist philosophy enabled the researcher to develop research objectives and hypotheses from an existing theory, the Theory of Planned Behaviour, which was tested, and results generalised to the entire population of students. The researcher assumed a neutral position during data collection using a structured questionnaire, all study participants received the same set of questions which were predetermined, and quantitative data was collected. This is different from using interviews which would result in researcher interreference due to the responses from study participants. Data analysis was conducted using a statistical programme, Statistical Package for the Social Sciences (SPSS). Saunders et al. (2009) stated that critics of the positivist philosophy claim that it is impossible to separate researchers from their study as they decide on the study topics, research objectives and type of data collected therefore a true positivist approach does not exist.

6.4 Research Approach

Creswell (2014: 31) defined research approaches as "plans and the procedures for research that span the steps from broad assumptions to detailed methods of data collection, analysis, and interpretation". The selection of a research approach is crucial in a study as it determines the data collection and analysis methods to be used, the type of data collected and how the results of the study will be interpreted. Various authors (Marczyk, DeMatteo & Festinger, 2005; Muijs, 2011; Singh, 2007; Stockemer, 2019) identified two major research approaches, that is quantitative and qualitative research. Creswell (2014) identified an additional approach and concluded that there are three major research approaches; quantitative, qualitative and mixed methods research approaches. All these research approaches identify suitable research instruments which facilitate the collection of desired data and data collection and analysis methods which in turn facilitate the production of desired results. This study adopted the quantitative research approach.

6.4.1 Quantitative Research Approach

According to Aliaga and Gunderson (2002) quantitative research is when data in the form of numbers is collected to solve and explain problems and it is analysed statistically. Similarly, Marczyk et al. (2005) stated that the key characteristic of quantitative studies is the analysis of data using statistical methods. Quantitative studies emphasise the collection of data in the form of numbers. According to Choy (2014), in quantitative studies, data is collected from a randomly selected sample using standardised questionnaires. Questionnaires facilitate the collection of numerical data in quantitative research, they usually consist of Likert Scales used to measure respondents' opinions and perceptions to given topics. Stockemer (2019) suggested that quantitative studies are usually identified by their large number of observations, hundreds, thousands or hundreds of thousands of observations which differentiates it from qualitative. Standardised questionnaires enable data to be collected from several research participants as the researcher does not need to take the participants through the entire process, respondents can be left to complete the questionnaire on their own. Singh (2007: 63) stated that the primary focus of quantitative research is to examine the relationship between variables, independent and dependant. This was supported by Creswell (2014) who reported that quantitative research studies were designed to test objective theories through the examination of the association between variables. Quantitative studies are grounded upon theories which are then used to examine the association between variables.

The researcher chose the quantitative research study to facilitate the investigation of the relationship between entrepreneurship education and students' entrepreneurial intentions. Stockemer (2019) stated that by collecting data in the form of numbers, quantitative research studies do not only enable researchers to measure phenomena under study but also allow the investigation of the relationship between variables. This study is grounded upon the Theory of Planned Behaviour and it sought to establish the relationship between variables identified in this theory which include education and intention. In addition, the researcher chose the quantitative research approach so that many observations could be used, the study used a sample (278), randomly drawn from the UKZN and DUT. Universities enrol many students and each course usually has a lot of registered students therefore a meaningful sample would be needed to represent the total population of students. The quantitative research approach enabled the researcher to collect data from a representative sample that generated results that could be generalised to the entire population of students. Polit and Beck (2010: 1451) stated that the concept of generalization is popular with quantitative as compared to qualitative studies and it is considered a quality determinant. If the researcher had used qualitative research, a smaller and non-random sample would have been used which would be impossible to generalize the results to the population of students. The researcher collected numerical data using a standardised questionnaire and data was analysed using a statistical method (SPSS). The standardised questionnaire enabled data to be collected based on the same set of questions so that comparisons would be made on results from the different respondents.

6.4.2 Strengths and weaknesses of quantitative research

The quantitative research approach has both strengths and weaknesses discussed across literature. Table 6-1 shows the strengths and weaknesses of the quantitative research approach. The major strength of a quantitative research approach is the issue of generalization, results from a selected sample can be generalized to the entire population which is more especially important for studies with huge target population sizes such as this current study. "Because the samples are generally large and considered representative of the population, the results are taken as if they constituted a general and sufficiently comprehensive view of the entire population" (Martin & Bridgmon, 2012: 370). In contrast, qualitative research studies use smaller samples which are not representative of the population under study therefore it would be difficult to infer the research results to the rest of the population.

Strengths	Weaknesses
Generalisation of sample results to the entire population of units identified for the study.	Sacrifices potentially useful information through process of aggregation.
Study results can be compared with other population groups.	Sacrifices potentially useful data by placing households or events in discrete categories.
Results can be broken down by socio-economic groups for comparisons.	Neglects intra-household processes and outcomes.
Data is tested for reliability. Reliability of data and findings is essential to inform policy.	Difficulties in accessing some individuals and households thereby failing to provide some useful information.
Results and findings can be verified as questionnaires are often published.	Sometimes data is collected but never used.
Data can be analysed by more than one data analysist.	
Most survey research are professionally and ethically conducted according to standards of good research.	

Table 6-1: Quantitative research methodology strengths and weaknesses

Source: Hulme (2007: 13).

Hulme (2007) stated that another major strength of the quantitative research approach is that researchers can compare different population groups based on the research results. This applies to this study as the researcher sought to compare the perceptions towards entrepreneurship education of students from UKZN and DUT and those taking entrepreneurship as a major and those who were not. Making comparisons between different groups is important to provide recommendations and keep track of trends if future research is conducted. Hulme (2007) suggested that quantitative research studies do not produce detailed results, and this limits the understanding of some issues. Quantitative research studies involve the collection of objective information as compared to qualitative research studies which allows the researcher to be immersed in the study and conduct an in-depth analysis applying their subjective views. A quantitative researcher can only explain as far as the results of the study can explain. This is a limitation to this current study; the researcher can only explain the results obtained from the statistical analysis of the data obtained. If a qualitative research approach had been used, the researcher would have been able to interact with the studies and find out more about their

perceptions towards entrepreneurship education and their intentions towards entrepreneurship. The information provided by respondents in a quantitative study is limited to the extent of the questions asked on the questionnaire, which results in some topics being under reported.

6.5 Research Strategy

Sekaran and Bougie (2016) defined research strategy as a plan used by researchers to answer their research questions. There are several options that researchers can choose from which include; experiments, survey research, observations, case studies, grounded theory, action research, ethnography and mixed methods. According to Sekaran and Bougie (2016), the choice of a research strategy is largely dependent on the research questions and objectives, time constraints and access to data.

6.5.1 Survey research

This study adopted the Survey Research Strategy which is the most popular in quantitative research studies. Folwer (2013) as cited in Terrell (2016) suggested that survey research designs are primarily concerned with the collection of statistical data in order to examine the current position of a population. In addition, Vanderstoep and Johnston (2009) suggested that survey research involves the collection of data from a relatively large group of people selected from the total population and the collected data can be used to describe the characteristics of the sample such as attitudes and behaviours. What can be gathered from the perspectives of the authors above is that survey research can be used when a researcher wants to collect data from a large group of people which will be used to provide answers to the topic of interest. Muijs (2011) went on to say that most survey research designs are characterised by data collection using a questionnaire comprised of a variety of questions which can be distributed to respondents through various methods such as face to face, telephonically, mailing and online which results in a greater degree of flexibility in administering them. Sekaran and Bougie (2016) suggested that survey research is usually used when conducting exploratory or descriptive studies to gather data about situations or people.

This study adopted the survey research design which enabled the researcher to collect data from a large sample of students selected from the UKZN and DUT. Numeric data to answer the research questions was collected with questionnaires and the results were generalized to the entire population of students in tertiary institutions. In addition, the survey research design enabled the researcher to collect data based on several statements using a questionnaire. The questionnaire gathered students' opinions on entrepreneurship education, their entrepreneurial

intentions, attitudes towards entrepreneurship and the influence of subjective norms on their decisions to venture into entrepreneurship to understand their entrepreneurial behaviour. The researcher was able to collect quantitative data using the survey research method which is one of its basic characteristics as suggested by Hammersley and Gomm (2000) as cited in Thomas (2011). In addition, the researcher was able to investigate the relationship between variables, entrepreneurship education and the students' entrepreneurial intentions, as Muijs (2011) suggested that survey studies are best used in investigating the relationships amongst variables.

Muijs (2011) stated that the greatest advantage of the survey research method is its flexibility, data can be collected telephonically, face to face, by postal or email using questionnaires. This flexibility is more especially important in times of uncertainty like during the Covid-19 pandemic when it is difficult for researchers to conduct field research. Survey research would be possible, however, through the electronic distribution of questionnaires. Survey research method can be regarded as the easiest and quickest form of research as it enables the researcher to collect data from many participants, data can be collected on several aspects. This is one of the reasons why the researcher chose the survey research strategy, data on several aspects regarding entrepreneurship education and entrepreneurial intentions was collected from a large sample of students using a questionnaire.

The survey research strategy enables researchers to reduce costs, data collection can be done without the help of fieldworkers as questionnaire administration can be done by participants themselves. Self-administered questionnaires have much less researcher involvement than interviews or focus groups. Vanderstoep and Johnston (2009) posited that self-administered questionnaires allow respondents to report about their own attitudes and behaviour regarding any social issue whilst researchers gather data and saving on money and time. Survey research enables researchers to collect large amounts of data in one goal. Muijs (2011) stated that survey research uses structured or semi-structured questionnaires which consist of the same questions, this enables researchers to make comparisons between groups of participants. Terrell (2016) posited that using survey research allows researchers to collect qualitative data: a section where respondents can provide their opinions or comments on their quantitative data can be included on the questionnaire thereby providing some flexibility in the form of data collected. In this study, the researcher was able to collect students' additional comments and opinions on entrepreneurship education offered in their universities.

The major disadvantage of the survey strategy as identified by Queirós et al. (2017) is that participants' emotions when responding to the questions cannot be accounted for therefore researchers cannot tell their feelings towards the topic. In the case of this study, it is difficult to tell how students felt about this topic of entrepreneurship. A different survey strategy would have captured students' feelings towards the subject which is important in drawing conclusions to the study and providing recommendations.

6.5.2 Cross-sectional survey

Stockemer (2019) noted that survey research designs are not all the same and distinguished between two main types; the cross-sectional survey and the longitudinal survey. This study adopted the cross-sectional survey design. Cross-sectional surveys are used for those studies which collect data once and no repetition of the survey is conducted (Stockemer, 2019). Behnke, Baur and Behnke (2006) stated that researchers using cross-sectional surveys can collect, analyse data and draw conclusions to the hypothesis tested or report on the relationships between variables. Cross-sectional surveys are different from longitudinal surveys which are conducted repeatedly over a period of time. Sekaran and Bougie (2016) stated that cross-sectional surveys collect adequate data to answer the research questions which is the main purpose of studies adopting such a design.

The researcher chose the cross-sectional survey because the study sought to report on the present state of the relationship between entrepreneurship education and students' entrepreneurial intentions. The study had to be completed within a defined period of time and answers to the research questions provided after the completion of the study. The use of the longitudinal survey was therefore not possible because follow up studies would have been required to track the changes in the variables over time, meanwhile the researcher wanted to provide answers to the research questions identified in the study. Even though it would be significant to track changes in the entrepreneurship education and intentions of university students as the curriculum is adjusted and new policies introduced, conducting follow up studies would be costly as compared to a cross-sectional survey which is cheaper in terms of financial resources mostly. The cross-sectional survey enabled the researcher to conduct the study faster. De Vaus (2001) suggested that the main disadvantage of the cross-sectional survey design is that they cannot explain causality, researchers cannot track and explain the changes in one variable that would be caused by changes in another because data is collected only once.

6.6 Study Site

Study site refers to the place where the researcher conducts the actual research study, that is the geographic location. This study was conducted in two public universities in Durban, in the KwaZulu-Natal (KZN) province of South Africa. Higher education institutions and universities are considered the major platforms for shaping the relevant skills and expertise needed for economic growth and development. In the case of this study, they are considered as suitable platforms for imparting an entrepreneurial culture and mindset among students hence they were identified as good data sources. The KZN province has four public universities: Mangosuthu University of Technology, University of Zululand, UKZN and DUT. The researcher chose UKZN and DUT because both institutions offer entrepreneurship courses at an undergraduate level which is the focus area of the current study. In addition, they were chosen because of their location, the two universities are located at the heart of Durban and not far from each other.

6.7 Target Population and Sampling

This section identifies and describes the target population used for the purpose of this research. The section also describes the sampling technique and method used to select the study's sample. The section concludes with a description of the sample used for data collection.

6.7.1 Target Population

Marczyk et al. (2005) posited that a target population is the specific units, individuals or variables that are of interest to the researcher. The target population refers to the elements or units that the researcher had in mind when developing the research study and the research questions: this is the researcher's source of data. Singh (2007: 88) stated that "a population is a group of individuals, objects, or items from among which samples are taken for measurement". When researchers are planning the data collection process, they would have decided on their target population, their characteristics and ability to give the required information. This is supported by Muijs (2011) who stated that whilst researchers are deciding on the type of information they need, they need to have a clear description of their target population so that they can see if they will get the information they are looking for. The target population for this study was undergraduate students registered for entrepreneurship courses at UKZN and DUT. The researcher sought to assess the entrepreneurship education offered in the two institutions, therefore students registered for and studying these courses were the ideal source of information on the subject. Three undergraduate entrepreneurship courses were identified: Introduction to entrepreneurship offered to students in both universities and

Entrepreneurial Skills offered to DUT undergraduate students. The registered students were recipients of and exposed to the formal entrepreneurship education offered in the universities therefore they were the best source of information. Creswell (2014) stated that in quantitative research, the target population must be defined, the size clearly stated and how it was chosen. Stating the population size helps researchers to select a sample that represents the target population. The population size for this research was approximately 1 000 students.

Stockemer (2019) stated that it is often impossible for researchers to study the entire population usually because of large sizes. Conducting a study on the entire population would require many resources of money, time and field workers. In the case of this study, it was not possible for the researcher to conduct the study on all students registered for entrepreneurship courses at UKZN and DUT. Muijs (2011) stated that researchers must be explicit when it comes to their target populations as this determines their sample. Researchers select a sample of units from the target population, and this is achieved through sampling.

6.7.2 Sampling Method

As with many target populations, it is seldom that researchers use the entire population of elements in their studies therefore they select a sample to represent the population. Sampling refers to the process of selecting a portion of the target population to include in the study and for data collection purposes. Singh (2007: 89) gave a comprehensive definition of sampling: "sampling is defined as the process of the selection of sampling units from the population to estimate population parameters in such a way that the sample truly represents the population". The sample characteristics are believed to resemble those of the population hence it is said to represent the population. Similarly, Kumar (2011) stated that sampling is when a few elements (sample) are chosen to draw information on the bigger group (population). Singh (2007) stated that the main reasons why researchers conduct sampling is due to financial and time challenges, using a small group of elements is cost effective and saves time as compared to working with the entire population which is often large. Figure 6-2 shows the sampling process as suggested by Taherdoost (2016).

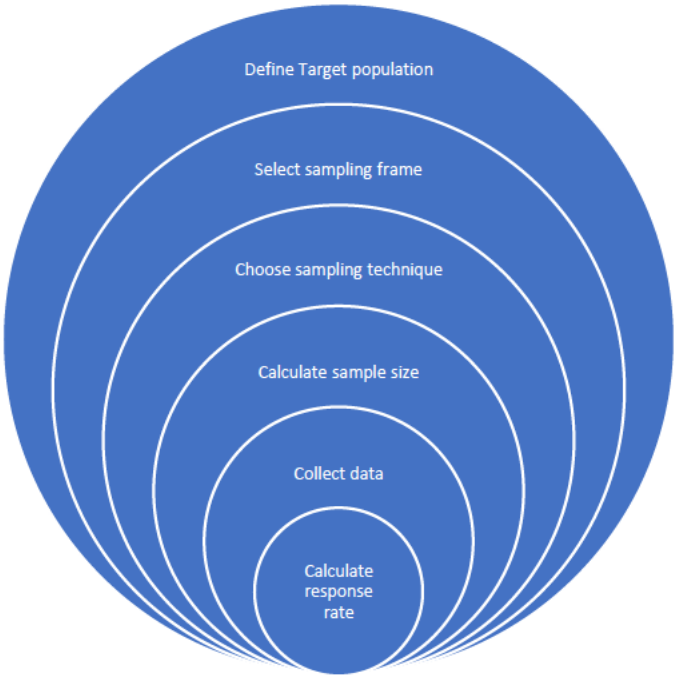


Figure 6-2: Steps in the sampling process

Source: Taherdoost (2016: 19).

According to the sampling process presented by Taherdoost (2016) in Figure 6-2, researchers must have a well-defined target population and sampling frame for the sampling process to be efficient. In addition, researchers must choose a technique that they will use to select units from the larger population of interest. Defining the sample size is similarly an important step as shown in Figure 6-2, defining the sample size also requires a well-defined population size.

The sampling approach used depends on the type of research study, researchers do not just choose to use any sampling method. When designing the study, researchers think about their research approach, population of interest and its size, sample characteristics and size and this determines the sampling approach to be used. Taherdoost (2016) purported that there are two major sampling techniques available to researchers as shown in Figure 6-3, probability and non-probability sampling. It is within these categories that researchers choose sampling methods that best suit their research at hand.

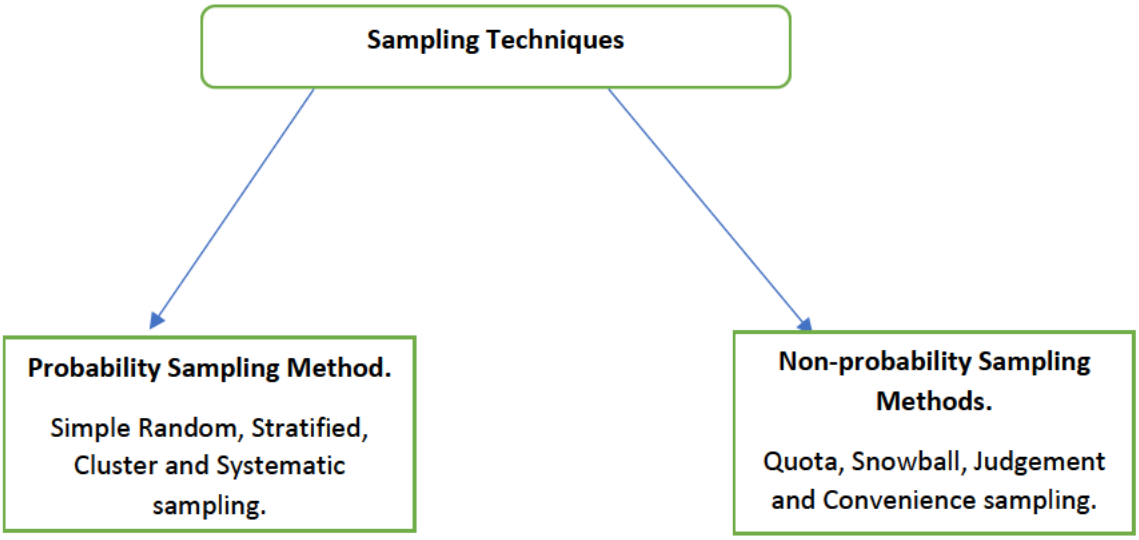


Figure 6-3: Sampling approaches and methods

Source: Taherdoost (2016: 19).

Muijs (2011) purported that generalisation is one of the core characteristics of quantitative research studies and for that to be possible an unbiased sample is required. Similarly, Stockemer (2019) reported that quantitative research studies must use a representative sample, with units that have the same characteristics as the population. The selection of a quantitative sample must be objective and free from the researcher's subjective feelings. The sample must not be skewed to one group over another, hence the researcher's subjectivity is not required. Muijs (2011) stated that an unbiased sample can be achieved using a probability sampling technique as compared to non-probability. Singh (2007: 90) posited that "often researchers do not know about the population characteristic and in the end, it becomes very difficult to accurately ascertain whether a sample was representative of the entire population, this is where the theory of probability comes to the rescue". Probability sampling techniques do not discriminate or favour a certain group of units, each unit is given equal consideration therefore it is assumed every unit was equally represented. This study used the probability sampling approach which observes the principles of randomization and probability. The researcher adopted a quantitative research approach which would enable the generalization of research results therefore wanted to create a sample that would represent the population of students.

Table 6-2 shows the four main probability sampling methods; Simple random, Stratified, Systematic and Cluster sampling. Muijs (2011) stated that the simple random method is the most popular and frequently used of the probability sampling technique. According to Table

6-2, a simple random method requires a list of all units in the population of interest then a sample is selected through randomization. The questionnaire was shared on the UKZN Moodle platform for the Introduction to entrepreneurship course to where registered students only had access. The questionnaire was also shared through the WhatsApp group platforms of both UKZN and DUT undergraduate entrepreneurship students. The simple random sampling method was employed to choose a sample of 278 students. UKZN and DUT had approximately 1 000 students registered for entrepreneurship courses at the time of study. The researcher then had access to the 278 students who formed the sample for this study.

Type of Sample	Technique
Cluster	Cluster units are randomly selected from a defined sampling frame for large cluster units. Units are further randomly selected from defined sampling frames of individual clusters.
Simple random	Units are randomly selected from a defined sampling frame.
Stratified	Units are randomly selected from a defined sampling frame for each of the different identified categories, then combine the different samples.
Systematic	A sampling interval is calculated. The researcher randomly chooses a starting point in the sampling frame and includes every 1/k unit in the sample.

Table 6-2: Probability sampling methods

Source: Taherdoost (2016: 21).

6.7.3 Sample Size

According to Singh (2007: 88), "a sample can be defined as a finite part of a statistical population whose properties are used to make estimates about the population as a whole". A sample is a group of units drawn from the target population. A sample is therefore smaller than the target population and it is used to represent the entire population. Figure 6-4 illustrates the difference between a population and a sample, a sample is a portion of the entire population. Muijs (2011) stated that the sample is the group you want to interact with and collect data whilst the population is the one you want to generalize your findings to. Muijs (2011) however pointed out that it is not always when researchers must conduct the study using a sample, sometimes they can use the entire population given the size is smaller or they can manage to. If the financial, time and personnel resources are available, researchers can collect data from the whole target population which was not the case in this study. The target population for this

study was big (approximately 1 000 students) therefore the researcher was constrained with regards to time and financial resources. Marczyk et al. (2005) stated that when researchers cannot collect data from the population, it is important that the sample be a true representation of the population which is essential in quantitative research. Generalization of results to the entire population of study elements is one of the characteristics of quantitative research as identified earlier on, and for it to be possible, the sample must be a true representation of the population. "In order for us to be able to generalise, we need to have an unbiased sample of the population, which means that we want our sample to be representative of the population we are studying, and not skewed towards one group" (Muijis, 2011: 38). The results of this study would be generalized to the entire population of students at UKZN and DUT.

Stockemer (2019) posited that a sampling frame which is a list of all the elements in the target population must be obtained. In the case of this study, the questionnaire was randomly sent to undergraduate students registered for entrepreneurship courses or modules at UKZN and DUT. Kelly, Webster and Craig (2010) claimed that most researchers are faced with difficulties when deciding on the sample size and suggested that the sample must not be too small or large, researchers must find a balance between the two. Sample size calculation is important in quantitative as compared to qualitative research. Karlsson, Engebretsen and Dainty (2003) posited that if a sample is too small it might not be able to detect the differences within the population therefore the results would not be a true representation of the sample and can be considered statistically insignificant. Kumar (2011) stated that the certainty of research findings depends on the size of the sample, as the size increases so does the accuracy of the findings. This is more especially true when the population involved is large; a representative sample can only be obtained through a large sample. However, Malone, Nicholl and Coyne (2016) suggested that if a sample is too big, the practicability of the study would be doubted, and it can be considered unethical because it is usually impossible to conduct research on many elements.

Burmeister and Aitken (2012) stated that "sufficient sample size is the minimum number of participants required to identify a statistically significant difference if a difference truly exists". A sufficient sample size is important more especially in quantitative research due to the need to generalize research results to the target population, however it is often difficult to decide the sufficient sample size for a target population. Sekaran and Bougie (2016) suggested that it is rare to achieve a sample that has the same characteristics as the population of interest, therefore the issues of precision and confidence are important in determining a sample size. Precision is

the degree to which the sample statistics closely resemble the population parameters, the extent to which the sample reflects the population whereas confidence is the level of certainty on the accuracy of the sample (Sekaran and Bougie, 2016). The researcher used a sample calculation table published by Krejcie and Morgan (1970) which provide the sample size for a given set of criteria. Krejcie and Morgan (1970) stated that the need for a statistically representative sample in quantitative research facilitated the introduction of objective sample calculation methods. The sample for this study was approximately 1 000 undergraduate students registered for entrepreneurship courses at the UKZN and DUT: Introduction to Entrepreneurship and Entrepreneurial Skills. Krejcie and Morgan (1970) stated that for a population size of 1 000 (N=1 000), a sample size of 278 (S=278) can be selected, with a 95% confidence level. Therefore, given the population size of approximately 1 000 undergraduate students registered for entrepreneurship courses at the UKZN and DUT (as at time of research), the researcher applied a confidence level of 95.0% and a margin of error of 5.0% to get a sample of 278 students.

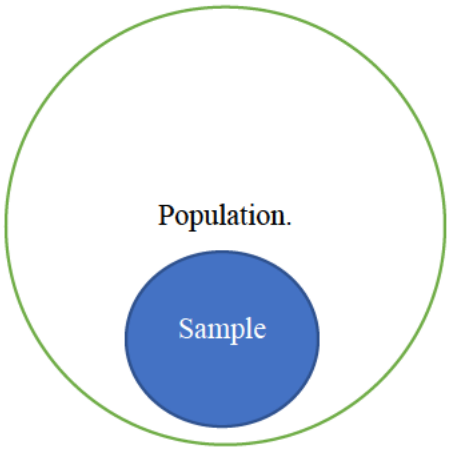


Figure 6-4: Illustration of a population and sample.

Source: Stockemer (2019: 58).

6.8 Research Instrument/Measurements

There are different data collection instruments and techniques open to researchers such as interviews, questionnaires, observations, focus group discussions and experiments. Sani (2013) argued that research designs and approaches are almost independent to data collection techniques therefore any data collection method can be used for any research approach. The researcher is however of the opinion that some research instruments would be more applicable to a research as compared to the others. Choice of instrument depends on the research design

of the study, whether qualitative or quantitative and data to be collected, statistical or words. Singh (2007) suggested that when choosing and designing research instruments, researchers consider factors such as the research problem and design and the type of data to be collected. Morgan and Harmon (2001) noted that the widely used data collection methods in survey research are questionnaires and interviews. Interviews are however common with qualitative research studies as they seek are used to collect verbal data in the form of respondents' views and opinions.

The researcher collected data using a self-administered structured questionnaire. A self-administered questionnaire is one that is given to respondents, and they complete it on their own and give it back to the researcher. A self-administered questionnaire was used to enable the researcher to collect data from several students at one goal, all the researcher needed to do was to distribute the questionnaire online and they completed it. The questionnaire consisted of seven (7) sections; Section A to F had closed-ended questions. In addition, the questionnaire had an open-ended question where respondents were asked to voice their opinions. Section A measured respondents' demographic information while sections B to F consisted of scales measuring respondents' attitudes towards entrepreneurship, perceived behavioural control, subjective norms, entrepreneurship intentions and their perception of entrepreneurship education. The different scales were adopted from the Entrepreneurial Intention Scale developed by Linan and Chen (2009) and the Individual Entrepreneurial Intent Scale developed by Thompson (2009). To determine the reliability of the questionnaire, the different scale's internal consistency was determined through the calculation of the Cronbach's Alpha Coefficient. Pallant (2010: 6) stated that "Cronbach's Alpha provides an indication of the average correlation among all of the items that make up the scale, values range from 0 to 1 with higher values indicating greater reliability". The researcher wanted to ascertain the measuring instrument's consistency and ability to give the same score repeatedly. Details of the questionnaire are as detailed below:

6. 8.1 Demographic Information

Section A consisted of respondents' biographical information. Biographical questions such as age, institution of registration, degree registered for, level of study, academic majors, students' awareness of government and private organisations that support small business development and the reasons why they chose entrepreneurship modules, were asked. These questions were asked to acquire the study participants' background information relating to both their personal information and knowledge of entrepreneurship.

6.8.2 Personal Attitude towards Entrepreneurship Scale

Section B consisted of the Personal Attitude towards Entrepreneurship Scale. The ten (10) item Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5) was developed to measure and explain students' personal attitudes towards entrepreneurship. Some of the items featured on this scale were: "Being an entrepreneur would entail great satisfaction for me; Among various options, I would rather be an entrepreneur; Being an entrepreneur is a form of personal achievement for me and Being an entrepreneur implies more advantages than disadvantages to me". To measure the reliability of the Personal Attitude towards entrepreneurship scale, the Cronbach's Alpha coefficient which assesses the internal consistency of the questionnaire items was calculated. Tavakol and Dennick (2011) argue that internal consistency measures the extent to which all the items in a scale measure the construct or variable they intend to measure and are closely related to each other and hence it is important to determine it first to determine the validity of the research instrument. The Cronbach's Alpha Coefficient for the Personal Attitude towards Entrepreneurship Scale was .90. Nunnally and Bernstein (1994) and DeVellis (2003) suggested that the Cronbach's alpha values of .70 to .95 indicate a good internal consistency and are therefore acceptable. The scale indicated a score range of 10-50.

6.8.3 Perceived Behavioural Control Scale

Section C consisted of the Perceived Behavioural Control Scale. The thirteen (13) item scale Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5) was designed to measure the influence of external factors on students' intentions to become entrepreneurs. The following items were amongst the scale: "To start a firm and keep it working would be easy for me; I am prepared to start a viable firm; I can control the creation process of a new firm; If I tried to start a firm, I would have a high probability of succeeding and I have a satisfactory level of creativity to become an entrepreneur". The Cronbach's Alpha Coefficient for the Perceived Behavioural Control Scale was .94. The scale had a score range of 13-65.

6.8.4 Subjective Norms Scale

Section D consisted of the Subjective Norms Scale. The seventeen (17) items Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5) sought to measure the participants' social influence on their entrepreneurial intentions. The scale was designed to measure the influence people around the students, including their family, lecturers and fellow students have on their decisions and intention to become entrepreneurs. Some of the items included in the

scale were: “If I decide to start a firm, my close family would approve of such a decision; My society values entrepreneurship and supports upcoming entrepreneurs; If I decide to become an entrepreneur, my lecturer would approve of such a decision; My colleagues and mates value entrepreneurial activities better than other activities and careers and My lecturer would be a good role model if I choose to become an entrepreneur”. These statements sought to determine students’ perceptions of their social environment towards entrepreneurship and entrepreneurial activities. The Cronbach’s Alpha Coefficient for the Subjective Norms Scale was .91. The scale indicated a score range of 17-85.

6.8.5 Entrepreneurship Intention Scale

Section E consisted of the Entrepreneurship Intention Scale. The seventeen (17) item Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5) sought to measure the level of students’ entrepreneurial intentions. Some of the statements which made up the scale were: “I have very seriously thought of starting a firm; I spend time learning about starting a new firm; I am ready to do anything to be an entrepreneur; I always dream of owning my own company and becoming my own boss and I search for business start-up opportunities”. These statements sought to assess the students’ intentions of venturing into entrepreneurship. The Cronbach’s Alpha Coefficient for the Entrepreneurship Intention Scale was .95. The scale had a score range of 17-85.

6.8.6 Entrepreneurial Education Scale

Section F, the final section in the questionnaire was comprised of the Entrepreneurial Education Scale. The sixteen (16) items Likert Scale ranging from Strongly Disagree (1) to Strongly Agree (5) sought to measure students’ perception of the entrepreneurship education offered in their respective courses and modules. The following statements were included in the scale: “The entrepreneurship modules or courses I have taken helped me to develop knowledge about the entrepreneurial environment; Because of the entrepreneurship modules I have taken, I know how to develop a business plan; Because of the entrepreneurship modules I have taken, I can say I know how to source capital and manage money in a business; The entrepreneurship modules I have taken enhanced my critical thinking skills and The entrepreneurship modules I have taken gave me the opportunity to work on a practical business project”. The Cronbach’s Alpha Coefficient for the Entrepreneurial Education Scale was .95. The scale indicated a score range of 16-80.

6.9 Pilot Study

Van Teijlingen and Hundley (2002) defined a pilot study as one that is conducted on a smaller scale with a few respondents from the target sample in preparation of the main study. A pilot study can be regarded as a study conducted to ascertain the feasibility or practicability of the actual study. Fraser, Fahlman, Arscott and Guillot (2018) stated that a pilot study is used to provide recommendations and direction to the main study and, as a result, it reduces its risk of failure. Researchers conduct pilot studies for a reason, their role is significant to the execution and success of the main study. In (2017) stated that the main purpose of a pilot study is to improve the execution of the main study, to determine if it can be done in the real world and how. Since a pilot study mirrors the main study, that is it uses the same research instrument and sample, the researcher can get valuable information from the participants on aspects of the study. The researcher selected ten participants from the sample and conducted a pilot study to assess its feasibility. In particular, the researcher wanted feedback on the design of the research instrument; whether the respondents found the language easy to understand, the length and the average time spent to respond to all the questions. Furthermore, the researcher wanted to get a feel of the data collection process before executing the main one. A pilot study was more especially important for this research since the researcher had planned to physically distribute the questionnaires but due to the COVID-19 pandemic had to collect data electronically. The study therefore afforded the researcher and the few selected participants an opportunity to conduct a test-run and get a feel of the process.

6.10 Data Collection Methods

Data collection is another important step in the research process as it involves the actual or physical gathering of raw data for analysis. Kabir (2016: 202) stated that "data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes". Data is collected from the selected research participants and analysed to satisfy the research objectives of the study. Jovancic (2019) reported that, in research, information is important but what is of more importance is how this information is gathered and whether the chosen methods fulfil the needs of the study. Several factors are considered when choosing appropriate data collection methods, not every method will be suitable for a specific study. Johnson and Christensen (2019) stated that researchers go through the following steps when selecting a data collection method; identify research problems and questions, choose the suitable research methods, design and strategy to answer the research questions then

decide on the data collection methods to collect the empirical data. The study's research approach is therefore an important consideration in the selection of data collection methods. This study adopted the quantitative research approach therefore quantitative data collection methods were employed to gather empirical data.

Kabir (2016) posited that quantitative data is usually numerical and is analysed through statistical methods and often use different scales which can be classified into nominal, ordinal, interval and ratio scales. Numerical data is one of the key characteristics of quantitative data which makes it different from qualitative data which is in the form of texts and words. Jovancic (2016) reported that quantitative data is used to answer the; who, when, what and how questions which are in most cases closed-ended. Quantitative data therefore lacks the ability to probe further on respondents' answers which is the main characteristic of qualitative data. Johnson and Christensen (2019) stated that the common data collection methods used in research are tests, questionnaires, interviews, focus groups, secondary, observations and existing data. Kabir (2016) highlighted the frequently used data collection methods in quantitative research; experiments, observation of definite events, mining data from management information systems, closed-ended surveys and paper-pencil based questionnaires. Questionnaires are the frequently used data collection methods in quantitative research studies. Kabir (2016) further stated that quantitative data collection methods use highly structured research instruments, random samples, generate results that are easy to summarize and compare and the results can be easily generalised to the entire population due to randomization.

Data collection in this study was conducted using a structured questionnaire. The questionnaire consisted of closed-ended questions and one open-ended question, and it was distributed to participants online. Due to the corona virus pandemic, the researcher could not physically distribute questionnaires to students as they were doing remote studying, questionnaire distribution was therefore restricted to online channels. The questionnaire was uploaded on the respective universities' announcement and Moodle portals and students accessed and completed it electronically. The researcher introduced the study topic and objectives to the students before presenting the questionnaire. The letter to the respondents and the informed consent were uploaded together with the questionnaire. Responses were recorded electronically as students completed the questionnaire forms and they were later captured into SPSS ready for analysis. The researcher chose a standardised questionnaire because it enabled the fast collection of responses from standardised questions which facilitated the comparison of research results. The researcher sought to examine students' perceptions of entrepreneurship

education offered in their respective Universities and how it was of significance to their entrepreneurial intentions. The questionnaire also facilitated the easy and cheaper collection of data, given the corona virus pandemic respondents simply completed the self-administered questionnaires online whilst the responses were captured electronically.

6.11 Data Quality Control

Kreuger and Neuman (2006) stated that a notable similarity between quantitative and qualitative research studies is that both approaches aim to avoid reporting biased or falsified research results. There are principles and guidelines that researchers must follow when conducting research hence the need for ethical consideration in research. Moreover, research results must be free from bias and researchers must ensure accuracy starting from designing the study and research instruments, collecting and analysing data, interpreting the findings and reporting the research results. This enhances the quality of the study and ensures that accurate feedback and recommendations are given to the interested parties. Sekaran and Bougie (2016) suggested the term *goodness of measure*s which explained the need to develop research instruments that are free from error and measure exactly what they are meant to measure o facilitate the reporting of accurate research results. It is therefore important that validity and reliability issues be addressed in research, Sekaran and Bougie (2016) stated that these two concepts are significant in assessing the goodness of measure which is key in research studies. The following sections will explain how the researcher ensured the validity and reliability of the questionnaire used to collect data for this study.

6.11.1 Reliability

Creswell, Ebersohn, Eloff, Ferreira, Ivankova, Jansen, Nieuwenhuisen, Pietersen, Clark and Westhuizen (2007) defined reliability as the ability of a research instrument to deliver the same results each time it is administered to different groups of participants from the same population, it measures the constancy of the research instrument. In this study, reliability refers to the questionnaire's ability to produce the same results if used in different occasions. Sekaran and Bougie (2016) claimed that consistency and stability are key elements in assessing the reliability of a research instrument, it must be consistent in measuring the constructs under study which ensures stability. The research instrument in this study sought to measure variables such as entrepreneurship education, entrepreneurial intention and subjective norms, the reliability of this instrument would be the ability to measure these variables and produce the same result if administered to different students in the same of population. Singh (2007) suggested that three elements are significant in defining the reliability of a study; stability,

internal reliability and inter-observer consistency, adding another element to those identified by Sekaran and Bougie (2016). To determine the reliability of the questionnaire, the researcher considered the internal reliability of the measures. Kumar (2011) reported that internal consistency is the degree to which items in a scale measuring the same construct produce similar results. Singh (2007) stated that in simpler terms, internal consistency refers to the correlation between items in a scale. Items measuring the same construct must be positively correlated to each other, they must show that they are a group of items measuring the same variable or they are homogeneous. Items making up the entrepreneurship, entrepreneurial intentions, subjective norms and perceived behavioural control scales must be homogenous and show that they are all measuring the same construct.

Sekaran and Bougie (2016) stated that the internal consistency of a scale can be measured using the interim consistency of reliability test which shows how consistent respondents' answers are to the scale items, the most popular determinant is the Cronbach's coefficient alpha. Cronbach's coefficient alpha enables the researcher to determine the relationship between the items in a scale or whether they are homogenous. Nunnally (1978) suggested that a Cronbach's alpha coefficient of .7 signifies a reliable scale, although values lower can be reported. The Cronbach's alpha coefficient values range from 0 to 1, higher values indicating a more reliable scale. The Cronbach's alpha coefficient values of the entrepreneurship education, entrepreneurial intentions, subjective norms and perceived behavioural control scales were calculated and reported to ensure the reliability of the questionnaire developed for this particular study.

6.11.2 Validity

Validity is another important element used to assess the *goodness of measures* as highlighted by Sekaran and Bougie (2016). For a research instrument to be valid, it must measure the construct or variable it was designed to measure. The entrepreneurship education scale must measure entrepreneurship education whilst the entrepreneurial intentions scale must measure the level of students' entrepreneurial intentions. Sekaran and Bougie (2016: 221) stated that "when we ask a set of questions (develop a measuring instrument) with the hope that we are tapping the concept, how can we be reasonably certain that we are measuring the concept we set out to measure and not something else?". Validity helps in establishing whether the research instrument is measuring what it is supposed to measure. Jhangiani, Chiang and Price (2015) suggested three major forms of validity; construct, content and criterion validity. Heale and Twycross (2015) stated that content validity is the degree to which the research instrument

adequately captures the content pertaining to the construct under study. As the name suggests, content validity focuses on the content of the constructs under investigation, it assesses the sufficiency of the items in the research instrument to represent the constructs under study. The items in the entrepreneurship education scale must adequately capture the construct, the items must cover all aspects of entrepreneurship education to ensure content validity. Heale and Twycross (2015) stated that face validity is used as a measure of content validity. Creswell (2007) claimed that face refers to the face value of the research instrument which can be determined by industry experts. This study falls in the field of entrepreneurship therefore experts within the field can ascertain the face validity of the research instrument. The questionnaire developed for this study was given to both academic and non-academic experts in the field of entrepreneurship to state their opinions on its validity. Moreover, the questionnaire used in this study was adopted from Linan and Chen (2009) and Thompson (2009), it was used before in other studies and was considered to be valid.

6.12 Data Analysis

Data analysis is an important step in research, it is extracting meaning out of data to answer the research questions. Bhandarkar, Wilkinson and Laldas (2010) defined data analysis as processes and actions done to summarize and arrange the collected data so that it provides responses to the research questions or proposes hypothesis and questions that have not been identified by the study. Data collected from the field is without meaning until it is analysed and organised in a way that will provide answers to the research questions and hypothesis. Researchers interpret information that is derived from data analysis, without which the study cannot be completed. The Academy for Educational Development (2006) purported that it is believed there is a difference between data and information, data is meaningless until it is analysed and converted into useful information. The researcher analysed the data captured and recorded by the questionnaires to create sense of the data and provide answers to the research questions.

Singh (2007) stated that several factors must be considered when choosing data analysis methods; the research approach and design, variables in question and the methods used to collect data about the variables. Whether the study is quantitative or qualitative is a significant determinant of the data analysis technique and methods chosen. Qualitative data is primarily made up of words and texts whilst quantitative is predominantly numbers therefore analysed differently. However, Kreuger and Neuman (2006: 434) posited that both qualitative and quantitative data analysis involve; “inference - the use of reasoning to reach a conclusion based

on evidence; comparison as a central process – identification of patterns or aspects that are similar or different and striving to avoid errors, false conclusions and misleading inferences". Data in this study was analysed using the Statistical Package for Social Sciences (SPSS) version 27, a statistical tool for analysing quantitative data.

Welman, Kruger and Mitchell (2005: 211) argued that statistical methods of analysing data assists researchers in investigating variables, their relationship, influence and how they can be explained in the real world. By analysing and interpreting data for this study, the researcher sought to understand the association between variables which include entrepreneurship education, entrepreneurial intentions, subjective norms and degree registered for. The researcher sought to investigate the influence the variables have on students' entrepreneurial intentions, draw patterns and make comparisons. In addition, the researcher sought to test the research hypotheses formulated at the beginning of this study to see if they can be accepted or rejected therefore used statistical techniques to analyse the data. Marczyk et al. (2005) stated that research findings and the interpretation must be valid and reliable. Therefore, the following steps can be taken to ensure such; data preparation, data analysis and data interpretation (testing the research hypotheses and drawing valid inferences).

The Academy for Educational Development (2006) reported that quantitative data analysis is divided into two types; descriptive and inferential analysis. These will be further discussed below.

6.12.1 Descriptive Analysis

Marczyk et al. (2005) stated that the objective of descriptive analysis is to explain the characteristics of variables under study in a specific sample. As the word suggests, descriptive analysis is conducted mainly to describe and summarize variables and it is the initial analysis done on a data set to understand characteristics such as its distribution and the nature of the variables. There are several statistics that are a part of descriptive analysis. Creswell (2014) stated that the most common descriptive statistics are; the means, standard deviations and range. Sekaran and Bougies (2016) reported that descriptive analysis can be categorised into frequencies, measures of central tendency, and dispersion. Descriptive statistics were conducted to measure the level of students' entrepreneurial intentions calculating the means and standard deviations of the data set. Frequencies were conducted to measure the distribution of the data based on demographic characteristics; race, age, gender, level of study, Institution

of study, degree registered for, academic majors and other demographic characteristics used to identify the sample characteristics.

6.12.2 Inferential Analysis

According to The Academy for Educational Development (2006: 12) "inferential analysis is concerned with the various tests of significance for testing hypotheses in order to determine with what validity data can be said to indicate some conclusions". There are research objectives and hypotheses that were set out in the introduction of this thesis that the researcher ought to achieve and test. Inferential statistics were used to analyse data to answer those research objectives and hypotheses.

Correlation analysis was used to achieve the main objective of this study, to investigate the relationship between entrepreneurship education and students' entrepreneurship intentions. Furthermore, correlation analysis was used to measure the influence of perceived behavioural control on students' entrepreneurial intentions. The association between subjective norms, attitude towards entrepreneurship, degree registered for, academic majors, attended any extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus, students' ability to read/listen or look for information about entrepreneurs and entrepreneurship was also tested by the correlation analysis.

The simple linear regression analysis was used to determine the best predictors of entrepreneurship education amongst selected variables. In addition, it was used to establish the relative contribution of each selected predictor variable to entrepreneurship education. The independent samples t-tests analysis was used to determine the significance differences between UKZN and DUT students' entrepreneurship intention.

T-tests were also used to investigate the significant differences between students' entrepreneurship intentions based on gender, students' attendance of extracurricular entrepreneurship programs (workshops, conferences, seminars) and whether they read/listen or look for information about entrepreneurs and entrepreneurship. The Analysis of Variance (ANOVA) tests were used to determine significant differences between students' entrepreneurship intentions based on their age, race, level of study and head parent's occupation.

6.13 Ethical Considerations

There are several issues involved when conducting research and researchers must maintain professional and ethical standards to protect participants. Cacciattolo (2015: 55) stated that "in addition to understanding the discourse of academic research, being aware of what constitutes ethical research is an essential part of planning for a research project". Ethical considerations must be implemented in the entire research process, not only during data collection, but as early as during the development of the data collection tool. It ensures that the study's design meets the ethical requirements in research which positively impacts the outcome of the research. According to Fouka and Mantzorou (2011), there are individual, community and social values that govern how research must be conducted and these emphasise how people and information pertaining to the research must be treated. Similarly, Vanderstoep and Johnston (2009) posited that ethics in research refers to how participants, data and information are dealt with through the entire research process.

Research is conducted in social settings and uses people and information and, therefore, certain values must be observed. According to Fouka and Mantzorou (2011), the following major issues must be observed when conducting research; Informed Consent, Respect for anonymity and confidentiality, Respect for privacy, Vulnerable groups of people and harm to participants. Similarly, Vanderstoep and Johnston (2009) stated that according to the Belmont Report prepared by the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research, three ethical issues are important when conducting research; respect for persons, beneficence and justice. In addition, since research is conducted in social settings, permission must be obtained from the relevant authorities before data is collected. Observing ethical standards in research differentiates between good and bad research: good research ensures that data is collected responsibly, participants are protected, and the research code of conduct is observed. The researcher observed the following ethical considerations to ensure good research protocols are maintained.

6.13.1 Permission to conduct research

This study was permitted by the UKZN Humanities and Social Sciences Research Ethics Committee. An ethical clearance certification was provided after the research title, methodology, data collection methods, sample and research instrument were reviewed by the UKZN Humanities and Social Sciences Research Ethics Committee. A gatekeeper's letter granting the researcher permission to conduct data on the UKZN was given by the University's

Registrar. In addition, a gatekeeper's letter was also given by the DUT Research Ethics Committee.

6.13.2 Voluntary participation

Research respondents were informed that participation was voluntary, and they must choose to participate in the study or not. In addition, they were informed that they can pull out of the study at any point in time.

6.13.3 Informed Consent

Even though participation was made voluntary, the researcher ensured that written consent be obtained from respondents. "Informed consent seeks to incorporate the rights of autonomous individuals through self- determination, it also seeks to prevent assaults on the integrity of the patient and protect personal liberty and veracity" (Fouka and Mantzorou, 2011: 4). All the participants were made to sign an informed consent form showing their voluntary consent to participate in the study. The participants were asked to read and understand the information pertaining to the study before signing the informed consent form. The sample used in this study consisted of University students who are all above the age of sixteen (16) and in a capacity to make their own decisions.

6.13.4 Confidentiality and anonymity

Respondents were assured that their participation in the study would remain voluntary during and after the study. Participants were accorded the right to privacy. The questionnaire used to collect data did not ask for the respondents' personal information therefore no names, identity numbers, location and any other form about the respondents was used throughout the study. For the sake of coding and analysing data, research participants were given number identification such as 1, 2, 3 and 4.

6.13.5 No harm to participants

The researcher understood that the participants' psychological and physical well-being is important during research. Actual research was conducted in a setting that did not expose participants to any form of physical harm. Data was collected in a lecture room setting where participants did not feel trapped or coerced to participate in the study. The suitability of the questionnaire and the data collected was reviewed by the UKZN Humanities and Social Sciences Research Ethics Committee. The Committee observes and upholds research ethics standards and would not allow a questionnaire that expose research participants to be used.

6.13.6 Data storage

Collected data was stored in the UKZN School of Management, Information and Technology Governance department under the strict supervision of the research supervisor. The researcher understood that access to the research data must be restricted due to the confidentiality and anonymity right accorded to the study participants. Only the researcher and the research supervisor have access to the data and it will be safely secured for a minimum period of five (5) years.

6.14 Summary

This chapter discussed the research design that was implemented in the current study. The study adopted the positivist research philosophy which saw the researcher maintaining an objective position and independence from the topic of study. The study adopted the quantitative research approach which is popular with the positivist philosophy and objectivity. The quantitative approach enabled the researcher to use a randomly selected sample of 278 undergraduate students registered for entrepreneurship courses at two public universities in Durban: UKZN and DUT. A survey was conducted using a self-administered questionnaire which was electronically distributed to the targeted sample of students. This chapter further discussed how data was analysed to provide answers to the research questions. Data was analysed using a statistical tool, Statistical Package for the Social Sciences (SPSS) version 27 which allowed the researcher to conduct both descriptive and inferential statistics. Finally, the chapter addressed the concept of ethics in research. An ethical clearance letter was awarded by the University of KwaZulu-Natal and gatekeepers letters giving the researcher permission to conduct the research on the study sites were given by the two institutions. The study was completely voluntary and upheld the highest levels of confidentiality and privacy.

The chapter that follows presents results from the data analysis in the form of tables and graphs.

CHAPTER SEVEN

PRESENTATION OF RESULTS

7.1 Introduction

Chapter six outlined this study's research design. The study adopted the positivism research philosophy and quantitative research design. The target population was 1 000 undergraduate students registered for entrepreneurship courses (Introduction to Entrepreneurship and Entrepreneurial Skills) at UZN and DUT. A sample of 278 students was calculated from the population and data was collected using a self-administered questionnaire which was distributed to students online. The research was conducted according to the standards and ethics of good research where rules such as obtaining ethical clearance and gate-keeper's letters, keeping respondents' information anonymous and not forcing them to participate were strictly adhered to. Data was statistically analysed using SPSS version 27.

This chapter presents results from data analysis. The chapter opens with a discussion of the response rate. Results from descriptive and inferential statistics to satisfy the research objectives and hypotheses presented in Chapter one is also discussed.

7.2 Response rate

Morton, Bandara, Robinson and Carr (2012: 106) defined response rate as "the total number of completed interviews divided by the total number of participants with whom contact was made (or the number of all possible interviews)". Response rate highlights the actual number of respondents who successfully participated in the research study. Response rate is an important topic in quantitative research studies due to the issue of representativeness which is how well the sample of respondents represents the target population of interest. Baruch (1999) argued that using a questionnaire as a data collection instrument will seldom provide a full data set as the decision to complete the survey entirely depends on the target population of interest, some people choose not to participate, and researchers cannot force them. In this regard, researchers have better control over a physical data collection process as compared to an online process as they cannot meet the target population and convince them to participate, Response rate is therefore always lower for online distributed questionnaires. Morton et al. (2012) identified two major reasons behind a low response rate; the increased difficulty in reaching and accessing the target population of interest and the unwillingness of the contacted target population to participate in the study.

The calculated sample for this study was 278 undergraduate entrepreneurship students from two public Universities in Durban, University of KwaZulu-Natal and Durban University of Technology. Out of a sample of 278 students, data was collected from 197 students which brought the response rate to 70,9%. The researcher insinuates that the online data collection process impacted on the response rate, as the researcher had no contact with the study participants due to remote learning. However, the 70.9% response rate was sufficient to represent the population of interest. Fincham (2008) described nonresponse bias as potential or targeted respondents' failure to complete the questionnaire and further stated that it impacts negatively on the research findings' reliability and validity. The nonresponse bias for this study was 29.1%.

7.3 Sample Characteristics

Section A of the questionnaire collected respondents' biographical and other information relevant to this study. The section collected information such as respondents' gender, age, institution and level of study, head parent's occupation and main reason why they chose the entrepreneurship module/s. This section will present the results from the descriptive analysis of data.

7.3.1 Gender

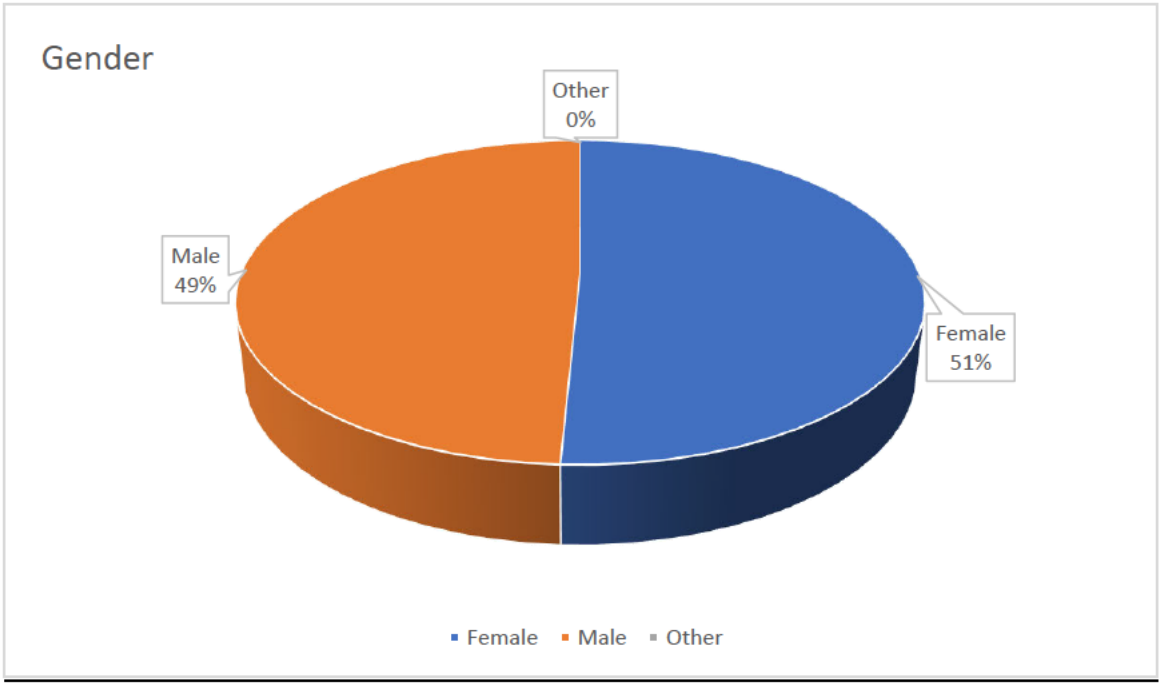


Figure 7-1: Respondents' distribution by gender

Figure 7-1 shows that more than half 100 (51%) of the study participants were female whilst 97 (49%) were male. The sample was dominated by females as compared to males.

7.3.2 Age

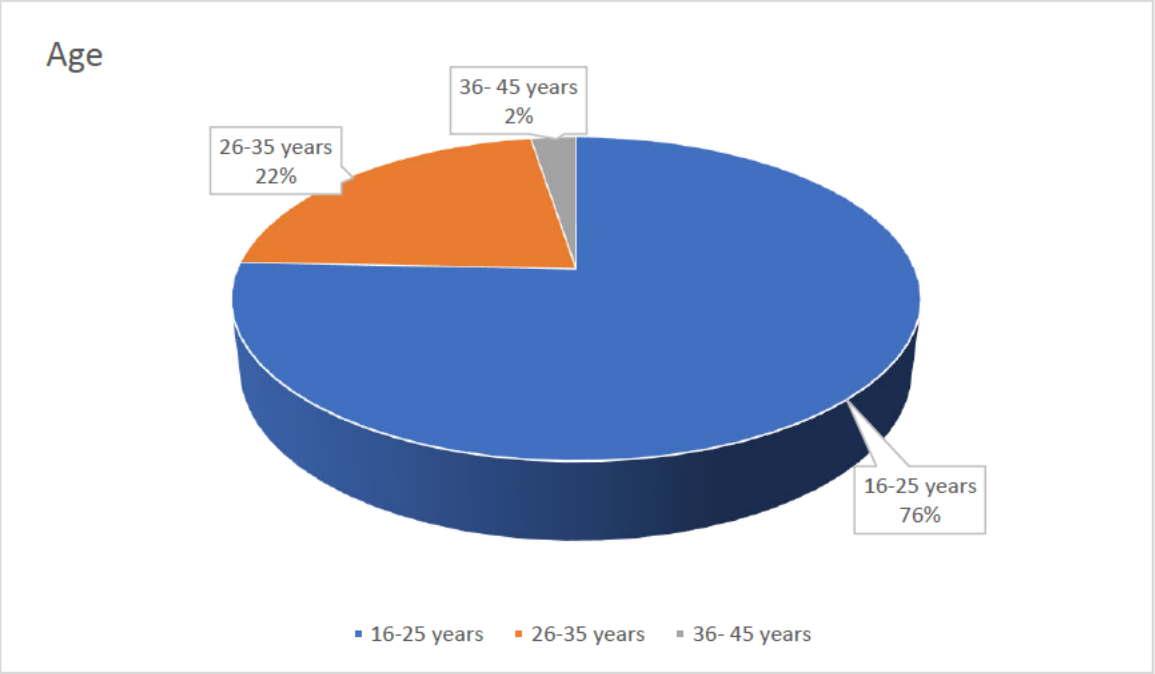


Figure 7-2: Respondents' distribution by age

Figure 7-2 shows that three quarters of the sample 149 (76%) were in the 16-25 years age group. 43 (22%) were in the 26-35 years age group whilst only 5 (2%) of the sample were between 26-35 years.

7.3.3 Race

Figure 7-3 illustrates that almost half of the study participants 96 (49%) belonged to the Indian race whilst 86 (44%) were of the African race. The White and Coloured race groups had 9 (4%) and 6 (3%) distribution of participants respectively.

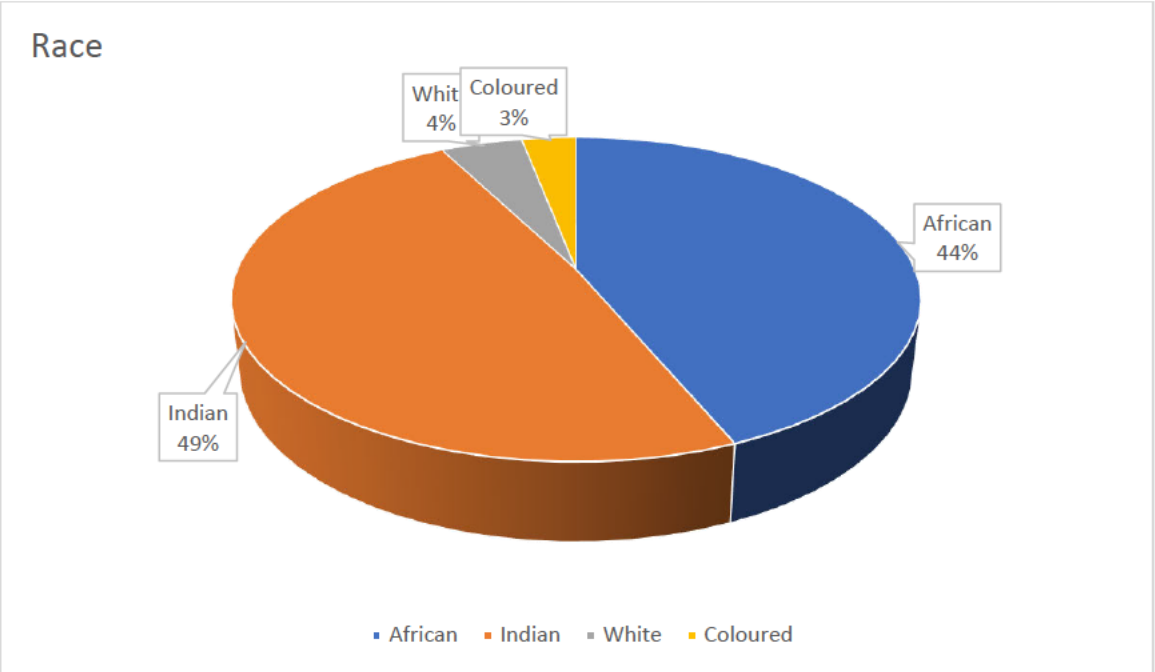


Figure 7-3: Respondents' distribution by race

7.3.4 University of study

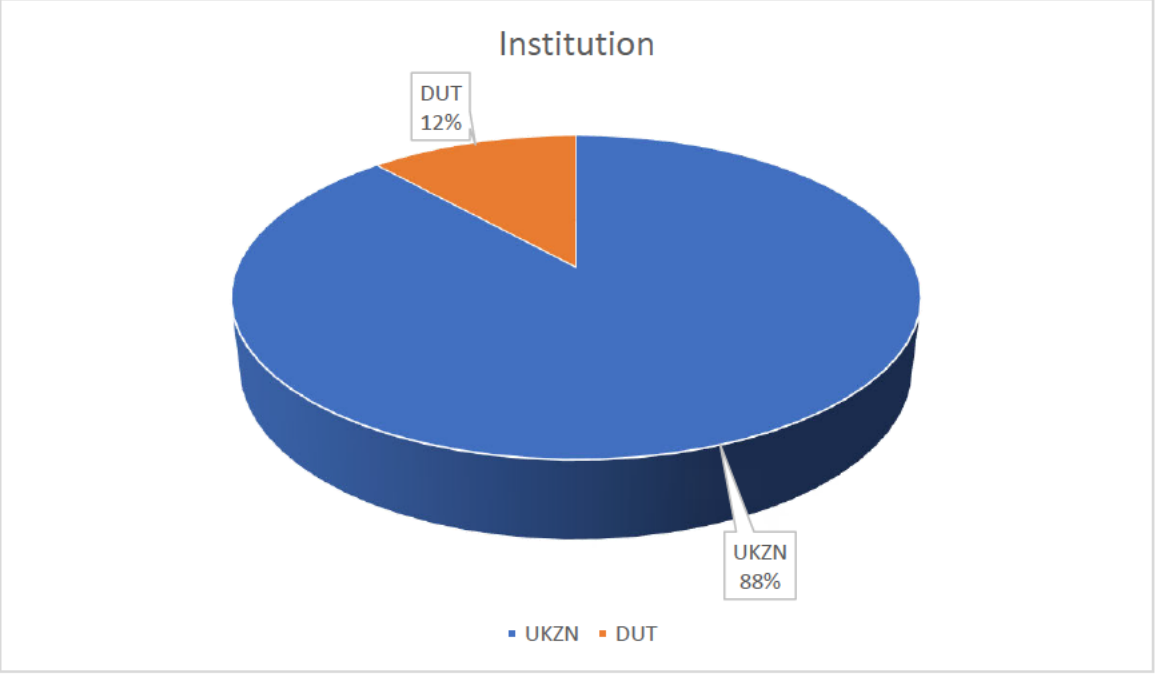


Figure 7-4: Respondents' distribution by university

Figure 7-4 demonstrates that more than three quarters 174 (88%) of the respondents were registered at the UKZN whilst only 23 (12%) were students from DUT.

7.3.5 Level of study

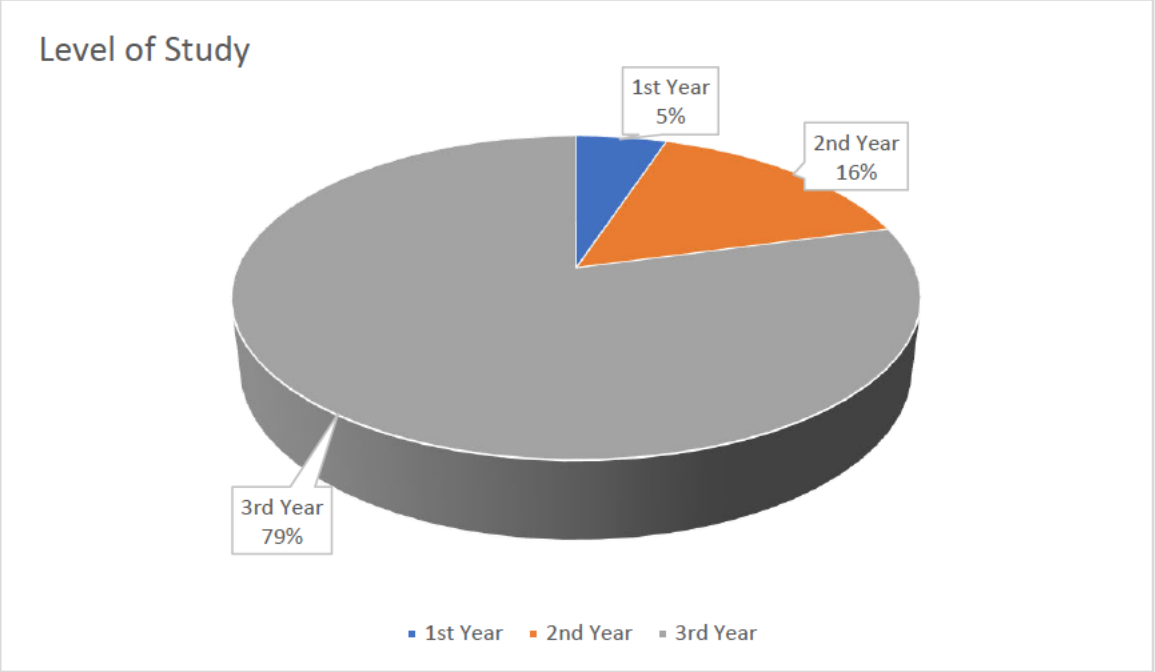


Figure 7-5: Respondents' distribution by Level of study

Figure 7-5 illustrates that over three quarters of the study participants 156 (79%) were 3rd year students whilst 31 (16%) were 2nd year students. 10 (5%) were 1st year students.

7.3. 6 Reason for choosing entrepreneurship module/s

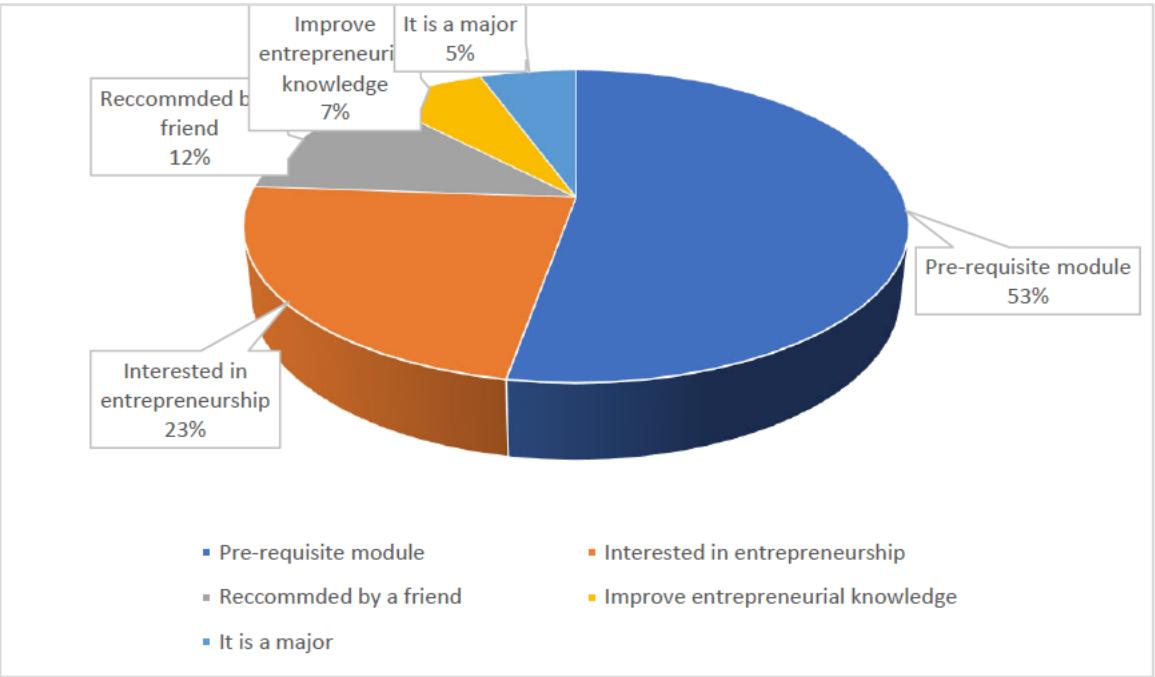


Figure 7-6: Respondents' distribution by reason for choosing entrepreneurship

Figure 7-6 illustrates that more than half 104 (53%) of the study participants indicated that they were doing entrepreneurship because it was a pre-requisite module required for them to complete their programme or move to the next stage. 46 (23%) indicated that they registered for an entrepreneurship module because they were interested in entrepreneurship whilst 23 (12%) indicated that it was recommended by a friend. Only 13 (7%) of the respondents indicated that they wanted to improve their entrepreneurship knowledge and registered for an entrepreneurship module while 11 (5%) indicated that entrepreneurship was one of their majors.

7.3.7 Head parent's occupation

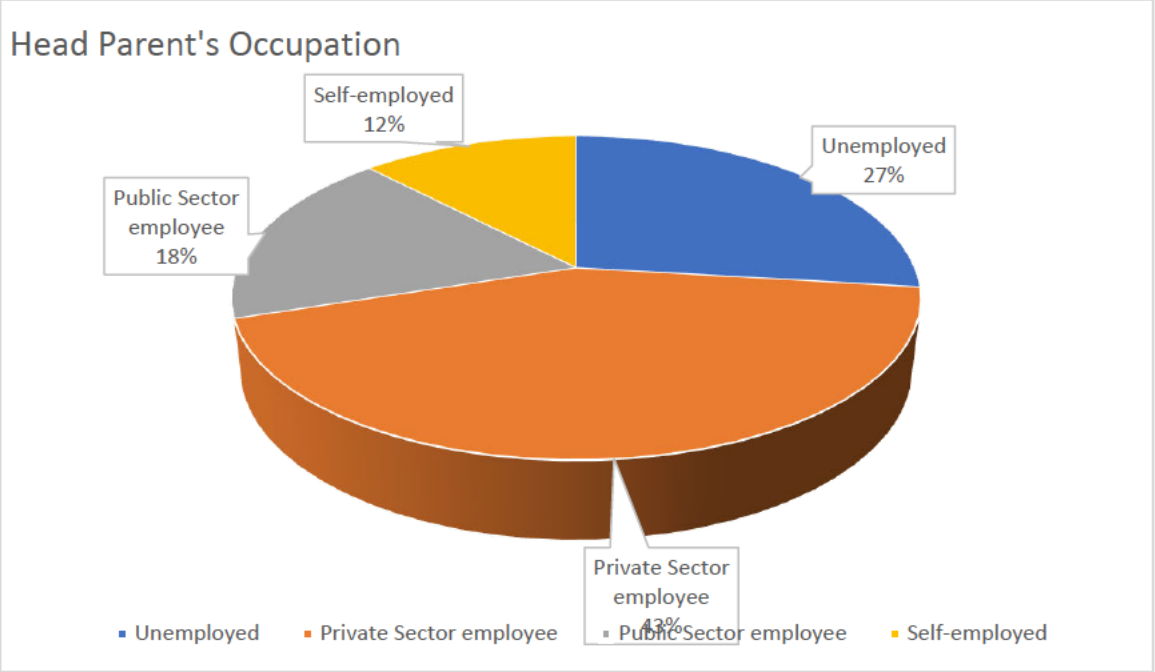


Figure 7-7: Head Parent's Occupation

Figure 7-7 shows that almost half 85 (43%) of the respondents indicated that their head parent was employed in the private sector whilst 53 (27%) indicated that they were unemployed. 35 (18%) of the respondents indicated their head parent was employed in the Public sector whilst only 24 (12%) indicated they were employed self-employed.

7.3.8 Degree registered for

Figure 7-8 shows that 116 students (58.9%) of students were registered for the Bachelor of Commerce degree. The second largest group of students 38 (19.3%) were registered for the Bachelor of Social Science degree whilst 13 (6.6%) were registered for the Bachelor of Arts degree. 8 (4.1%) of the students were registered for a Diploma in Management Sciences whilst

an equal number of students 6 (3%) were registered for the Higher Certificate in Business Administration and Bachelor of Administration.

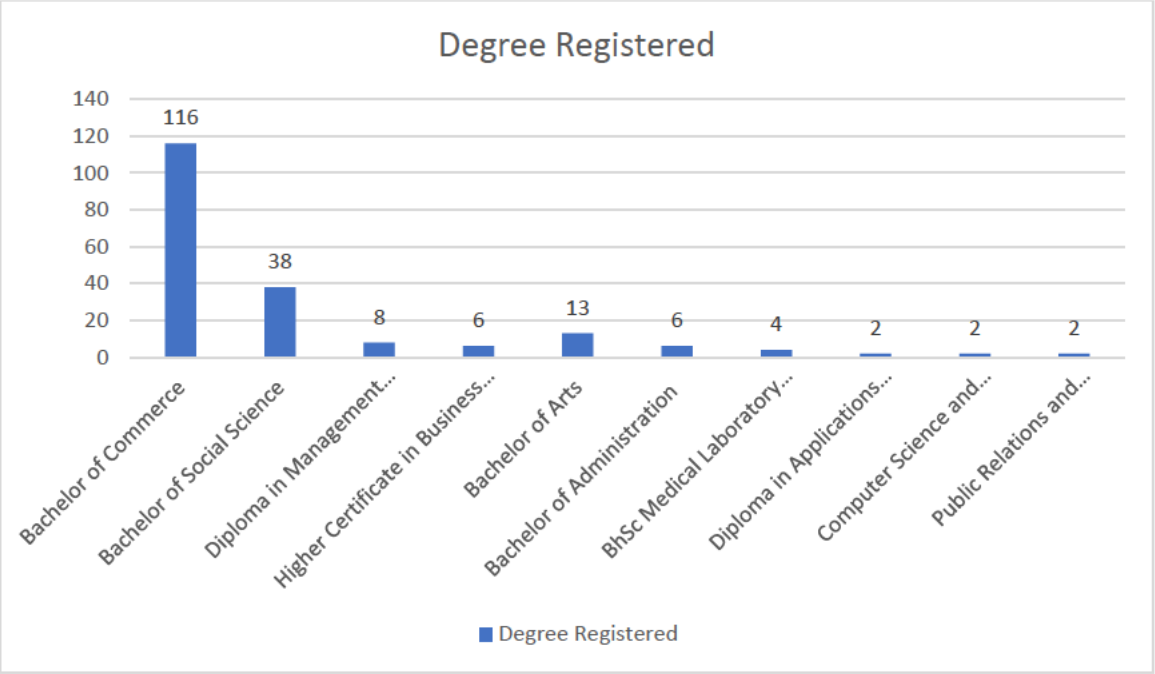


Figure 7-8: Degree Registered for

7.3.9 Students' Major/s

The results of the analysis indicate that students were majoring in different courses and most from the business studies field. 21 (10.7%) of the students were studying towards the accounting major whilst 12 (6.1%) towards business administration. 10 (5.1%) of the students were majoring in management whilst 9 (4.6%) were majoring in economics and finance. 6 (3.0%) students indicated their major as finance and management. Other majors identified by students include marketing, information systems and technology, supply chain management, economics, human resource management, industrial psychology, sociology, media and cultural studies, economics, development studies and entrepreneurship. 4 (2%) indicated they were majoring in clinical pathology.

7.4 Results from descriptive analysis

		Statistic			
Dimension	**N**	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Age	197	1	3	1.27	.499
Gender	197	1	2	1.49	.501
Race	197	1	4	1.67	.705
Institution of study	197	1	2	1.12	.322
Level of study	197	1	3	2.74	.543
Parents' occupation	197	1	4	2.15	.957
Reason for choosing Entrepreneurship	197	1	5	1.89	1.186

Table 7-1: Descriptive analysis of demographic factors (age, gender, race, institution of study, level of study, head parent's occupation, reason for choosing entrepreneurship)

Table 7-1 shows the descriptive statistics for selected demographic characteristics. The table shows that respondents' highest age group was 3 (36- 45 years); no respondents indicated an age in the 46 and above category. The table also shows that respondents represented four race groups: Africans, Blacks, Whites and Coloured, whilst both institutions, UKZN and DUT were represented. Furthermore, the results indicate that respondents were from all three study levels whilst all four head parents' occupation were represented. Table 7-1 also shows that scores did not vary much from the mean as shown by the standard deviations less than 1 (.49; .50; .70; .32; .54 and .95). Respondents' scores on the reason for choosing the entrepreneurship module/s had the greatest variation from the mean (SD= 1.186).

7.4.1 The entrepreneurship intentions of UKZN and DUT students.

Table 7-2 illustrates the descriptive statistics of the entrepreneurial intention scale. The average entrepreneurship intention amongst the students sampled in this study was 3.24 (M= 3.24; SD= .98). The results show that students' mean entrepreneurship intention scores did not vary much from the mean of 3.24, coefficient of variation was .30.

	Statistic			
Dimension	Minimum	Maximum	Mean	Std. Deviation
Entrepreneurship Intention Scale	1	5	3.24	.975

Table 7-2: Descriptive statistics for the EI scale

Score	Interpretation
Below 4	Lower level of entrepreneurship intention
Equal to or greater than 4	Higher level of entrepreneurship intention

Table 7-3: Interpretation of the EI scores

The entrepreneurship intention scores (EI) were measured on a 5-point Likert scale with strongly disagree 1 and strongly agree 5. The highest and lowest mean scores possible were therefore 5 and 1 respectively. To interpret the mean scores and measure the level of students' entrepreneurship intentions, the researcher used the guide indicated in table 7-3 above. Mean scores lower than 4 were considered to be low whilst mean scores of 4 and above were considered to be high. Given the entrepreneurship intention mean score of 3.24, the study concluded that students' have low levels of entrepreneurship intentions.

7.5 Results from Inferential Statistics

7.5.1 Results from T-tests Analysis

7.5.1.1 Ha: Students who attend extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus will have higher levels of entrepreneurship intentions than those who do not.

Group Statistics

	Extra-Curricular Activities	N	Mean	Std. Dev	Std. Error Mean
EI	Yes	70	59.44	15.603	1.865
	No	120	52.53	16.654	1.520

Table 7-4: Attendance of Extra-Curricular Activities and EI

Table 7-4 illustrates results from the Independent Samples T-test analysis on students' attendance at extra-curricular activities and their entrepreneurial intentions. The test sought to

find out if there are significant differences on entrepreneurship intention levels between students who attend extra-curricular activities such as entrepreneurship workshops, seminars and trainings and those who do not. The results of the analysis show that there were significant differences on entrepreneurship levels between students who attend extra-curricular activities (M = 59.44, SD = 15.603) and students who do not (M=52.53, SD= 16.654); t (188) = 2.823, p = .005, two-tailed. This means that students who attend entrepreneurship workshops, seminars or training programs would be more entrepreneurial and interested in becoming or pursuing careers in entrepreneurship. The results of the analysis led to the acceptance of the alternative hypothesis and the rejection of the null hypothesis. The statistical significance (p=.005) was less than 0.05.

7.5.1.2 Ha: There are significant differences in entrepreneurship intentions of UKZN and DUT students.

Group Statistics

	Institution of Study	N	Mean	Std. Dev	Std. Error Mean
EI	UKZN	168	54.90	16.785	1.295
	DUT	22	56.45	15.148	3.230

Table 7-5: Institution of Study and EI

Table 7-5 shows the results from the independent samples t-test where the differences between entrepreneurial intentions of UKZN and DUT students were tested. An independent-samples t-test was conducted to compare the entrepreneurship intention scores for UKZN and DUT students. There was no significant difference in scores for UKZN students (M = 54.90, SD = 16.785) and DUT students (M = 56.45, SD = 15.149); t (188) = -.413, p = .68, two-tailed). The results explain that students from UKZN and DUT do not have any significant differences in their willingness to become entrepreneurs. The results of the analysis led to the null hypothesis being accepted. The statistical significance value (p= .68) was greater than 0.05 therefore the alternative hypothesis was rejected.

7.5.1.3 Ha: There exist significant differences on UKZN and DUT students' entrepreneurship intentions based on gender

Group Statistics

	Gender	N	Mean	Std. Dev	Std. Error Mean
EI	Female	96	55.45	17.602	1.796
	Male	94	54.70	15.583	1.603

Table 7-6: Gender and EI

Table 7-6 illustrates the results from the Independent samples t-test where the significant differences in entrepreneurial intentions amongst female and male students were investigated. The analysis indicates that there are no significant differences between female (M = 55.45, SD = 17.602) and male students' entrepreneurship intentions (M = 54.70, SD = 15.538); t (188) = .112, p = .76, two-tailed). The results explain that gender is not a good predictor of differences in entrepreneurial intentions as both females and males show the same characteristics. The results of the analysis between students' entrepreneurship intentions and gender led to the null hypothesis being accepted. The statistical significance (p= .76) was greater than 0.05 therefore the alternative hypothesis was rejected.

7.5.1.4 Ha: Students who read/listen or look for information about entrepreneurs and entrepreneurship have higher levels of entrepreneurship intentions than those who do not.

Group Statistics

	Read/Listen or look for entrepreneurship Infor	N	Mean	Std. Dev	Std. Error Mean
EI	Yes	126	58.10	15.671	1.396
	No	64	49.13	16.807	2.101

Table 7-7: Read/Listen or look for entrepreneurship information and EI.

An independent-samples t-test was conducted to compare the entrepreneurship intention scores for students who read/listen or look up for information about entrepreneurship as shown in figure 7-14. There was a significant difference in scores for students who read/listen or look for information about entrepreneurship (M = 58.10, SD = 15. 671) and those who do not (M = 49.13, SD = 16.807); t (188) = 3.642, p = .000 two-tailed). Students who are interested in reading information on entrepreneurship from different sources such as the internet,

entrepreneurship books, articles and magazines and listening to presentations from entrepreneurs are more likely to venture into entrepreneurship as compared to those who do not. The interest these students have in entrepreneurship information equates to the interest they have in the field and their preparedness to pursue it. The results of the analysis led to the rejection of the null hypothesis. The statistical significance (p= .000) was less than 0.05 therefore the alternative hypothesis was accepted.

7.5.2 Results from Correlation Analysis

Table 7-8 shows the results from correlation analysis and the Pearson Product Moment Correlation Coefficient between entrepreneurship intention and selected variables.

7.5.2.1 Ha: There is a positive significant relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

A correlation analysis was conducted to measure the relationship between entrepreneurship education and entrepreneurship intention. The results indicate a significant positive correlation between entrepreneurship education and students' entrepreneurship intentions ($r=.79$, $p<0.01$), the correlation is significant at the 0.01 level indicating that there is more confidence in these results. According to Cohen (1988), values ranging r= .50 to r= .1.0 indicate a strong relationship between the variables. The results of the analysis therefore indicate a strong (r=. 79) relationship between entrepreneurship education and students' entrepreneurship intentions. To get an idea of how much variance the two variables share, the coefficient of determination was calculated. Entrepreneurship education helps to explain 62% of the variance in respondents' scores on the entrepreneurship intention scale. This means that an increase in entrepreneurship education would result in an increase in the level of entrepreneurship intention amongst students. Exposing students to more entrepreneurship education would therefore increase their entrepreneurial intentions. The results of the study led to the rejection of the hull hypothesis. The statistical significance (p= .000) was less than 0.05 therefore the alternative hypothesis was accepted.

		EE	EI	SN	PA	Degree Registered for	Academic Majors	Government/ Private bodies	Extra-curricular activities
Entrepreneurship education	Pearson correlation Sig. (2-tailed) N	1							
Entrepreneurship intention	Pearson correlation Sig. (2-tailed) N	.790** .000 183	1						
Subjective Norms	Pearson correlation Sig. (2-tailed) N	.875** .000 177	.821** .000 184	1					
Personal attitudes Towards entrepreneurship	Pearson correlation Sig. (2-tailed) N	.747** .000 185	.785** .000 190	.803 .000 185	1				
Degree registered for	Pearson correlation Sig. (2-tailed) N	.024 .747 185	-.37 .610 190	.000 .996 185	-.039 .591 197	1			
Academic Majors	Pearson correlation Sig. (2-tailed) N	.073 .324 185	.187** .010 190	.126 .088 185	.147* .039 197	-.232** .001 197	1		
Government/Private bodies	Pearson correlation Sig. (2-tailed) N	-.226** .002 185	-.220** .002 190	-.188* .010 185	-.240** .001 197	.094 .187 197	-.150* .035 197	1	
Extra-curricular activities	Pearson correlation Sig. (2-tailed) N	-.154* .036 185	-.202** .005 190	-.161* .029 185	-.121 .089 197	-.113 .115 197	-.099 .167 197	.182* .011 197	1

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

*. Correlation is significant at the 0.05 level (2-tailed).

Table 7-8: Results from correlation analysis

7.5.2.2 Correlation between personal attitude towards entrepreneurship and students' entrepreneurship intentions.

Table 7-8 shows the results of the impact of students' personal attitude towards entrepreneurship on their entrepreneurship intentions. The results indicate a significant positive correlation between students' personal attitude towards entrepreneurship and their entrepreneurship intentions ($r = .79$, $p < 0.01$). The correlation is significant at the 0.01 level indicating that we have so much confidence in these results. The results of the analysis indicate a strong relationship between students' personal attitude towards entrepreneurship and their entrepreneurship intention ($r = .79$). Personal attitude towards entrepreneurship helps to explain 62% of the variance in respondents' scores on the entrepreneurship intention scale which is a good amount of variance. Students with a strong positive attitude towards entrepreneurship are more likely to venture into entrepreneurship as they exhibit higher levels of entrepreneurship intentions. Strategies to improve students' personal attitude towards entrepreneurship must be employed to develop in them the desire to become entrepreneurs.

7.5.2.3 Correlation between subjective norms and students' entrepreneurship intentions.

A correlation analysis was conducted to determine the effect of students' subjective norms on their entrepreneurship intentions as indicated in table 7-8. The results of the analysis indicate that the variables have a significant positive correlation ($r = .82$, $p < 0.01$). The results are significant at the 0.01 level showing the high level of confidence in these results. The results of the analysis indicate a strong correlation ($r = .82$) between students' subjective norms and their entrepreneurship intentions. Subjective norms help to explain 67% of the variance in respondents' scores on the entrepreneurship intention scale. The results of this analysis show the extent to which entrepreneurial support is important in encouraging entrepreneurship behaviour and activities. The more support students receive from their families, friends, colleagues and close people the more they intend to be entrepreneurially active. In addition, when students receive support from their lecturers, educators and the University system, they feel more inclined to engage in entrepreneurship. A strong support system is significant for more entrepreneurship ready students.

7.5.2.4 Ha: Students' academic majors have a significant influence on their entrepreneurship intentions.

Table 7-8 illustrates the results from the correlation analysis to determine the influence of students' academic majors on their entrepreneurship intentions. The analysis sought to examine

whether the major/s students are registered for have an impact on their decisions to venture into entrepreneurship. The results of the analysis show a significant positive correlation between students' academic majors and their entrepreneurship intentions (r=. 19, p< 0.01). Even though the relationship between these two variables is significant at the 0.01 level, according to Cohen (1988) values between r= .10 to r= .29 signify a weak relationship. The Pearson Product Moment Correlation Coefficient between students' academic majors and their entrepreneurship intention shows a weak relationship (r= .19) therefore students' academic majors are not good predictors of their entrepreneurship intentions. Academic majors help to explain only 4% of the variance in respondents' scores on the entrepreneurship intention scale which is not a good variance. However, the results of the analysis led to the rejection of the null hypothesis. The statistical significance of the analysis (p= 0.01) was less than 0.05 therefore the alternative hypothesis was accepted. Students can register or study towards majors in the entrepreneurship discipline or related disciplines such as management, marketing or business administration but without much intention to venture into entrepreneurship. Students' studying towards an entrepreneurship major can choose to pursue careers in the field only if they feel the need to do it because they have studied entrepreneurship.

7.5.2.5 Ha: Students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development is positively related to their entrepreneurship intentions.

Table 7-8 shows the correlation analysis between students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development and their entrepreneurship intention. The analysis indicates that there is a significant negative correlation (r= -.22, p<= 0.01) between students' awareness of government bodies or private organisations that support entrepreneurship and their entrepreneurship intentions. However, the results of the analysis indicate a weak (r= -.22) relationship between the two variables even though they are significant at the 0.01 level showing high confidence in the results. Students' awareness of government bodies or private organisations that support entrepreneurship helps to explain only 5% of the variance in respondents' scores on the entrepreneurship intention scale. The Pearson Product Moment Correlation Coefficient between these two variables is negative indicating that an increasing in one variable will result in a decrease in the second variable. In the case of this study, higher values in students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development indicate that they do not know about them as

Yes is coded as 1 and No coded as 2. Therefore, students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development result in an increase of their entrepreneurship intentions. Effort must be made to make available and educate students on the availability of government and private programs that support small businesses and the development of entrepreneurship in South Africa. Some students might have brilliant ideas that can be turned into viable business but without capital or finances they might lose hope of pursuing the idea. This information must be made available to students during lectures, workshops, seminars and entrepreneurship programmes. The results of the study led to the rejection of the null hypothesis. The statistical significance of the analysis (p= .00) was less than 0.05 therefore the alternative hypothesis was accepted.

7.5.2.6 Correlation between students' attendance of extra-curricular entrepreneurship programs offered on campus and their entrepreneurship intention.

A correlation analysis between students' attendance of extra-curricular entrepreneurship programs offered on campus and their entrepreneurship intention was conducted as illustrated in table 7-8. The Pearson Product Moment Correlation Coefficient indicates that there is a significant negative correlation between the two variables ($r = -.20$, $p<0.01$). According to Cohen's (1988) interpretation, the relationship is however weak ($r = -.20$) in spite of the 0.01 significance level. Students' attendance of extra-curricular programs in entrepreneurship helps to explain only 4% of the variance in respondents' scores on the entrepreneurship intention scale. For this study, a Yes response is scored 1 and a No response is scored 2 on Students' attendance of extra-curricular programs in entrepreneurship therefore lower scores are associated with higher scores in the entrepreneurship intention scale. The more students attend the extra-curricular programs in entrepreneurship, the more their entrepreneurship intentions. Even though there is a weak relationship between students' attendance of extra-curricular entrepreneurship programs offered on campus and their entrepreneurship intention, these programs must be made available to students on a compulsory basis. The goal is to impart the entrepreneurship knowledge unto students and instil in them the zeal and will to become successful entrepreneurs. Measures such as organising entrepreneurship seminars and conferences where guest speakers and popular successful entrepreneurs are invited to speak to students about entrepreneurship must be employed to supplement the classroom education. In addition, students must be encouraged to be members of the University entrepreneurship clubs and associations that seek to develop their entrepreneurship behaviour and knowledge.

7.5.2. 7 Ha: There is a significant positive relationship between the degree students register for and their entrepreneurship intentions.

Table 7-8 shows the correlation analysis between the degree students register for and their entrepreneurship intentions. The results of the analysis indicate that there is no significant relationship between the degree registered for and students' entrepreneurship intentions (r= -.04, p> 0.05). This means that the degree students choose to register for does not have an influence on their entrepreneurship intentions. Students might be registered for a degree outside of the business management or related field but still have an entrepreneurial intention. Students' entrepreneurship intentions are therefore not dependent on the degrees they are registered for. The results of the analysis led to the acceptance of the null hypothesis. The statistical significance (p= .61) was higher than 0.05 therefore the alternative hypothesis was rejected.

7.5.2. 8 Ha: Students with a higher level of perceived behavioural control are highly likely to engage in entrepreneurial activities.

Correlations

		PBC	EI
Perceived Behavioural Control	Pearson Correlation	1	.895**
	Sig. (2-tailed)		.000
	N	189	184
Entrepreneurship Intention	Pearson Correlation	.895**	1
	Sig. (2-tailed)	.000	
	N	184	190

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

Table 7-9: Results from correlation analysis (Entrepreneurship Intention and Perceived behavioural control (PBC)).

A correlation analysis was conducted to determine the impact of perceived behavioural control on the entrepreneurial intentions of students as illustrated in table 7-9. The analysis sought to examine the influence of perceived behavioural control on entrepreneurship intention. The purpose of the analysis was to assess students' perceptions on their ability to engage in entrepreneurial activities or become successful entrepreneurs. The results of the analysis show that there is a significant positive correlation between perceived behavioural control and

entrepreneurship intention (r= .90, p<= 0.01). The correlation was significant at the 0.01 level showing the extent to which these results can be trusted, which is to a larger extent. The Pearson Product Moment Correlation Coefficient (r= .90) indicates that there is a strong relationship between perceived behavioural control and students' entrepreneurial intentions. The results of this analysis indicate that the greater the students' perceived behavioural control, the more their intentions to venture into entrepreneurship. The more resources and fewer barriers and limitations towards entrepreneurship students perceive, the greater their perceived behavioural control and the more they are likely to engage in entrepreneurial activities. Students need to feel they have more control of their decision to venture into entrepreneurship, the perception of more threats than opportunities will deter their entrepreneurship intentions. Perceived behavioural control helps to explain 79% of the variance in respondents' scores on the entrepreneurship intention scale. This is a value that is greater than that of entrepreneurship education, subjective norms and personal attitude towards entrepreneurship. The outcome of the analysis resulted in the rejection of the null hypothesis. The statistical significance of the analysis (p =. 00) was less than 0.05 therefore the alternative hypothesis was accepted.

7.5.3 Results from Regression Analysis

7.5.3.1 To investigate the role that entrepreneurship education can play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence UKZN and DUT students' entrepreneurial intentions.

A standard multiple regression analysis was conducted amongst the variables that were found to be strongly correlated with entrepreneurship intention, that is entrepreneurship education, personal attitude towards entrepreneurship and subjective norms. The researcher sought to determine the best predictor of entrepreneurship intention amongst the variables and the results of the analysis were presented in tables 7-10, 7-11 and 7-12.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856	.732	.728	8.650

a. Predictors: (Constant), Entrepreneurship education, Personal attitude, Subjective norms

b. Dependent Variable: Entrepreneurship Intention

Table 7-10: Model Summary from Regression Analysis

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35399.199	3	11799.733	157.709	.000
	Residual	1 2943.825	173	74.820		
	Total	48343.024	176			

a. Dependent Variable: Entrepreneurship Intention

b. Predictors: (Constant), Entrepreneurship education, Personal Attitude, Subjective Norms.

Table 7-11: ANOVA table from regression analysis

Predictor variable	Beta	T	Sig
Personal Attitude	.324	4.854	.000
Subjective Norms	.347	3.785	.000
Entrepreneurship Education	.244	2.968	.003

Table 7- 12: Regression analysis of EI predictors

According to tables 7-10 and 7-11, the Standard Multiple Regression analysis shows that the regression model accounted for a significant proportion of 73.2% of the variance in the dependant variable (entrepreneurship intention), R^2= .732; F= 157.709, p< 0.01. The independent variables of entrepreneurship education, personal attitude towards entrepreneurship and subject norms combined explain 73.2% of the variance in entrepreneurship intention which is a good result. It is however important to assess the relative contribution of each independent variable in predicting entrepreneurship intention.

7.5.3.2 Ha: Entrepreneurship education has a significant impact on students' entrepreneurship intentions compared to their attitude towards entrepreneurship and subjective norms.

As illustrated in table 7-12, all the independent variables were found to make a significant contribution to entrepreneurship intention. Subjective norms was found to be making the greatest contribution to the dependant variable (B= .347; t= 3.785; p< 0. 01) and therefore is the best predictor of entrepreneurship intention. Personal attitude towards entrepreneurship was found to be making the second greatest contribution to entrepreneurship intention (B= .324; t= 4.854, p< 0.01). Amongst the three independent variables, entrepreneurship education was found to be making the least contribution to entrepreneurship intention (B= .244; t= 2.968; p< 0.01). Even though entrepreneurship education was found to have a significant positive correlation with students' entrepreneurship intention, compared with the other independent

variables it has the least contribution to the variable. Subjective norms play the greatest role in the development of students' entrepreneurial intentions therefore a strong support system must be made available for students in as far as entrepreneurship is concerned. A university support system and structure must be set up to support every student to cultivate their entrepreneurial capacity. Support from family, parents and colleagues is also important for students to see the need to venture into entrepreneurship and become entrepreneurially active. Personal attitude towards entrepreneurship and entrepreneurship education are still good predictors of entrepreneurship intention and effort must be put in enhancing both. However, the results of the study led to the rejection of the alternative hypothesis. Even though entrepreneurship education has a significant influence on students' entrepreneurship intentions, the results show that subjective norms have the greatest influence followed by personal attitude towards entrepreneurship, therefore, the alternative hypothesis was rejected.

7.5.4 Results from the One-way Analysis of variance tests (ANOVA).

7.5.4.1 To investigate the significant differences of UKZN and DUT students' entrepreneurship intentions based on head parent's occupation.

Table 7-13 illustrates results from the One-way analysis of variance (ANOVA) analysis between head parent's occupation and entrepreneurship intention. The analysis was conducted to explore the impact of parents' occupation on the entrepreneurship intentions of students. Parents' occupation was divided into four groups: Unemployed, Private Sector employee, Public Sector employee and unemployed.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	205.450	3	68.483	.246	.864
Within Groups	51708.365	186	278.002		
Total	51913.816	189			

Entrepreneurship Intention

Table 7-13: Head parents' employment and EI

The researcher wanted to find out if students with parents occupied in the different sectors would have different perceptions towards entrepreneurship and levels of entrepreneurship intention. This would in turn explain the role played by parents' occupation on the entrepreneurship intentions of their children. The results of the analysis indicate that there are

no significant differences in entrepreneurial intentions amongst students with parents employed in the private and public sectors, those who are self-employed and unemployed, F (3, 186) = .2, p> 0.05. Parents' occupation was therefore not found to be effective in explaining students' entrepreneurship intentions, significant differences were not found amongst the four categories of students.

7.5.4.2 To investigate the significant differences of UKZN and DUT students' entrepreneurship intentions based on level of study.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	3898.684	2	1949.342	7.592	.001
Within Groups	48015.131	187	256.765		
Total	51913.816	189			

Entrepreneurship Intention

Table 7-14: Students' level of study and EI

A One-way analysis of variance was conducted to explore the impact of students' level of study on their entrepreneurship intentions as illustrated in table 7-14 The analysis sought to examine whether 1st, 2nd and 3rd year students reported significant differences on their entrepreneurship intentions. The analysis concluded that there are significant differences in entrepreneurship intentions amongst students in the three different levels of study F (2.187) = 7.6, p< 0.01. The results mean that there were statistically significant differences in entrepreneurship intention scores for the 1st, 2nd and 3rd year group of students. The eta squared was calculated to determine the effect size of these results. The eta squared value for this analysis was .07 and according to Cohen (1988) it is a moderate effect size. The students' level of study therefore plays a noticeable role in influencing their entrepreneurship intention.

The post-hoc tests were conducted to identify where the differences on students' level of study and entrepreneurship intention are, as illustrated in table 7-15. The Post-hoc comparisons using the Tukey HSD test indicated that the mean score for 1st year students (M = 59.56, SD = 12.71) was significantly different from 2nd year students (M = 44.70, SD = 18.32). The mean score for 2nd year students (M = 44.70, SD = 18.319) was significantly different from 3rd year students (M= 56.87, SD= 15.70). However, the mean score on entrepreneurship intention for 1st year students (M = 59.56, SD = 12.71) did not differ significantly from 3rd year students (M= 56.87,

SD= 15.70). The 1st year group of students was found to have the highest level of entrepreneurship intentions followed by the 3rd year students. 1st year students could have registered for entrepreneurship courses with the intention to further their entrepreneurship knowledge whereas the 3rd year students could have developed interest in the subject and field during their course of studies and looking forward to pursing a career in entrepreneurship post-graduation.

(I) Level of study	(J) Level of study	Mean difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
1st year	2nd year	14.856*	6.090	.041	.47	29.24
	3rd year	2.681	5.498	.877	-10.31	15.67
2nd year	1st year	-14.856*	6.090	.041	-29.24	-.47
	3rd year	-12.174*	3.203	.001	-19.74	-4.61
3rd year	1st year	-2.681	5.498	.877	-15.67	10.31
	2nd year	12.174*	3.203	.001	4.61	19.74

*The mean difference is significant at the 0.05 level

Dependent Variable: Entrepreneurship Intention.

Table 7-15: Post Hoc Tests for level of study and EI

7.5.4.3 To investigate the significant differences of University of KwaZulu-Natal and Durban University of Technology students' entrepreneurship intentions based on age.

A one-way analysis of variance test was conducted to determine if there are significant differences in the entrepreneurship intention of students from different age groups. Students were divided into the following age groups: 16 -25years, 26- 35years, 36- 45 years and 46 years and above. The results from the ANOVA analysis as illustrated in table 7-16 find out that there are no significant differences in the entrepreneurship scores of students from the different age groups (F (2. 187)= 1.47, p> 0.05. Age was found not to make a statistically significant contribution to students' entrepreneurial intentions and therefore it cannot be concluded that entrepreneurship intention is dependant on a student's age. Students can have varying entrepreneurship levels regardless of their age group.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	804.793	2	402.396	1.472	.232
Within Groups	51109.023	187	273.310		
Total	51913.816	189			

Entrepreneurship Intention

Table 7-16: Age and students' EI

7.5.4.4 To investigate the significant differences of UKZN and DUT students' entrepreneurship intentions based on race.

A one-way analysis of variance was conducted to explore the impact of race on students' levels of entrepreneurship intention. Study participants were divided into five groups according to their race: African; Indian; White; Coloured and Other). The analysis as illustrated in table 7-17 shows that there are no statistically significant differences on students' entrepreneurship intentions based on their race F (3.186) = .41, p> 0.05. Race is not an effective variable in predicting entrepreneurship intentions as students' scores on entrepreneurship intention were found not to vary according to their race. Whether a student is from either of the four racial groups identified in this study does not explain their level of intention to venture into entrepreneurship.

ANOVA

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	337.393	3	112.464	.406	.749
Within Groups	51576.423	186	277.293		
Total	51913.816	189			

Entrepreneurship Intention

Table 7-17: Students' race and EI

7.6 Results from written response

The study sought to understand students' perceptions towards entrepreneurship education. Students were therefore requested to express their written views regarding what they thought must be added to their entrepreneurship courses that would adequately prepare them to become entrepreneurs. The researcher sought to understand what according to students would be

deemed an ideal entrepreneurship course specifically targeted at improving their entrepreneurial intentions and getting them ready for a career as entrepreneurs. Themes were extracted from students' written responses and used to understand their perceptions towards entrepreneurship, as shown in table 7-18.

Themes from students' written responses	
Practical activities.	Entrepreneurship must be taught at all levels
Guest lecturers	Practical assignments
Interactive programmes	Financial management
Mentorship programmes	Business Plans
More advanced entrepreneurship module	

Table 7-18: Themes extracted from students' written responses.

7.6.1 Practicals

More than half of the students who responded to the written question indicated their entrepreneurship course must be blended with practicals that would give them the opportunity to practice what they are taught in the classroom. Students expressed their desire to be given a platform to practice entrepreneurship, something further than being taught about entrepreneurship. The following extracts to support this theme were taken from students' written responses.

"*More practical work, compulsory entrepreneur workshops & seminars. Introduction to actual entrepreneurs. Less glamourising of the job. Emphasis on failures that people may experience when attempting to become an entrepreneur. In depth analysis of the south african market and economy. The real world does not follow the rules of the textbook, students should be taught how to adapt to their environment. The entrepreneurship modules are exceptionally easy to pass and at most just test general knowledge*"

"A practical aspect (i.e. Actually selling something as an assignment, doing the marketing research & marketing for it eg, cupcakes"

"Practical experience within the business environment where students have to volunteer and learn from entrepreneurs".

"Practicals like starting a hypothetical business venture".

"More practical work such as meeting entrepreneurs, doing field work by visiting various start-ups etc".

The above extracts show that students need to be given the opportunity to experience the business world from the entrepreneur point of view. One response indicated that they are willing to take up volunteer work just to feel how it is like walking in the shoes of an entrepreneur.

7.6.2 Guest lecturers

Students indicated the need for lecturers to come and speak to them about entrepreneurship. In their argument, students indicated they need people who have walked the talk of entrepreneurship, people who have gone through the processes of starting and running a business so that they can share their success or failure stories with them. In other words, students indicated that they need to be given the chance to learn through the experiences of other entrepreneurs who are already in practising. The below comments to support this theme were extracted from students' written responses:

"I feel that there are experience gaps that cannot be filled by merely studying entrepreneurial modules, therefore we should have experienced entrepreneurs (regardless of success) share their personal experience and educate us on their shortcomings and inform us on how to avoid similar mistakes".

"Guest speakers to talk about entrepreneurship"

"The need for guest lecturers that have their own firms to come out and share their experiences or a business convention".

"This can be in the form of finding entrepreneurs or others in the higher end of the management hierarchy to speak to students".

"To actually meet entrepreneurs and talk to them personally".

"Real life analysis of real-life entrepreneurs and their struggles".

The above extracts show that students regard experience as more important than theory when it comes to entrepreneurship education. The above extracts stress the need for interaction and conversations with entrepreneurs so that they can learn directly from them.

7.6.3 Interactive programmes

Students expressed the need to have more interactive programmes such as workshops, seminars and business conventions. Students claimed that these workshops and seminars would give them the platform to engage in business conversations with external people, colleagues and work on practical tasks. Furthermore, students expressed the workshops and seminars would provide them with a different learning atmosphere and environment different from the classroom environment. The below extracts from students' written responses support the development of this theme:

"A business plan was really helpful because it helped me understand entrepreneurship much better. I wish there was more interactive programs such as workshops being included into syllabus".

"We need workshop to train entrepreneurship".

"Guest speakers and compulsory entrepreneurship workshops".

To show the dire need for interactive programmes to be included in the entrepreneurship course, one student mentioned the need for the attendance of entrepreneurship workshops to be made compulsory for every student.

7.6.4 Mentorship programmes

Students expressed the need for mentorship programmes to be included during their entrepreneurship studies. In their argument, students stated that they need to be mentored in their journey of starting and running a business venture as part of the University entrepreneurship support programme. The following comments to support the theme were extracted from students' written responses:

"Institutes should also try to implement a mentorship program whereby the institution gets alumni to mentor students who qualify. (create an application process)."

"There should be some kind of virtual guide that can assist start-up businesses and entrepreneurs that can assist with necessary, realistic and up to date criteria for successful business based on the current economic climate."

7.6.5 More advanced entrepreneurship module

An interesting suggestion that was put forward by students is the need for an entrepreneurship course that is more intense than the ones they were studying.

Students felt the need for a course that would challenge their intellectual skills. The current entrepreneurship course/s was regarded as covering more of basic information that did not give students the platform to apply critical and innovative thinking.

"I think there should be another more advanced module and entrepreneurship cause I feel as if just the one module was more of the basics".

7.6.6 Entrepreneurship must be taught at all levels

Another issue that was expressed by the students that the researcher felt it is significant to capture is the inclusion of an entrepreneurship module/course at all levels of study from 1st year to final year. It is probable that students felt the entrepreneurship course they were taking was insufficient to provide them with the entrepreneurial foundation and knowledge they need to start a career in entrepreneurship or a business. Below is a direct extract from students' written responses to support the development of this theme.

"Entrepreneurship should be taught at all levels"

7.6.7 Practical assignments

Students' written responses expressed the need for practical entrepreneurship assignments. The responses expressed students' need for a hands-on assignment, one that would not only require them to theorise their ideas but also express them in a practical way. This theme corroborates with the need for practicals theme. The below extracts from students' written responses support this theme:

"There should perhaps be an assignment that creates exposure for students in the entrepreneurial space, more of a practical assignment that requires one to be out there and engage as a way of teaching students to network and also how to get information from people as a way of getting to your target market"

"Practical school-based business".

7.6.8 Financial management

Students expressed their need to receive entrepreneurship education that is specifically targeted at teaching them how to raise finances in a business. This view shows that students appreciate that starting and running a business requires a capital and financial investment. They therefore feel the need to be exposed to teachings on how to manage finances. Furthermore, students feel they need more guidance on making good business decisions.

It is probable that students would need more financial advice and teaching more especially when it comes to starting a business where money is needed to cover the start-up costs. The below extract from students' written responses contributed to the development of this theme.

"More teachings on how to manage finances and more practical ways on how to think critically in a business and make good business decisions."

7.6.9 Business Plans

Students expressed the need to be taught how to develop a business plan. It is probable that students understand the importance of a business plan when planning to venture set up a business. It is important that students are taught not just to draft a business plan but to practically implement it. The below extract supports this theme:

"Business plan, lectures with entrepreneurs."

7.7 Summary of the hypotheses tests

A summary of the ten hypotheses tested in this research study is presented in table 7-19.

Number	Hypothesis	Result.
H1	There is a positive significant relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.	A positive significant relationship exists. ***Accepted.***
H2	There are significant differences in entrepreneurship intentions of UKZN and DUT students.	No significant differences. ***Rejected.***
H3	There exist significant differences on UKZN and DUT students' entrepreneurship intentions based on gender.	No significant differences. ***Rejected.***
H4	UKZN and DUT students with a higher level of perceived behavioural control are highly likely to engage in entrepreneurial activities.	A positive significant correlation exists. ***Accepted.***
H5	UKZN and DUT students who read/listen or look up for information about entrepreneurs and entrepreneurship have higher levels of entrepreneurship intentions than those who do not.	Significant differences exist. ***Accepted.***
H6	UKZN and DUT students who attend extracurricular entrepreneurship programs (workshops, conferences, seminars) offered on campus will have higher levels of entrepreneurship intentions than those who do not.	Significant differences exist. ***Accepted.***
H7	Entrepreneurship education has a significant impact on UKZN and DUT students' entrepreneurship	Subjective norms is the best predictor of entrepreneurship

	intentions compared to their attitude towards entrepreneurship and subjective norms.	intentions followed by personal attitude towards entrepreneurship. ***Rejected.***
H8	UKZN and DUT students' academic majors have a significant influence on their entrepreneurship intentions.	A significant influence exists. ***Accepted.***
H9	UKZN and DUT students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development is positively correlated to their entrepreneurship intentions.	A positive significant correlation exists. ***Accepted.***
H10	There is a significant positive correlation between the degree UKZN and DUT students register for and their entrepreneurship intentions.	No significant correlation. ***Rejected.***

Table 7-19: Summary of the hypotheses tests

7.8 Questionnaire validity and reliability

This section outlines the statistical methods that were used to validate the research instrument and present results from the analysis.

7.8.1 Factor Analysis

Likert scale items were subjected to factor analysis using SPSS version 28. The collected data was evaluated for its suitability for the analysis. Table 7-20 shows the Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy for the scale items. Kaiser (1974) recommends an acceptable KMO value of .6 and above, values less than .6 are deemed inadequate. Furthermore, KMO values between .7 to .8 are good whilst values above .9 are excellent (Kaiser, 1974). As shown in table 7-20, the KMO value for the factor analysis was .85. The Bartlett's Test of Sphericity was significant, that is less than .5, indicating that data was suitable for analysis.

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.856
Bartlett's Test of Sphericity	Approx. Chi-Square	15263.389
	Df	2628
	Sig	.000

Table 7-20: KMO and Bartlett's Test of Sphericity

As shown in table 7-21, Principal component analysis generated five factors with eigenvalues of more than 1. Furthermore, Table 7-21 shows the factor loadings and variance for the rotated factors, the factors accounted for a cumulative percentage of 63.26. All the loadings that were greater than .5 were significant, loadings less than .5 were insignificant and excluded from the analysis. Items that loaded significantly on two factors were recorded once, the higher loading was considered. Table 7-21 shows all the item loadings for Factors 1, 2, 3, 4 and 5.

Item	Component				
	1	2	3	4	5
EI 1			.539		
E1 2	.609				
E1 3	.635				
EI 4	.568				
E1 6	.661				
EI 7				.537	
EI 8					.600
EI 9				.500	
EI 10					.513
EI 11				.662	
EI 12					.674
E1 13	.540				
EI 15				.605	
EI 16	.604				
EI 17	.723				
EE 1		.741			
EE 2		.649			
EE 3		.658			
EE 4		.706			
EE 5		.535			
EE 6		.569			
EE 7		.508			
EE 8		.600			
EE 9	.518				

EE 10		.681			
EE 11		.621			
EE 12		.689			
EE 13		.580			
EE 14		.569			
EE 15				.641	
SN 1	.627				
SN 2	.680				
SN 3	.590				
SN 6		.539			
SN 7				.584	
SN 9				.610	
SN 11	.507				
SN 12		.616			
SN 13		.674			
SN 14		.662			
SN 15			.574		
SN 16			.569		
SN 17			.635		
PBC 1			.500		
PBC 2			.633		
PBC 4			.609		
PBC 5			.505		
PBC 6			.561		
PBC 7				.501	
PBC 8	.597				
PBC 9	.588				
PBC 10	.653				
PBC 11	.567				
PBC 12	.551				
PBC 13	.509				
PATE 2	.751				

PATE 3	.686				
PATE 4	.713				
PATE 5	.711				
PATE 7	.596				
PATE 8			.531		
PATE 9	.740				
PATE 10	.720				
Eigenvalue	35.599	3.602	3.101	2.017	1.860
% of Variance	48.756	4.934	4.248	2.763	2.547

Table 7-21: Factor analysis: factor loadings

25 items loaded significantly on Factor 1 and contributed 48.76% towards the total variance. Of the 25 items, seven were entrepreneurship intention and personal attitude towards entrepreneurship each, six were perceived behavioural control whilst four were subjective norms and one entrepreneurship education. The greatest loading was personal attitude towards entrepreneurship (.751), therefore Factor 1 was categorised as *personal attitude towards entrepreneurship.*

17 items loaded significantly on Factor 2 and contributed 4.93% towards the total variance. Of the 17 items, thirteen were entrepreneurship education whilst four were subjective norms. Factor 2 was therefore categorised as *entrepreneurship education* as most of the items were entrepreneurship education.

10 items loaded significantly on Factor 3 and contributed 4.25% towards the total variance. Of the 10 items, five were perceived behavioural control, three subjective norms, one entrepreneurship intention whilst the other one was personal attitude towards entrepreneurship. Most of the items were perceived behavioural control, therefore, Factor 3 was categorised as *perceived behavioural control.*

8 items loaded significantly on Factor 4 and contributed 2.76% towards the total variance. Of the 8 items, four were entrepreneurship intention, two subjective norms, one perceived behavioural control and the other one entrepreneurship education. Factor 4 was categorised as *entrepreneurship intention* as most items loaded on entrepreneurship intention.

3 items loaded significantly on Factor 5 and contributed 2.55% towards the total variance. All three items were entrepreneurship intention and Factor 5 was categorised as *entrepreneurship intention.*

As shown by Table 7-21, the five Factors were labelled as follows:

Factor 1- Personal attitude towards entrepreneurship

Factor 2- Entrepreneurship education

Factor 3- Perceived behavioural control

Factor 4- Entrepreneurship intention

Factor 5- Entrepreneurship intention

The analysis did not identify subjective norms as a factor. It is probable that respondents misinterpreted subjective norms items when participating in the research. The items could have been perceived as one of the items from the other dimensions and regarded as such.

7.8.2 Reliability analysis

The reliability of the questionnaire was statistically tested using Cronbach's Alpha Coefficient as shown in table 7-22.

Cronbach's Alpha Coefficient	.98

Table 7-22: Overall Reliability of the Questionnaire

Table 7-22 shows a Cronbach's Alpha Coefficient of .98 showing that the overall questionnaire had a good level of inter-item consistency and reliability.

The individual dimensions' Cronbach's Alpha Coefficients are presented in Table 7-23. The results from reliability analysis of the individual dimensions show that they had a good level of inter-item consistency and reliability.

Dimension	Cronbach's Alpha Coefficient
Personal attitude towards entrepreneurship	.90
Perceived behavioural control	.94
Subjective norms	.91
Entrepreneurship intention	.95
Entrepreneurship education	.95

Table 7-23: Dimensions Cronbach's Alpha Coefficients

7. 9 Summary

Chapter seven presented results from the descriptive and inferential tests analysis to answer the research objectives and hypothesis of the study. The target population for the study was 1 000 undergraduate students registered for entrepreneurship courses/modules at the UKZN and DUT. Using the sample calculation table suggested by Krejcie and Morgan (1970) a sample of 278 students was calculated. Out of a target sample of 278, the researcher collected data from 197 students and achieved a 70.9% response rate. The majority (51%) of the study participants were female whilst 76% were aged between 16-25 years. 49% of the respondents were of the Indian race. The majority (88%) of the students were registered at the UKZN whilst only 12% were at the DUT. 79% of the students were final year undergraduate students. 53% of the respondents indicated that they registered for their respective entrepreneurship subjects because it was a pre-requisite module required to complete their study programme or move to the next level of study.

The main research question sought to investigate the relationship between entrepreneurship education offered to university students in selected institutions and their entrepreneurship intention. The results from correlation analysis concluded that there is a significant positive correlation between entrepreneurship education and entrepreneurship intention ($r= .79$, $p< 0.01$). According to the results, an increase in entrepreneurship education would result in an increase in the level of students' entrepreneurial intentions. However, the regression analysis indicated that subjective norms which constitute support from family, friends, colleagues and the university system is the best predictor of entrepreneurship intention ($B= .347$; $t= 3.785$; $p< 0. 01$). The influence of perceived behavioural control on students' entrepreneurship intention was found to be great ($r= .90$, $p<= 0.01$), with the construct explaining 79% of the variation in students' entrepreneurship intention scores. The study further established that the level of students' entrepreneurship intention was low ($M= 3.24$; $SD= .98$) and there are no significance differences between entrepreneurship intentions of UKZN and DUT students. The results of the study indicated that the following demographic factors do not imply significant differences in students' entrepreneurship intentions: age, race and parents' occupation. However, there are significant differences on students' entrepreneurship intentions based on their level of study. Various themes were developed to analyse students' written responses. The following themes amongst others were identified from students' written responses; practicals, guest lectures, interactive programmes and financial management.

Chapter eight that follows discusses the results in relation to the research objectives and hypotheses set out in the study.

CHAPTER EIGHT

DISCUSSION OF RESEARCH RESULTS

8.1 Introduction

Chapter seven presented results from data analysis. The chapter opened with a discussion of the study sample's demographic representation. A sample of 197 students was used for the study with the majority (88%) registered at the University of Kwa-Zulu Natal (UKZN). 51% of the respondents were female and the majority were of the Indian race (49%). A larger proportion of the students (53%) indicated that they registered for their entrepreneurship courses because it was a pre-requisite module and 79% of them were in their 3rd year of study. The results of the correlation analysis concluded that there is a positive significant relationship between entrepreneurship education and entrepreneurship intention ($r = .79$, $p < 0.01$). however, the regression analysis predicted that amongst entrepreneurship education, subjective norms and attitude towards entrepreneurship, subjective norms contribute the most to the development of students' entrepreneurship intentions ($B = .347$; $t = 3.785$; $p < 0.01$). The results of the study also concluded that students have a low level of entrepreneurship intentions ($M = 3.24$, $SD = .98$).

This chapter discusses the research findings in view of the objectives to be achieved in this study. The research findings are also discussed in view of results from past studies and contributions from various theorists.

8.2 Research Objectives and Hypotheses for the study

1. To investigate the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

2. To examine the entrepreneurship intentions of UKZN and DUT students.

3. To investigate the significant differences of UKZN and DUT students' entrepreneurship intentions based on demographic factors (head parent's occupation, level of study, age, race).

4. To investigate the role that entrepreneurship education can play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence UKZN and DUT students' entrepreneurial intentions.

5. To make recommendations to the entrepreneurship curriculum developers at UKZN and DUT based on students' perceptions on entrepreneurship education.

Hypotheses

H_a1: There is a positive significant relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

H_a2: There are significant differences in entrepreneurship intentions of UKZN and DUT students.

H_a3: There exist significant differences in UKZN and DUT students' entrepreneurship intentions based on gender.

H_a4: UKZN and DUT students with a higher level of perceived behavioural control are highly likely to engage in entrepreneurial activities.

H_a5: UKZN and DUT students who read/listen or look up for information about entrepreneurs and entrepreneurship have higher levels of entrepreneurship intentions than those who do not.

H_a6: UKZN and DUT students who attend extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus will have higher levels of entrepreneurship intentions than those who do not.

H_a7: Entrepreneurship education has a significant impact on UKZN and DUT students' entrepreneurship intentions compared to their attitude towards entrepreneurship and subjective norms.

H_a8: UKZN and DUT students' academic majors have a significant influence on their entrepreneurship intentions.

H_a9: UKZN and DUT students' awareness of government bodies/programs or private organisations that support entrepreneurial or small business development is positively correlated to their entrepreneurship intentions.

H_a10: There is a significant positive correlation between the degree UKZN and DUT students are registered for and their entrepreneurship intentions.

8.3 Discussion of research results

8.3.1 Research Objective 1: To investigate the relationship between entrepreneurship education and entrepreneurship intention amongst University of KwaZulu-Natal and Durban University of Technology students.

This study intended to investigate the relationship between entrepreneurship education and students' entrepreneurship intentions, which was its main objective. The results of this study concluded that there is a significant positive relationship between entrepreneurship education and students' entrepreneurship intention. These results confirm the researcher's expectations. An increase in entrepreneurship education is accompanied by an increase in students' entrepreneurship intention which implies that the more entrepreneurship education students receive, the more they intend to venture into entrepreneurship. It is highly likely in this case that students' intention to venture into entrepreneurial activities is increased by the knowledge, skills and expertise gained through entrepreneurship education. With the right entrepreneurial skills and knowledge such as the ability to come up with creative business ideas and draw up a business plan, identify opportunities and threats in the business environment through the SWOT analysis and source capital, students would feel confident to start a business venture which improves their entrepreneurship intentions. This can be best explained with the support of the perceived behavioural control construct of the Theory of Planned Behaviour developed by Ajzen (1991). According to this construct, individuals feel the urge to engage in a behaviour if they perceive more control of the situation and the opportunities outweigh the threats. Mwange (2018) gave a distinction between internal and external control factors that impact on behavioural performance and stated that positive behavioural change takes place when internal factors outweigh the external. In the case of this study's results which concluded a positive relationship between entrepreneurship education and entrepreneurship intention, students are more likely to engage in entrepreneurship as their skills, knowledge and abilities (internal factors) increase and outweigh the obstacles (external factors) they might face.

These results lend support to previous studies which established and concluded similar results. In a research designed by Ogbari et al. (2018) to ascertain the value of entrepreneurship education on aspiring entrepreneurs' performance amongst students from selected Universities across Nigeria, the results concluded a positive relationship between University entrepreneurship education and the performance of aspiring entrepreneurship. The Ogbari et al. (2018) study differs from the current one because the former study focused on the performance of aspiring entrepreneurs whilst the later focused on students' entrepreneurship

intentions. The context and sample of the two studies also differ significantly: the educational environments, University systems and entrepreneurship education Nigerian and South African students are exposed to are different. Nevertheless, the two studies focused on assessing the role played by entrepreneurship education towards the attainment of entrepreneurial behaviour, entrepreneurship intention is the best predictor of behaviour. The results of the current study therefore concur with the findings of the previous study. Ogbari et al. (2018) further concluded that entrepreneurship education enhances students' product development skills, this result was possible as the study focused on the actual entrepreneurial performance. In contrast, the current study could only theoretically confirm the level of students' entrepreneurial intentions, the practical aspect was not included which is a limitation that future studies could take note of. However, as a preliminary study at both institutions, the contribution of this study is significant at explaining entrepreneurship education and students' entrepreneurship intentions.

The findings of this study concur with those of Hou et al. (2019) who conducted a study to assess the contribution of four variables (entrepreneurial passion, entrepreneurship education, entrepreneurship self-efficacy and role models) on the entrepreneurship intentions of University students in the Pearl River Delta of China. The study concluded that there is a positive relationship between entrepreneurship education and students' entrepreneurship intention. Furthermore, the study explained that entrepreneurship passion is the best predictor of students' entrepreneurship intention amongst the four independent variables followed by entrepreneurship education (Hou et al., 2019). Similarly, even though the current study concluded a significant positive relationship between entrepreneurship education and students' entrepreneurship intention, it also found out that subjective norms are the best predictor of entrepreneurship intention. Whilst the two studies confirmed the significant role played by entrepreneurship education on students' entrepreneurial intentions, it is important that other interventions be implemented alongside entrepreneurship education for effective results. In the case of Hou et al. (2019), interventions that focus on building entrepreneurship passion must be implemented whilst in the case of this study, interventions around the subjective norms must be implemented. Regardless of the context, the two studies' contribution to entrepreneurship education is significant, they point to the need for Universities to see entrepreneurship education as the foundation for entrepreneurial intention and therefore consider a well thought out and highly structured entrepreneurship curriculum.

Ozaralli and Rivenburgh (2016) conducted a study on the impact of the following factors on American and Turkish students' entrepreneurship intentions; social (experience and

education), societal (economic and political) and personal factors (optimism, innovativeness, risk-taking propensity and competitiveness). The findings of their study contrasts with those of this study together with the Hou et al. (2019) and Ozaralli and Rivenburgh (2016) studies. Ozaralli and Rivenburgh (2016) did not find a significant positive correlation between entrepreneurship education and entrepreneurship behaviour. The authors stated that their results confirmed that studying courses in entrepreneurship did not have a significant impact on American and Turkish students' entrepreneurship intentions. To explain their findings, Ozaralli and Rivenburgh (2016) applied Kirby's (2004) theory which purports that entrepreneurship courses only teach students *about* entrepreneurship not *for* entrepreneurship. In other words, the authors were of the opinion that entrepreneurship education only introduces students to entrepreneurship such that they know about it but cannot practice it; it focuses on the theoretical and not the practical aspect of entrepreneurship. Ozaralli and Rivenburgh (2016) findings could be in line with a popular proverb which says, "Entrepreneurs are born not made", meaning for one to be an entrepreneur it is something they have to be born with.

Similarly, Johannisson (1991: 79) suggested that "to teach individuals to become not only more enterprising but businessmen as well is an undertaking that in both time and scope is beyond the capabilities of an academic business school". Of particular interest is that Johannisson (1991) highlighted that regardless of time and scope, people are not taught to be businessmen therefore entrepreneurship cannot be taught. The author claims empirical evidence from the Swedish environment points to the fact that for an individual to venture into business, qualified experience and social skills are more crucial to success than formal education (Johannisson, 1991). The argument therefore implies that formal entrepreneurship education which is the focus of this study does little in providing students with practical entrepreneurship skills. Furthermore, Ozaralli and Rivenburgh (2016) findings can be attributed to students' personal factors such as career choice and attitude towards entrepreneurship which are further influenced by factors such as personality and family background. Some students feel they are introverts and they cannot handle the adjustments that come with entrepreneurship education, such as networking and travelling.

Bux and Van Vuuren (2019) conducted a study on the relationship between entrepreneurship intervention programs and self-efficacy amongst South African high school students (ages 15 to 18). The study concluded that there is a positive relationship between entrepreneurship intervention programs in the form of entrepreneurship education and self-efficacy. The authors identified self-efficacy as a good predictor of entrepreneurship education and sought to assess

the influence of entrepreneurship education in its development. Even though the sample used for that particular study is somewhat different from the current study sample, there is an overlap on the age groups of the study participants, the majority of respondents in the current study were aged between 16-25 years and both samples are from the South African environment. These findings therefore help explain the results of this study in that entrepreneurship education is effective in positively influencing self-efficacy which in turn influences behavioural change. The following two items were included in the self-efficacy scale used by Bux and Van Vuuren (2019: 7), "I believe that I have acquired the required knowledge and skills to become an entrepreneur through the programme and I will seek further knowledge and skills through other entrepreneurship education if the programme does not fulfil this need". The two scale items were theoretically sufficient in measuring the intention or readiness of students to become entrepreneurs but could not further explain a positive behavioural change. If after the entrepreneurship intervention programmes behaviour was assessed to check if there were any positive changes the contributions of the study in explaining entrepreneurship behaviour would be more significant. Limitations identified in the current study are therefore equally evident in this study. However, the significant role played by entrepreneurship education as highlighted by Bux and Van Vuuren (2019) cannot be ignored.

In a similar study conducted by Manyaka-Boshielo (2019) to evaluate the influence of entrepreneurship education in township communities in South Africa, it was concluded that entrepreneurship education has a positive significant impact on the entrepreneurial behaviour of the township residence. The study further explained that entrepreneurship education is effective in developing self-efficacy a finding which substantiates the results of Bux and Van Vuuren (2019). Of interest however is the fact that Manyaka-Boshielo (2019)'s findings concluded that entrepreneurship education is rather a 'preparatory function' for individuals looking forward to launching new business. Whilst it can be acknowledged that entrepreneurship education gets people started in business, the study did not indicate the degree of its sufficiency in preparing them to become successful businessmen and entrepreneurs who can sustain long term businesses. The study also did not specify whether people are prepared in terms of gaining business knowledge or practical skills of running a business.

Kirby (2004) posited that the traditional education system inhibits rather than grows the vital traits and skills required to establish entrepreneurs and suggests that if entrepreneurs are to be established, significant variations are mandatory in both the content and process of learning. In light of the observation made by Kirby (2004), it can be noted that the results of the study

conducted by Manyaka-Boshielo (2019) are not sufficient in explaining whether entrepreneurship education was found to be doing more than just preparing individuals to venture into business. It would make a significance difference if the entrepreneurship behaviour of the township communities can be traced to assess the degree to which entrepreneurship education contributed to the development of successful businessmen. Nevertheless, the contribution of entrepreneurship education in this study cannot be ignored as positive entrepreneurship behavioural change was detected in the township communities which led to a positive significant influence being confirmed for this study.

The findings of this study which concur with past studies (Bux & Van Vuuren, 2019; Hou et al., 2019; Manyaka-Boshielo; Ogbari et al., 2018) suggest the need for higher education institutions to focus their attention more on entrepreneurship education. As shown by literature, entrepreneurship education is meant to equip students with the correct skills and knowledge of entrepreneurship and therefore its design and structure must be carefully considered. Entrepreneurship education must be set to achieve the objectives highlighted in this study and others as identified by the institution. The study of context and institutional and environmental factors is significant for the implementation of context-specific entrepreneurship education. Focus must be on the exact needs of the students, these must be investigated and taken into consideration when designed entrepreneurship education curriculum. The researcher believes there is no-one-size fits-all panacea when it comes to entrepreneurship education. Students display different characteristics, learning patterns and needs and they are exposed to different business environments post-graduation, and higher education institutions must take these factors into account when designing their entrepreneurship education. The goal is to come up with a curriculum that is best suited for the students' entrepreneurial development.

8.3.2 To investigate the level of entrepreneurship intentions of UKZN and DUT students.

The study sought to investigate the level of the UKZN and DUT students' entrepreneurship intentions. The study concluded that there are low levels of students' entrepreneurship intentions (M= 3.24; SD= .98). These outcomes differed from what the researcher expected as students sampled in this study were or had taken entrepreneurship courses and expected higher levels of entrepreneurship intentions. Data from the Global Entrepreneurship Monitor South Africa Reports indicates that entrepreneurship intentions of the South African adult population (18-64 years) have been low compared to the Africa region average from as far back as 2008. Between 2008 and 2019, the South African adult population recorded an entrepreneurial

intention level above 15% in only three years; 2008 (16.9%), 2010 (19.6%) and 2013 (15.4%) (Herrington and Kew, 2018). Data from the most recent Global Entrepreneurship Monitor South Africa report (Bowmaker-Falconer and Herrington, 2020) shows that entrepreneurial intentions for the adult population in 2019 was 11.9% compared with a regional and global averages of 40% and 23.7% respectively. However, the GEM SA Report 2021/2022 indicated that the entrepreneurial intentions of the South African adult population in 2021 was 20%. Compared with the Africa region 2021 average of 40.6%, South Africa's entrepreneurship intention is still low. The researcher expected this trend to change for the better as university students who are regarded as part of the adult population in South Africa are exposed to entrepreneurship education through their formal entrepreneurship courses together with seminars and workshops in workshops. Could it be the results of this study are confirming Johannisson's (1991) commentary which stated that teaching entrepreneurship cannot be achieved by a business school, or the low levels of students' entrepreneurship intentions point to the need for an upgrade of entrepreneurship education in universities? On the other hand, students could be accustomed to the learn and earn theory where they believe they have to look for employment post-graduation.

Compared with results from past studies, the researcher identified both similarities and differences. In a study conducted by Oni and Mavunyangwa (2019) on the entrepreneurial intentions of students from a previously disadvantaged University in South Africa, students from four faculties were used: health sciences, management and law, humanities and science and agriculture. The findings of the study confirmed higher levels of entrepreneurial intentions amongst students from the faculty of management and law. Furthermore, the results pointed to the significant differences between entrepreneurial intentions of students registered in the different faculties. Students from the management and law faculty recorded higher levels of entrepreneurial intentions whilst those from the health sciences, humanities and sciences and agriculture recorded low levels (Oni & Mavunyangwa, 2019). The results of Oni and Mavunyangwa (2019) study contrast with those of the current study. Students from the college of law and management studies and faculty of management sciences were used for this study and were found to be without much entrepreneurship intention. The samples used for Oni and Mavunyangwa (2019) study and the current study were drawn from different Universities and were therefore exposed to different courses and entrepreneurship education; it would therefore be difficult to make comparisons. However, what is important to note is that students from Oni and Mavunyangwa's (2019) study were exposed to entrepreneurship education that was

significant enough to develop entrepreneurial intent in them and thus they recorded higher levels than students from the other faculties. It would however be helpful if students' from the management and law faculty entrepreneurial intentions levels were known prior to exposure to entrepreneurship education to have a better understanding of its significance. Similarly, the current study could have also taken into consideration students from different faculties or colleges such as health sciences and agriculture, engineering and science to identify differences in students' entrepreneurial intentions.

In a study conducted by Bux and Van Vuuren (2019) to measure the impact of entrepreneurship education on students' self-efficacy, the results of the study indicated that students who were exposed to both long and short-term entrepreneurship intervention programmes recorded higher levels of entrepreneurship intentions. The findings of this study are contrary to those of the current study which concluded a low level of entrepreneurship intentions amongst students. Interesting to note is that Bux and Van Vuuren (2019) noted significance differences between the two groups of students, those exposed to longer term entrepreneurship intervention recorded higher entrepreneurial intention levels. The difference between the findings of the current study and those of Bux and Van Vuuren (2019) could be due to the fact that the entrepreneurship interventions administered to students in the later study were targeted to achieve specific objectives. Furthermore, the time between the administration of the entrepreneurship intervention programs and the study was taken could have been short and therefore students' minds were inclined to entrepreneurship and entrepreneurial activities. Different results could have been achieved if targeted entrepreneurship intervention programs were not administered and the study was just based on the formal entrepreneurship education they received. However, entrepreneurship education provided to University students must also be targeted to achieve specific objectivities such as creativity and innovation and risk taking. Bux and Van Vuuren's (2019) study could therefore serve as a benchmark for this and future studies, entrepreneurship education administered to students ought to achieve its objectives of preparing and developing students for entrepreneurship.

8.3.3 Significant differences between UKZN and DUT students' entrepreneurship intentions based on gender.

The study sought to determine the influence of gender on students' entrepreneurial intentions. It was hypothesised that there were significant differences in the entrepreneurial intentions of UKZN and DUT male and female students. The findings of the study indicated that there are

no significant differences on students' entrepreneurial intentions based on gender therefore the alternative hypothesis was rejected contrary to the study's predictions as well as past studies (Ahmed et al., 2010; Farrington et al., 2012; Fatoki 2014; Herrington et al., 2017; Kakkonen, 2010; Ndofirepi, 2016; Ndofirepi, Rambe and Dzansi, 2018). The intention to engage in entrepreneurial activities is expected to develop in individuals regardless of gender, and entrepreneurs can be male or female.

Despite females taking an active role in entrepreneurship, literature has consistently revealed and concluded men to be more entrepreneurially active than women. According to the Global Entrepreneurship Monitor (2018/2019) Report on Women's Entrepreneurship, the global average for women's intentions to start a business was 17.6%, four points down from men (Elam et al., 2019). Furthermore, the report indicated that 39.1% of women as compared to 42.5% of men believed starting a business was easy (Elam et al., 2019). Similarly, the GEM 2022/2023 global report indicated that in many countries, male TEA is above that of women. However, the World Bank (2021) reported an increase in female entrepreneurship in developing countries citing that in the 8 million to 10 million formal small and medium enterprises (SMEs) there is at least one female entrepreneur. These figures show the increasing participation of women in entrepreneurship which makes gender an insignificant variable for predicting entrepreneurship intentions and entrepreneurship activities as confirmed by the current study.

The findings of this study support the Total early-stage entrepreneurial activity (TEA) rates amongst women and men reported in the Global Entrepreneurship Monitor South Africa Reports. The GEM South Africa Report (2016/2017) concluded that female entrepreneurship activity is lower than males (Herrington et al., 2017). A look at the TEA rates for both males and females from 2001 to 2016 in South Africa shows that the female entrepreneurship activity rate has always been lower than male including the Africa region (Herrington et al., 2017). Bowmaker-Falconer and Meyer (2022) reported that in 2021, male and female TEA rates were 18.2% and 16.2% respectively confirming that men are more entrepreneurially active than women.

In a study conducted by Brand South Africa in 2017, the findings reported a significant increase in women's entrepreneurship activity over the years 2015, 2016 and 2017 from 35% to 31% to 47% respectively. Even though a positive shift was identified in this study, it only focused on the female activity and therefore no comparisons can be made with the male category.

However, the study is consistent with the results of this study which confirmed insignificant differences between male and female students' entrepreneurial intentions. There is a general shift in women and men's roles: what was previously said to be men's jobs can now be equally done by women and entrepreneurship is no exception. Furthermore, the same entrepreneurship education is exposed to both male and female students therefore it would be expected to have the same effect on their entrepreneurial intentions. The results of this study could also be explained by the need for women to achieve what they desire and need. Castrillon (2019) stated that more women are becoming entrepreneurs largely because of the need to follow their passion and have more control of their own future. The passion to establish a successful business develops in individuals regardless of gender. There are successful female entrepreneurs such as Kylie Jenner of Kylie Cosmetics and Kylie Skin, Cher Wang of HTC Corporation, Huda Kattan of Huda Beauty and Yang Lan of Sun Media Group from whom young female individuals draw inspiration; therefore their growing intention to venture into entrepreneurship would be equal to men.

The findings of this study differ with those of various other studies (Ahmed et al., 2010; Farrington et al., 2012; Fatoki 2014; Herrington et al., 2017; Kakkonen, 2010; Ndofirepi 2016; Ndofirepi et al., 2018) which sought to investigate gender differences on entrepreneurial intentions and found significant differences. In a study conducted by Malebana (2015) on final year undergraduate commerce students from two rural Universities in Limpopo and the Eastern Cape in South Africa, the findings revealed significant differences between entrepreneurship intentions and gender where male students recorded higher scores than females. This study took place in the same context as the current study, but the samples were drawn from different universities and set ups. The findings from this study add to the many aforementioned studies that concluded significant differences between male and female students on their entrepreneurship intention scores and contradictory to the current study.

In a research designed by Ndofirepi et al. (2018), the findings concluded significant differences on entrepreneurship intention and its antecedents (subjective norms, attitude towards entrepreneurship, perceived behaviour control) based on gender amongst Central University of Technology students, contrary to the current study. As in this study, the students from the university were attending a compulsory entrepreneurship course. In support of their findings, Ndofirepi et al. (2018) purported that their results could be in line with the popular belief that entrepreneurship is best seen as a masculine activity. With the changing gender roles, position and status of women in South Africa and the world at large, one would expect entrepreneurship

to be embraced by each gender equally, which is what is portrayed in this study. Today's women are being taught to be leaders and to take up space in societies, the same is happening in entrepreneurship.

8.3.4 Significant differences of UKZN and DUT students' entrepreneurship intentions based on race.

The study sought to investigate if there are significant differences on students' entrepreneurship intentions based on race. The study concluded that there are no significant differences on students' entrepreneurship intentions based on race. Race is not a measure of entrepreneurial intentions and cannot predict the extent to which students would want to engage in entrepreneurial activities. Contrary to the findings of this study, the Global Entrepreneurship Monitor South Africa Report (2017/2018) (Herrington and Kew, 2018) highlighted significant differences in TEA rates amongst black Africans, coloured, whites and Indians aged between 18-64 in South Africa. According to Herrington and Kew (2018), Black Africans recorded the highest TEA rate amongst the four racial groups indicating that they venture into entrepreneurship more than the other race groups. For example, in 2017, 65.7% of TEA activity in South Africa was by blacks Africans and was opportunity driven, followed by White (3.8%), Coloured (3.5%) then lastly Indian (1.9%). According to Bowmaker-Falconer and Meyer (2022), in 2021, TEA for Africans was 18.9% whilst for Indians was 15.4% supporting significant differences in entrepreneurship activities based on race.

The huge differences between these statistics cannot be ignored. These trends could be explained by the need for the previously disadvantaged societies to venture into entrepreneurship and create employment, upgrade their societies and achieve what they could previously not achieve. Recently, there has been a move towards the black population from previously disadvantaged backgrounds and those who used to work for others starting their own companies and employers rather than employees.

8.3.5 Significant differences of University of KwaZulu-Natal and Durban University of Technology students' entrepreneurship intentions based on age.

The study sought to investigate the influence of age on University of KwaZulu-Natal and Durban University of Technology's students' entrepreneurship intentions. The findings of the study indicated that there are no significant differences on students' entrepreneurship intentions

based on age. The findings of the study could be based on the fact that venturing into entrepreneurship does not need one to reach a certain age. People develop the intent to become entrepreneurs and start businesses at different age groups, some as teenagers, some in their early or late twenties and some in their old age. What matters most when it comes to entrepreneurship as evidenced by the results of this study is the availability of opportunities and resources, the skills and knowledge, a positive attitude and intention and support from those around the individual. A good example of entrepreneurs who started companies at ages that are significantly different is Colonel Harland Sanders who started the Kentucky Fried Chicken (KFC) company at the age of 65 in 1952 and Mark Elliot Zuckerberg founder and Chief Executive Officer (CEO) of Facebook who started Facebook at the age of 20 in 1984. Seid (2019) stated that Colonel Sanders did not believe in the popular saying 'the future belongs to the young' and sought to achieve his dream. This is what is basically explained by the results of this study, individuals can venture into entrepreneurship at any age, the intention to do so is regardless of age.

The results of this study differ from the trends reported in the Global Entrepreneurship Monitor Reports. The Global Entrepreneurship Monitor Global report (2017/18) reported that similar trends on the effect of age on entrepreneurial activity are noted over the years with the highest rates recorded amongst the 25–34 and 35 –44 age groups (Global Entrepreneurship Research Association (GERA), 2018). According to Bowmaker-Falconer and Meyer (2022), in 2021, the TEA rate for the 18-24 years age group was 19.3% compared to 15.1% of the 55-64 years age group. These trends are contrary to the results of this study which concluded no significant differences on entrepreneurship activities by age. Global Entrepreneurship Monitor South Africa Report (2017/2018) reported that in 2017 the 25-34 (14.5%) years age group recorded the highest level of entrepreneurship activity and the 55-64 years recorded the least (7%) (Herrington and Kew, 2018). The difference observed amongst these two age groups is large enough to conclude significant differences in entrepreneurship activity by age which is contrary to the findings of the current study. These differences can be attributed to the point that the Global Entrepreneurship Monitor Reports include individuals from 18 to 64 years as the adult population whilst the students who participated in the current study were between the ages of 16 to 45 therefore differences on their entrepreneurship scores were insignificant. Furthermore, it is generally believed that as people grow older, they become less active and look forward to retirement and staying at home. For example, in South Africa and Zimbabwe, the retirement

age is approximately 60 years and it is rare that you would expect someone to think of starting a company and sustain it after retirement.

In a study conducted by the Seed Academy in 2017 with more than 1 200 entrepreneurs in South Africa, it was concluded almost half (45%) of the sample belonged to the 25 to 34 years age group whilst only 12% belonged to the 16-24 years age group (Brands South Africa, 2017). The results of that study show significant differences in entrepreneurial activity based on age which is contrary to the findings of the current study. The differences in the findings of that study could be attributed to the fact that the Seed Academy focused on individuals who are already entrepreneurs whilst this study focused on students' entrepreneurial intentions which can change at any time during the course of their studies or after finishing their tertiary education programs. Students' perceptions of their ability to venture into entrepreneurship might change resulting in the younger ages thinking they might not be able to handle the pressures and challenges that come with being an entrepreneur. Future research conducted on a broader scale is vital to know the distribution of entrepreneurship intention in South Africa by age. It is important to note whether entrepreneurship intentions decrease by age or they remain consistent, as this information is important for both higher education institutions in this study, policy makers and the government. Higher education institutions would need to know if there is a need for entrepreneurship education courses and interventions targeted for the elderly and where to focus their attention. The government would also need to know if they are to focus their programs, especially those to do with financial support on the youth only or that the elderly must be included in such programs and also receive financial and material support as they are potential entrepreneurs.

The findings of this study are inconsistent with various past studies which concluded that there are significant differences on entrepreneurship intention scores based on age (Hatak, Harms, and Fink, 2015; Kautonen, 2008; Levesque and Minniti, 2006; Weber and Schaper, 2004). However, the results are consistent with Chaudhary (2017) who conducted a study with students from two Universities in India and concluded that there is insufficient statistical evidence to confirm that age has a positive impact on entrepreneurship intentions. Even though this study was conducted in a different context (Indian) the same samples of University students were used and the former study provides good support for the current study. Chaudhary (2017) argued that Universities are good sources of potential entrepreneurs therefore students made a good sample for the study which is similar to the current study. The studies could however have been conducted on a larger scale with more than two Universities to have a better

perspective of the role age plays in students' perceptions of their intentions to venture into entrepreneurship.

In a study conducted by Nguyen (2018) on the impact of demographic factors (gender, age ranges and education level, family background include parents' employment status and parents' immigrant status) on the entrepreneurship intention of Vietnamese business students, the findings reported no significant differences between age and students' entrepreneurial intentions. The findings are consistent with those of the current study however it is important to take into consideration the age group of the study sample. Moreover, there is need for further research to be conducted as it is immature at this stage to conclude that the impact of age on entrepreneurship intentions is insignificant more especially given that most past studies confirmed significant differences.

In a study conducted by Hatak et al. (2015) on the impact of age and job identification on the entrepreneurial intentions of the Austrian adult workforce, the results of the study indicated significant differences on the entrepreneurial intentions of the workforce based on gender. Hatak et al. (2015) purported that according to their findings, older employees reported lower levels of entrepreneurial intentions as compared to the younger ones. These findings are consistent with the general assumptions in many contexts including South Africa, the elderly especially 60 years and above are expected to retire or resign from work and create space for the young in organisations. However, Deeb (2015) suggested that age is not a determinant of entrepreneurship success, but experience is, and the general assumption is that the older someone gets the more experienced they become.

8.3.6 Significant differences of UKZN and DUT students' entrepreneurship intentions based on level of study

The study to understand significant differences in entrepreneurship scores based on their level of study. The findings revealed that there were significant differences on students' entrepreneurship scores based on their level of study. 1st year scores differed significantly from 2nd year scores whilst 2nd year scores differed significantly from 3rd year scores. 1st year students recorded the highest level of entrepreneurship scores followed by 3rd year students. The students' entrepreneurship scores would be expected to increase as they progress from 1st to 3rd year, however in this study the 1st year students recorded the highest scores. It is possible that some 1st year students were exposed to entrepreneurship education or information prior to joining University. Some high schools offer subjects in business studies, conduct career

exhibitions whilst some access entrepreneurship information from other sources such as the internet and business magazines. Some students have role model entrepreneurs who inspire them such that they develop an entrepreneurship mindset prior to joining University. Furthermore, students registered for a one-year diploma programme would have taken the programme to enhance their entrepreneurship development which was already established in them. The diploma programme would be for the purpose of getting a qualification in line with the entrepreneurship career they would want to pursue.

3rd year students would be expected to have the highest entrepreneurship intention scores as they would be in their exit stage of their studies and expected to choose a career to pursue after graduation. Furthermore, students' entrepreneurship intentions would be expected to increase as they progress with their studies from 1st to 3rd year. In a study conducted by Terjesen et al. (2016), the findings concluded that individuals with a higher level of education are more likely to start social ventures as compared to those with lower levels of education. Terjesen et al. (2016) argued that a higher level of education enables individuals to come up with innovative solutions that would rectify the failures in the market and are more willing to venture into social entrepreneurship. The study by Terjesen et al. (2016) did not specify the educational level that would make individuals want to venture more into social entrepreneurship, however it did highlight the significant differences in entrepreneurship will based on educational level which makes the findings similar to this study. What can be important to note is that the study by Terjesen et al. (2016) was conducted using a sample of female participants, the variable of educational level could therefore have a different implication on the samples as compared to the results of the current study which had both female and male participants.

Important to note however, is the impact of educational level, and the findings of this study together with Terjesen et al. (2016) imply that the more educated individuals get, the more likely they are to venture successfully into entrepreneurship. Entrepreneurs are expected to display critical thinking and innovativeness and these traits are usually associated with an individual's level of education. Therefore, the more education they get the more they are expected to be successful in their careers as entrepreneurs.

Contrary to the findings of this study, Kakkonen (2010) concluded that there are no significant differences on students' entrepreneurial attitudes and intentions based on level of study. "The development of entrepreneurial attitudes did not differ between the different academic study groups or between the different years of study, but remained almost the same" (Kakkonen,

2010: 43). Kakkonen (2010) further argued that entrepreneurship education does play a role in creating entrepreneurial awareness and knowledge, but it does not contribute to the development of students' entrepreneurial intentions. It is probable that Kakkonen's (2010) views were founded on Kirby's (2004) theory which was centred on the notion that entrepreneurship education teaches students about entrepreneurship not for entrepreneurship. Entrepreneurship education is therefore regarded in this case as satisfying the first objective of communication, that is *informing* students about entrepreneurship but does little or nothing in satisfying the second objective of communication, that is *persuading* students to venture into entrepreneurship. Kakkonen (2010) further stated that it is probable that students develop a negative perception towards entrepreneurship as they progress from one level of study to another. The researcher somewhat agrees with Kakkonen (2010) because as can be seen from the results of this study, 2nd year students (M= 44.70, SD= 18.32) reported entrepreneurship intention scores lower than those of 1st year students (M = 59.56, SD= 12.71) displaying a much wider gap. Kakkonen (2010) however did not provide further explanation to support the decreasing students' entrepreneurship attitudes and intentions as they progress to the next level of study. A poorly structured entrepreneurship course can impact negatively on students' entrepreneurial attitudes and intentions so that the previously higher entrepreneurial intentions might reduce.

Ahmed et al. (2010) reported findings similar to this study's. Ahmed et al. (2010) reported that the year of study accurately predicated students' entrepreneurial intentions. Furthermore, Ahmed et al. (2010) stated that senior students displayed higher levels of entrepreneurial inclination as compared to junior students. In their argument, Ahmed et al. (2010) stated that senior students have more knowledge of entrepreneurship and exposure therefore they have higher levels of entrepreneurship intentions. This explanation is true to some extent regarding the current study, 3rd year students (M =56.87, SD= 15.70) were more entrepreneurially motivated than 2nd year students (M= 44.70, SD= 18.32) however, 1st year students reported entrepreneurship intention scores (M= 59.56, SD= 12.71) better than the 2nd and 3rd year students. These results call for better and more advanced entrepreneurship courses/modules as students progress from the 1st to the 3rd year of study. To start with, entrepreneurship modules must be offered at all levels of study. This is also supported by the results from students' written responses. An extract from students' written responses stated that *"Entrepreneurship should be taught at all levels"* whilst another stated that *"I think there should be another more advanced module and entrepreneurship cause I feel as if just the one module was more of the*

basics". This is evidence to the fact that students did not feel challenged with the entrepreneurship education received, therefore they felt the need for a more engaging and advanced module as they progressed with their next level of study. This is also in line with the general assumption that as one progresses with their studies, the harder it becomes. A senior level course is usually more difficult than a junior level one and requires a higher level of critical thinking.

For most modules/courses, the final year of study includes experiential learning so that they can be given a chance to apply what was learnt in the classroom thereby learning through both theory and practice. For example, the Women's University of Africa (WUA) in Zimbabwe offers the four-year Bachelor of Science Honours Degree in Management and Entrepreneurial Development Studies, specialising in either banking and finance or management and marketing. For the 1st and 2nd year, students do the classroom lectures then in the 3rd year they go for an attachment or experiential learning for the whole year in an organisation of their choice then they go back to complete the programme after the attachment. In this way, students are given the platform to apply their knowledge and theories learnt, interact with industry experts and gain practical exposure from the field. Therefore, their knowledge of the subject, in this case entrepreneurship, would be different from those of 1st and 2nd year students, and even better when they return to college in their final year of study as 4th year students.

Farrington et al.'s (2012) findings corroborate the results of Terjesen et al. (2010), Ahmed et al. (2010) and the current study. In their study on undergraduate students registered for Business modules at Nelson Mandela Metropolitan University (NMMU), Rhodes University and Stellenbosch University in South Africa, Farrington et al. (2012) concluded that there are significant differences on students' entrepreneurship intentions based on their level of study. Furthermore, they stated that according to their study, 2nd and 3rd year students displayed a higher intention to start and run their own business ventures as compared to 1st year students. The results of this study are in part related to the current study, however for the current study, 2nd year students did not show higher entrepreneurship intentions as compared to 1st year students. Farrington et al.'s (2012) sample was made up from undergraduate students, that is 1st to 3rd year students, similar to the current study. It is therefore premature at this stage to confirm and conform to the results of this study because only a sample of undergraduate students was used. Further research can be conducted using both undergraduate and postgraduate students. For example, some students can be taken from the honours and masters programmes or from the post graduate diploma programmes. In that way, researchers would

have better informed results on the significant differences between students' entrepreneurship intentions based on their levels of study. The results would then provide empirical and practical evidence to support the development of senior level or post-graduate entrepreneurship courses. Some students venture into entrepreneurship after their undergraduate studies then decide to go back to University to improve their entrepreneurial knowledge and capacity. Therefore, post-graduate entrepreneurship courses must be designed to provide these students with the advanced entrepreneurship knowledge they need. It is not rare to find an owner of a successful business enterprise registering for an entrepreneurship course at a University; he would be experienced when it comes to running a business, but he would be looking forward to broadening his knowledge and expertise in the field. Universities must therefore be prepared to cater for these students. If an entrepreneurship course that covers just the basic information is offered to them, then no justice would have been done to these students who already possess the basic knowledge but are looking for specialisation in the field. This then calls for the introduction of structured entrepreneurship degrees that offer entrepreneurship subjects from 1st year to their exit level. For example, the RMIT and Torrens University in Australia offers the Bachelor of Business Entrepreneurship and University of Adelaide offers the Bachelor of Innovation and Entrepreneurship. These are programmes offering a fully-fledged entrepreneurship degree, one would expect students' entrepreneurial intentions to increase as they progress from one level to the other.

8.3.7 Significant differences in students' entrepreneurship intentions based on head parent's occupation.

The study sought to investigate significant differences on students' entrepreneurship intentions based on the head parent's occupation. The study found no significance differences. The family environment was identified by various authors (Aldrich and Cliff, 2003; Fatoki, 2015; Herdjiono et al. 2017; Lindquist et al. 2015) as playing a role in developing entrepreneurial intentions, hence the researcher sought to understand its role amongst UKZN and DUT's students' entrepreneurial intentions. There are businesses that are family run, so that the business is passed down from generation to generation, when the founders pass on or retire, the business is passed down to the younger generation for continued operation. The concept of socialisation is important in understanding family environment as a predictor of entrepreneurship intention; individuals can easily learn from those around them.

Soetanto et al. (2010: 25) stated that "there is strong evidence that parents become role models for their children, and that entrepreneurial parents give their children an opportunity to engage in business". What is important to note from Soetanto et al.'s (2010) contribution is that entrepreneurial parents practically introduce their students into the entrepreneurial field. The concept of family learning can be best used to explain this process. Family members engage in some kind of learning over time, and in the same way children with entrepreneurial parents learn to be entrepreneurs. Children and students with parents employed in the corporate world or public sector usually grow up with the mentality that upon graduation they need to be employed and work for someone. However, it is not always the case as some children learn through other people such as their lecturers, employers, colleagues, internet role models and relatives. Soetanto et al. (2010) confirmed the findings of Shane (2003) and Wang and Wong (2004) which also stated that entrepreneurial parents positively influence their children's entrepreneurial intent. These findings have been consistent for almost two decades across different samples and contexts showing the significant role played by parents and guardians in grooming their children for business. Ahmed et al., (2010) findings substantiate those of Shane, (2003); Wang and Wong, (2004) and Soetanto et al. (2010): the authors concluded a significant relationship between family business and students' entrepreneurial intentions. To explain their findings, Ahmed et al. (2010) posited that when there is evidence of family business experience, students exhibit higher levels of entrepreneurship intentions and are mostly prepared to become entrepreneurs.

Similarly, Ariff et al. (2010) stated that most students in their sample indicated that family members play a significant role in urging them to pursue entrepreneurship. However, this study did not specify whether the family members in question own business ventures or that they were employed in the private or public sectors. Nevertheless, the study contributes to the literature confirming the significant contribution of family members in students' entrepreneurial intentions. These results suggest that parents must take the processes of family learning and social interaction seriously in developing their students for entrepreneurship. The model of the entrepreneurial university acknowledges the role played by the community to support entrepreneurship development; the family is part of the community and ought to play an instrumental role in supporting their children for entrepreneurship. Moreover, entrepreneurial parents can contribute significantly as they have the platform to provide on the job learning experience to their children, children can assume roles in the family business and be included in the planning and decision-making processes. They can be involved in the

business meetings and take up major roles that required them to walk the walk of an entrepreneur. Mr Chrimson Mandizvidza a successful Zimbabwean businessman when speaking about how he ventured into entrepreneurship mentions how he started working in his father's business at the age of fourteen. He gives credit to his late father who introduced him into business and groomed him, at the age of sixteen he had an opportunity to work as his Personal Assistant (PA).

Contrary to the aforementioned findings, Kakkonen (2010: 43) stated that "the existence of an entrepreneur in the core family or even among acquaintances, had no significant influence on the perceived entrepreneurial intention of the students". These results are similar to the findings of the current study which concluded no significant differences on students' entrepreneurial intentions based on their head parent's occupation. Farrington et al. (2012) also concluded that there is no significant relationship and differences on students' entrepreneurial intentions based on the self-employment status of their parents. The authors further posited that whether students choose to venture into entrepreneurship or not, it has nothing to do with their parent's employment status. Parents might not be doing enough to motivate their children into entrepreneurship or the popular adage which says *"an apple does not fall far from its tree"* just might not be working in this case. Students can have their own career path which is different from their parents'. Parents can provide guidance and leadership, but they cannot force their children into a career they are not comfortable with. However, as confirmed by previous studies, the role of family and parent's occupation cannot be underestimated when it comes to developing students' entrepreneurial intentions.

8.3.8 What role can entrepreneurship education play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence University of KwaZulu-Natal and Durban University of Technology students' entrepreneurial intentions?

The study sought to investigate the role played by entrepreneurship education compared to the attitudes towards entrepreneurship and subjective norms. Ajzen (1991) recognized the role of personal attitude towards behaviour and subjective norms in influencing behaviour. Similarly, intention which is in turn influenced by personal attitude towards behaviour and subjective norms was recognised in the Theory of Planned Behaviour as a good predictor of behaviour. The study concluded that subjective norms is the best predictor of entrepreneurship intentions, and that entrepreneurship education comes after subjective norms. Even though entrepreneurship education is a good predictor of students' entrepreneurship intentions as

indicated by this study, subjective norms can predict entrepreneurial intentions better than entrepreneurship education. People that are close to an individual play a significant role in influencing their entrepreneurial intentions. An individual's family, friends, lecturers, colleagues and associates play an important role in influencing their entrepreneurial intentions according to the concept of subjective norms. This study found no significant differences between students' entrepreneurial intentions based on their head parent's occupation, however literature (Ahmed et al., 2010; Aldrich & Cliff, 2003; Fatoki, 2015; Herdjiono et al., 2017; Lindquist et al., 2015; Soetanto et al., 2010; Shane, 2003; Wang and Wong, 2004) explains the positive influence of family and the entrepreneurial family on children's and students' entrepreneurial intentions.

Significant people in students' lives must be aware of and acknowledge the role they are required to play in the development of students' entrepreneurship intentions. Lecturers and educators can assume roles that are beyond teaching, they can act as mentors or advisors to students regarding entrepreneurship. This can be achieved by listening to the entrepreneurial needs of students and working together with the department and University leadership to address these needs and come up with practical solutions. For example, the results of the written responses indicated that students need experienced entrepreneurs with success or perseverance stories to come as guest lecturers and speak to them about entrepreneurship. It is the role of lecturers to help identify those key entrepreneurs who can provide students with entrepreneurship knowledge and experience from a different perspective.

In a study conducted by Ozaralli and Rivenburgh (2016) on entrepreneurial intentions of USA and Spain students, the study found out that students had positive attitudes towards entrepreneurship but low levels of entrepreneurship intentions. To support these findings, the study further stated that students expressed the insufficiency of entrepreneurship education in developing their entrepreneurship intentions and highlighted the need for more education and training on entrepreneurship. The results of Ozaralli and Rivenburgh (2016) equate to the results of this study, even though entrepreneurship education was found to be significantly correlated with entrepreneurship intention, it plays a lesser role compared to attitudes towards entrepreneurship and subjective norms. Furthermore, students expressed their concerns with their entrepreneurship education and cited the need for improvements more especially on the practical end of learning. Students requested practical assignments and exercises, guest lecturers, more advanced entrepreneurship modules that do not just focus on the basics and the need for more education of specific areas of entrepreneurship education, such as financial

management and business plans. Such findings point entrepreneurship education curriculum developers to the critical points of improvement and it is up to individual institutions to provide an augmented curriculum best suited to the needs of their students.

In a study conducted by Muhammad et al. (2015) on entrepreneurial intentions amongst Nigerian University students, the study concluded that attitude towards entrepreneurship and subjective norms have a direct positive effect on entrepreneurial intentions and therefore must be of first priority regarding entrepreneurship behaviour development. Further research must focus on investigating factors that positively impact on students' attitudes towards entrepreneurship. Entrepreneurship education must also be considered; however its ability to yield positive results depends on how it is structured, implemented and delivered to students. In a similar study conducted by Bagheri and Pihie (2015) to investigate the factors influencing students' entrepreneurial intentions with a focus on perceived behavioural control and personal attraction towards behaviour, the findings concluded that both factors are instrumental in shaping students' entrepreneurial intentions. "Specifically, subjective norms affect students' entrepreneurial intentions through its impact on their perceived control over the performance of entrepreneurial tasks and personal attraction towards entrepreneurship" (Bagheri & Pihie, 2015: 1149). Similar to the results of this study, subjective norms has the greatest impact on students' entrepreneurial intentions. When students' feel they have support from those around them, family, friends, University lecturers and colleagues, they feel more empowered and capable of venturing into entrepreneurship. In this regard, Universities must capitalise on providing effective mentorship and support programs. Networks between students, University alumni, the society and entrepreneur societies must be encouraged. Universities must also capitalise on establishing partnerships with external stakeholders such as corporates and government bodies that promote entrepreneurship. According to the model of the Entrepreneurial University suggested by Streeter et al. (2002), the following external stakeholders play a significant role in entrepreneurship development: community, social events, mentors, invited speakers, corporations and partnerships with organisations. Focus must be on yielding a positive entrepreneurial attitude in students.

A comparison of entrepreneurial intentions of generation Y students in South Africa and Zimbabwe study conducted by Marire (2015) concluded that students' attitudes towards entrepreneurship positively impact on their entrepreneurial intentions, whilst no effect was found from subjective norms which is contrary to the findings of Bagheri and Pihie (2015), Muhammad et al. (2015), Ozaralli and Rivenburgh (2016) and the current study. These findings

by Marire (2015) can be attributed to a poor entrepreneurial support structure for students. Insufficient mentorship from lecturers and the University system, less support from family and colleagues can result in students not realising their full potential in entrepreneurship. The society and a country's government policies and systems also play influence students' entrepreneurial intentions. Effort and emphasis must be put in ensuring that students feel their entrepreneurial endeavours and intentions are supported.

8.3.9 Influence of degree which students register for and their entrepreneurship intentions.

The study sought to determine the influence of the degree students registered for on their entrepreneurial intentions. The results of the study indicated that there is no significant relationship between the degree students are registered for and their entrepreneurial intentions contrary to what the study hypothesised. Business students are perceived to have higher entrepreneurial intentions as found by Kautonen et al. (2015); and Maresch et al. (2016). The results explain that the degree students are registered for does not influence their entrepreneurial intentions. Whether students are registered for a Bachelor of Commerce degree, Bachelor of Arts or Bachelor of Social Science does not have an influence on their entrepreneurial intentions. The researcher however expected the degree students are registered for to be positively correlated with their entrepreneurial intentions so that students studying towards degrees in the commerce field would show higher entrepreneurial intentions that those in medical, engineering or agricultural fields. There is a greater probability that students registered in the management or commerce field would be exposed to entrepreneurship education or related courses. One would expect students studying towards the Bachelor of Entrepreneurship Honours degree to be more entrepreneurially aligned than those studying towards other degrees.

The need to become an entrepreneur however develops in individuals regardless of their field of study and entrepreneurship must be promoted to every student. The widely held belief that a career in the entrepreneurship field or related is for business studies students must be dismissed as students from any field can become successful entrepreneurs. Furthermore, students from non-business or entrepreneurship related degrees must be encouraged to register for entrepreneurship courses or attend workshops, seminars and training for entrepreneurship. University entrepreneurship programmes must also be made available for all students regardless of their faculty and degree of study. More often, students from the business studies or management faculty are given first preference to seminars and workshops on

entrepreneurship, and this can demotivate students from other faculties as it appears they are not considered when it comes to entrepreneurship.

In a study conducted by Oni and Mavuyangwa (2019) to assess if significant differences exist in the entrepreneurship intentions of students from four different faculties (health sciences, management and law, humanities as well as science and agriculture) in a South African University, the findings indicated significant differences in students' entrepreneurial intentions. Opposing the outcomes of the current study, Oni and Mavuyangwa (2019) study found that students registered in the management and law faculty had the highest entrepreneurial intentions as compared to students from the other three faculties. Students from the management and commerce field would be exposed to entrepreneurship education and are expected to show higher levels of entrepreneurial intentions. However, students from other faculties should not be exempted from entrepreneurship education as they can be also potential entrepreneurs. Aulia and Hadi (2018) argued that most studies focus on entrepreneurial intentions of students registered for entrepreneurship courses or degrees or receiving entrepreneurship education and there is a scarcity of studies with students from other faculties. Similarly, this study focused on students who were registered for specific entrepreneurship courses, that is Introduction to Entrepreneurship and Entrepreneurial Skills. The researcher concurs with this observation and suggests that future research must focus on students from all faculties, those taking entrepreneurship courses or not.

8.3.10 Academic majors and students' entrepreneurship intentions

The study sought to investigate the influence of students' academic majors on their entrepreneurial intentions. The study concluded that a positive correlation between students' academic majors and their entrepreneurial intentions. As proposed by the researcher, students studying towards business or entrepreneurship majors would have higher entrepreneurial intentions as compared to those studying towards other majors outside of the management field. It is possible that most students who register for business or management studies are already interested in the field therefore they take up their degrees in order to advance their entrepreneurship knowledge and expertise. However, some students register for entrepreneurship majors due to recommendation from friends, family or colleagues not because they are interested in the field of study or intend to pursue a career in entrepreneurship. Based on the results of this study, it is important that students are urged to take majors in

entrepreneurship or related courses as empirical evidence confirms a significant correlation with entrepreneurial intentions.

In a research designed by Iwu et al. (2016) to investigate the entrepreneurial intentions of students in a University of Technology in South Africa, the results of the study indicated that there are no statistical significant relationship between entrepreneurship intentions of students from both the entrepreneurship and business management courses and from non-business management related courses. “In a broad sense, students who take entrepreneurship-specific courses (whether business or non-business students) agreed more to wishing to eventually start their own businesses just after graduation, than a long time after graduation” (Iwu et al., 2016: 174). The results of the current study correlate with those of Iwu et al. (2016). Taking an entrepreneurship major or one from the business studies field would make a significant difference on students’ entrepreneurial intentions. The current study cannot make an informed conclusion on the differences in entrepreneurship intentions as students were drawn from a population of students who were or had taken an entrepreneurship course.

In a study conducted by Dao et al. (2021) on the effect of academic majors on the entrepreneurial intentions of engineering and business students in the context of Vietnam, the study concluded that engineering students displayed higher entrepreneurial intentions as compared to business students. The results of this study are contrary to those of this study and what would be normally expected. It is therefore important to take into consideration the context in which a study was conducted. Dao et al.’s (2021) study was conducted in the Vietnamese context, entrepreneurial activity and start-up business in the engineering field might be dominant therefore engineering students would display higher levels of entrepreneurial intentions. In the South African context, engineering students would look forward to working in big corporates such as Transnet Engineering, Eskom Holdings, Sasol, and Voith and would not be perceived as having higher entrepreneurial intentions prior to graduation. These findings confirm the need to consider contextual and personal characteristics of the students when studying their entrepreneurial intentions (Fayolle & Linan, 2014; Kautonen et al., 2015; Maresch et al, 2016).

8.3.11 Attendance of extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus and students’ entrepreneurship intentions.

The study sought to understand the relationship between attendance of extra-curricular activities and students’ entrepreneurship intentions. The findings concluded that attendance of

extracurricular activities in entrepreneurship result in an increase in students' entrepreneurship intentions as hypothesised by the study. Usually, the more individuals are subjected to activities or information, the less quickly they forget and the more they retain the information. This can be better explained by Zanjoc's (1986) theory of mere repeated exposure which states that when individuals are exposed to a stimulus or object repetitively their attitude towards it is highly likely to change positively. Similarly, Inoue, Yagi and Sato (2018) argued that mere exposure effect occurs when stimuli that is repetitive is evaluated in a positive way than that which is not. Students who attend entrepreneurship workshops, seminars and business conventions would have higher levels of entrepreneurship intentions. The workshops and seminars would provide a reinforcement to what was learnt during lectures which enhances the attitude and entrepreneurship intentions of students. Vaidya (2014) argued that innovativeness and creativity can hardly be promoted and harnessed in a traditional classroom environment and teachers might be able to teach students to think but not to be creative. Students can show how creative they are through a hands-on practical assignment which can be done in workshops and business seminars.

In a study conducted by Haliimah (2010) to investigate the management and provision of extracurricular programmes in inner city secondary schools in Pretoria, the study revealed positive benefits for students who attended extracurricular programmes. An interesting finding from the study stated that "learners' creativity and interest cannot be stimulated by reading books only, the provisioning of extracurricular participation possibilities enhances learners' potential to experience school life to the fullest" (Haliimah, 2010: 90). Even though the context of the study is different from that of the current study, the findings help to explain the significant contribution of extra-curricular activities to students, they enable students to be creative and develop further interest in a subject. In light of these findings, the emphasis must be on the structure of the extracurricular activities, in this case the structure of the entrepreneurship workshops, seminars and business conventions. The organisers and facilitators of the workshops must be creative and innovative in designing the entrepreneurship workshops and seminars to achieve effectively the defined objectives. The workshops and seminars must be designed to improve students' entrepreneurial skills. Therefore, they must be centred on practicals.

In a study conducted by Arranz et al. (2017) to examine the effect of curricular and extracurricular activities on the entrepreneurial motivation and competences of university students in Spanish institutions, the findings concluded that the activities develop students'

positive attitudes towards entrepreneurship. However, the findings also revealed that the curricular and extracurricular activities impededi students' intention to start a business (Arranz et al., 2017). The study context, design of the extracurricular activities and objectives have an effect on students' entrepreneurial intentions.

Similarly, in a study conducted by Rengiah and Sentosa (2016) to assess the effectiveness of entrepreneurship education in developing entrepreneurial intention among Malaysian University students, the study concluded with recommendations on co-curricular entrepreneurship programmes outside of the classroom set up. The study further explained that a focus on students' practical entrepreneurial programs enhances the development of student run entrepreneurial organisations and forums as practised in educational institutions of Western countries (Rengiah and Sentosa, 2016). These findings are based on a study conducted with Malaysian students, it is possible that further studies in a South African context might reveal different conclusions, however it is significant to note the contribution of extra-curricular entrepreneurship activities on students' entrepreneurship intentions.

A good example of practical entrepreneurial programs conducted in Western countries as highlighted by Rengiah and Sentosa (2016) is the Startup Weekend, a non-profit organisation that is based in Seattle, Washington. The organisation conducts weekend-long entrepreneurship workshops that covers activities such as pitching creative ideas, forming teams and starting companies (Ottawa University Entrepreneurship @ Telfer, 2021). Start-up Weekend reaches out to University students and in 2021 it will be at Ottawa University with the following objective "connect students across all faculties to encourage and promote entrepreneurship regardless of the discipline of study" (Ottawa University Entrepreneurship @ Telfer, 2021: para3). In 2013, UKZN Graduate School of Business and Leadership in partnership with eThekwini Municipality, Sigma International and ABSA hosted the Startup Weekend event. The event saw more than 100 entrepreneurs coming together to brainstorm and develop innovative business ideas, management and mentorship workshops were also conducted with aspiring entrepreneurs (eThekwini Municipality's Communication Unit, 2013). More Startup Weekend programmes or similar events must be run alongside the entrepreneurship education offered to University students for effective entrepreneurship development. The model of the Entrepreneurial University developed by Streeter et al. (2002) recognises the following extra-curricular activities in developing entrepreneurship: competitions, conferences, summer schools, programs and workshops, networking between students and staff, knowledge sharing

and idea generation. Extra-curricular activities provide a different learning environment that combines fun, creativity and knowledge sharing for effective learning.

8.3.12 Students who read/listen or look for information about entrepreneurs and entrepreneurship have higher levels of entrepreneurship intentions than those who do not.

The study sought to investigate if there are significant differences between students who read/listen or look for information about entrepreneurs and those who do not. The findings concluded that there are significant differences between entrepreneurial intentions of students who read/listen or look for information about entrepreneurs and those who do not as hypothesised by the current study. In light of these findings, students must be encouraged to read or listen to information about entrepreneurship from different sources and platforms. Social media sites; YouTube, Facebook, LinkedIn, Twitter and Instagram, personal and corporate blogs and company websites are awash with information about entrepreneurship and entrepreneurial activities that can benefit students willing to start a career in entrepreneurship. However, it takes interest and passion for students to access this information that is readily available to them, if they are not interested in pursuing entrepreneurial activities, they will not see the value in the information. Nonetheless, as Universities are key drivers of knowledge development and sharing, they can take a stand to ensure that entrepreneurship information further than that discussed in classrooms is made available to students and updated on a continuous basis. For example, UKZN developed eZone a platform where students, lecturers and entrepreneurship experts and industry players can share information; the platform must be updated with current videos, presentations, seminars and interactions on entrepreneurship. Lackéus (2015: 6) noted the following about entrepreneurship in education: “it is not at all about starting new organizations, but that it instead is about making students more creative, opportunity oriented, proactive and innovative, adhering to a wide definition of entrepreneurship relevant to all walks in life”. In line with Vaidya’s (2014) argument, classroom lessons does little to develop creativity and innovativeness in students, rather to follow on online presentation from successful entrepreneurs would facilitate experiential learning.

Robinson and Josien (2014) argued that entrepreneurial success is largely dependent on an extensive investment in education. The researcher argues that a focus on formal education only is insufficient, Universities must promote and share informal learning platforms amongst students for effective entrepreneurial learning to take place. Video presentations from YouTube

can be showcased during class or students can be directed to them. 59.2% and 8.2% of students indicated that they read or look for entrepreneurship information from internet/social media platforms and role model entrepreneurs respectively, whilst only 3.1% indicated they engage with their lecturers and entrepreneurship programmes offered on campus. Future research must focus on the effectiveness of the different sources of entrepreneurial information in driving entrepreneurial intentions in University students. The objective is to stimulate goal=oriented entrepreneurial learning.

8.3.13 Students with a higher level of perceived behavioural control are highly likely to engage in entrepreneurial activities.

The study sought to investigate the impact of perceived behavioural control on students' entrepreneurial intentions. The results of the study showed a strong positive significant correlation between perceived behavioural control and students' entrepreneurial intentions which was hypothesised by the current study. Students with a higher level of perceived behavioural control are more likely to engage in entrepreneurial behaviour. Perceived behavioural control is the key reason behind the birth of the Theory of Planned Behaviour by Ajzen (1991). Ajzen (1991) saw the need to include individuals' perceptions of the difficulty of engaging in a behaviour and their ability to control the behaviour. In the case of this study, it was significant to investigate students' perceptions of their ability to engage in entrepreneurial activities or pursue a career in entrepreneurship. According to the findings, students' have positive perceptions on their ability to venture into entrepreneurial activities, they felt they can develop innovative business ideas, start and run a company, have the correct networks and have good leadership and management skills needed to sustain a career in entrepreneurship. It is however important to note that these findings are merely based on students' perceptions of their abilities, an investigation of their actual performance on a practical entrepreneurship project would be significant as a follow up to this study.

In a study conducted by Marire (2015) on a comparison of entrepreneurial intentions of Generation Y Students in South Africa and Zimbabwe, the study concluded that perceived behavioural control has a positive impact on students' entrepreneurial intentions. Furthermore, the findings showed that South African students had a higher entrepreneurial intent as compared to Zimbabwean students (Marire, 2015). These findings of this study lend support to the findings of the current study which also concluded a positive significant correlation between perceived behavioural control and students' entrepreneurial intention. The difference

in the students' preparedness to venture into entrepreneurship might be attributed to the different environments they are subjected to; different economies, entrepreneurship education, opportunities and support structures. However, students' willingness to venture into entrepreneurship which is largely a matter of personal choice also predicts their tendency to venture into entrepreneurship. Entrepreneurship education, training and support can only do as much and leave it to the individual student to decide whether to venture into entrepreneurship or not. However, if an individual's personality that is said to be constant and enduring can change, their entrepreneurial intent can also change.

Similar to the results of Marire (2015) and the current study, Bagheri and Pihie (2015) concluded that Malaysian University students' entrepreneurial intentions are largely detected by attitude (attraction) towards entrepreneurship and perceived behavioural control. The authors (Bagheri & Pihie, 2015) highlighted the complexity of entrepreneurial intentions more especially as it is an individual characteristic. Future research must focus on factors that influence students' perceived behavioural control towards their entrepreneurial behaviour. It is a general norm that people would shy away from behaviours that appear to be difficult and engage in those that they perceive to be easy or they have control over. Higher education institutions must focus on managing students' perceptions of their perceived behavioural control or ability to venture into entrepreneurship. Popular successful entrepreneurs can be invited as guest lecturers to share their stories of entrepreneurial success and failure, challenges met along the way and how they overcame them. Individuals and programmes that can provide motivation and inspiration to students must be identified and students can be empowered and made to understand that they are in charge of their entrepreneurial success and destiny. Focus must be put on lessening the challenges and burdens that come with the careers in entrepreneurship; financial assistance, mentors, business seminars and coaching are some of the strategies that can be implemented.

8.3.14 Students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development is positively related to their entrepreneurship intentions.

The study sought to investigate the impact of students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development on their entrepreneurial intentions. The study concluded that students' awareness of programmes or organisations that support entrepreneurial or small business development

has a significant positive correlation with their entrepreneurial intentions as hypothesised in this study. Entrepreneurial support include financial, resource, moral and any other support deemed necessary for the growth of the organisation. This support is necessary and significant for the development of entrepreneurship in a country. Recently, governments and policy makers have come up with programmes that seek to support people wanting to pursue a career in entrepreneurship as they realise the benefits of entrepreneurship to economic growth. Ahmad and Hoffman, (2008: 3) posited that "many countries now recognise entrepreneurship policy as a separate discipline and, as a consequence, have taken steps to improve the measurement of entrepreneurship at the national level". Entrepreneurship policies help to set and communicate clearly defined goals and objectives, enable leadership to communicate their views and expectations, provide a framework for decision making, define rules and regulations and get everyone involved to work towards the same objectives.

Students' awareness of any government bodies/programs or private organisations that support entrepreneurial or small business development leads to an increase in perceived behavioural control over their entrepreneurial behaviour. When students are provided with capital and moral support it is possible that they feel confident of their ability to successfully engage in entrepreneurial behaviour. Lack of awareness of government bodies/programs or private organisations that support entrepreneurial or small business development obstructs students' entrepreneurial intentions as they feel they cannot start or achieve anything without resources. Such information must be made available to students in entrepreneurship classes, seminars and workshops. An extract from students' written responses stated that "*more teachings on how to manage finances and more practical ways on how to think critically in a business and make good business decisions".*

In a research study carried out by Malebana (2014) on the influence of the knowledge of entrepreneurial support on South African students' entrepreneurial intentions and its antecedents; the attitude towards becoming an entrepreneur and perceived behavioural control, the findings concluded that the knowledge of entrepreneurial support is significantly correlated with students' intention to start a business. Furthermore, the study found that when students know that they can be supported in their entrepreneurship activities, it improves their entrepreneurial attitudes and perceived behavioural control significantly (Malebana, 2014). The results of the study are similar to those of the current study and are supported by Nabi et al. (2006) who suggested that the provision of entrepreneurial support impacts positively on individuals' perceived attractiveness, perceived feasibility, self-efficacy, and propensity to act

on entrepreneurial behaviour. When students have a positive perception of their ability to engage in entrepreneurial behaviour, their intentions are most likely to be high. However, there could be an interference of personal factors that could hinder students' entrepreneurial intentions despite their knowledge of entrepreneurship behaviour. Saeed, Yousafzai, Yani-De-Soriano and Muffatto (2014) reported that positive perception of entrepreneurial support increases individuals' entrepreneurial self-efficacy and entrepreneurial intentions a notion that supports the results of this study.

Students must be made aware of government bodies/programs or private organisations that support entrepreneurial or small business development. Topics on entrepreneurial support either from the government or private organisations must be embedded into the entrepreneurship education curriculum and related discussions be done during entrepreneurship workshops and seminars. Students must be made aware of organisations such as The Small Enterprise Development Agency (SEDA), The South African Women Entrepreneurs' Network (SAWEN), Ntsika, South African Institute for Entrepreneurship, Business Partners Limited and National Empowerment Fund and their objectives clearly communicated. Knowledge of such organisations can increase students' perceived behavioural control and willingness to venture into entrepreneurship.

8.3.15 What recommendations can be made to the entrepreneurship curriculum developers at UKZN and DUT based on students' perceptions on entrepreneurship education?

The study sought to provide recommendations to curriculum developers at UKZN and DUT and higher education institutions in South Africa at large. Students were asked to comment on their entrepreneurship education from which the recommendations would be derived. In as much as the findings for the current study show a positive relationship between entrepreneurship education and students' entrepreneurship intentions, it is the individual institutions' responsibility to offer courses that are designed to develop effectively in students the necessary skills, knowledge and expertise to pursue a career in entrepreneurship. The first recommendation is to make entrepreneurship education accessible to all students regardless of their field of study. Entrepreneurship education, training and workshops must not be prioritised for business and management students only, every student must be educated on entrepreneurship and leave the University with at least basic entrepreneurial knowledge such as how to draw up a business plan or identify novel business ideas. An introduction to entrepreneurship or similar course must be offered to 1st year students and advanced courses

offered to 2nd and 3rd year students so that students get in-depth entrepreneurship knowledge as they progress to with their studies.

The model of the entrepreneurial University developed by Streeter et al. (2002) recognises the fundamental role of the teaching aspect in entrepreneurship education, more importantly the model notes that "not just one course- everyone should focus on this". An extract from students' written responses stated that: *"Entrepreneurship should be taught at all levels"*. This could be attributed to the fact that students feel their entrepreneurship courses are insufficient in preparing them for a career in entrepreneurship. For example, the UKZN offers the Introduction to Entrepreneurship course in the 2nd year of undergraduate only, no entrepreneurship specific courses are offered to 1st and 3rd year undergraduate students. The course content must increase in intensity with each level, for example the 1st year courses must equate to the National Qualifications Framework (NQF) level 5, the 2nd year courses NQF level 6 and the 3rd year courses NQF level 7 which is that for the Bachelor's degree. UKZN and DUT must also look into introducing standalone undergraduate degrees that focus specifically on entrepreneurship. There is a scarcity of Bachelors degrees in entrepreneurship in South African Universities. University of Johannesburg (UJ) offers the Bachelor of Commerce in Entrepreneurial Management which is a three-year undergraduate programme. Other Universities such as Walter Sisulu offer business related degrees such as the Bachelor of Commerce in Business Management. In contrast, Universities in Australia offer entrepreneurship specific degrees: RMIT and Torrens University: Bachelor of Business Entrepreneurship; University of Adelaide: Bachelor of Innovation and Entrepreneurship; and Western Sydney University: Bachelor of Entrepreneurship. The Business Marketing Engine (2021) argued that the key benefit of studying an entrepreneurship degree is that it covers both basic and speciality aspects of business; students can learn how to develop business plans and client bases and learn how to come up with start-up capital, and students can acquire real-world experiences prior to graduation.

Another recommendation is to provide students with practical entrepreneurship activities and assignments, and these must be made accessible to every student registered for an entrepreneurship course or studying towards an entrepreneurship degree. It is insignificant for an entrepreneurship student to graduate or leave University without working on a practical exercise, the value of entrepreneurship education is derived from its ability to teach students *for* entrepreneurship not *about* entrepreneurship. Rengiah and Sentosa (2016: 57) stated that "entrepreneurship curricula should incorporate the features on experiential learning methods,

critical thinking, start-up business ventures, visits to industries and business areas, inviting successful entrepreneurs as guest speakers". Experiential learning is a critical aspect of learning, it provides evidence that learning has occurred and can be used as a benchmark to assess learning progress. Moreover, some students can learn better through informal as compared to formal education. Polenakovikj (2015) stated three advantages of informal entrepreneurship education; its flexibility, project-based and that it can be interestingly implemented. The varied assignments that students get to work, citing their achievements and failures and getting to assess their progress would get them excited for a career in entrepreneurship. An extract from students' written responses reads: "*a practical aspect (i.e. actually selling something as an assignment, doing the marketing research & marketing for it eg, cupcakes)".* This shows that students know what entrepreneurship is, what they are required to do but are not sure if they can practically do it therefore, they need to be given a platform to develop the skills.

The researcher recommends that UKZN and DUT incorporate compulsory entrepreneurship workshops, seminars and business conventions and invite successful businessmen and women as guest lecturers. The main objective of entrepreneurship education as discussed in this thesis and across literature is to impart entrepreneurial knowledge and skills upon students with the goal of preparing them for a career in entrepreneurship. The researcher argues that emphasis must be placed on the design and implementation of entrepreneurship education. The design of entrepreneurship education must focus on activities that motivate, enhance understanding and stimulate students' interest in entrepreneurial activities. Furthermore, relevant teaching methodologies that are effective in developing students' entrepreneurial behaviour must be implemented. Students' learning experience must be the first priority in entrepreneurship education. Samuel and Rahman (2018) made a distinction between traditional and innovative teaching methods and identified the following innovative methods; team based or group discussions, guest speaker, seminars, individual and group projects. Guest speakers will give students the opportunity to learn through other people's experiences, be it success or failure stories. They can get an opportunity to network, mingle and learn from popular individuals in the entrepreneurship field. An extract from students' written responses stated that: *"I feel that there are experience gaps that cannot be filled by merely studying entrepreneurial modules, therefore we should have experienced entrepreneurs (regardless of success) share their personal experience and educate us on their shortcomings and inform us on how to avoid similar mistakes".* Another response stated that *"To actually meet entrepreneurs and talk to*

them personally". The above responses highlight students' dire need to share in the experiences of others and learn from them. Entrepreneurs' success stories can enhance students perceived behavioural control towards entrepreneurship, they can feel empowered to achieve.

Mwasalwiba (2010) stated that active entrepreneurship teaching methods are effective in enhancing students' entrepreneurial skills and these include; setting of real small business ventures, workshops, presentations and study visits. The researcher recommends more events such as the Start-up Weekend conducted in 2013 through a partnership of UKZN Graduate School of Business and Leadership and eThekwini Municipality. UKZN and DUT can partner with other Universities in Durban (University of Zululand and Mangosuthu University) and across South Africa to provide business seminars, workshops and conventions with students. Partnerships with corporates can be established to develop networks between the entrepreneurship industry experts and students.

Entrepreneurship education must be offered to students regardless of their faculty of study. For example, at UKZN entrepreneurship education must also be offered to students from the Colleges of Agriculture, Engineering and Science, Health Sciences and Humanities. Students' contributions to the economic development of the country is regardless of their field of study. Therefore, students from the different fields of study must be encouraged to engage in entrepreneurship. A study by Oni and Mavuyangwa (2019) on South African students' entrepreneurial intentions concluded that students from the faculties of health sciences, humanities, science and agriculture recorded lower levels of entrepreneurial intentions. Similarly, Pretheeba and Venkatapathy (2018) in their study of entrepreneurial intentions among students in India emphasised that entrepreneurship education must not be limited to business students, it must be offered to students from other disciplines and faculties without restrictions. UKZN and DUT can offer a compulsory entrepreneurship module to every undergraduate student registered at the University in their final year of studies. A policy or regulation can be put into effect to ensure that every undergraduate student completes this entrepreneurship course prior to graduating. For example, in 2014 UKZN introduced the IsiZulu module (ZULN101) for every undergraduate student who does not have Zulu as their 1st language or previously studied basic IsiZulu. Maduna (2019: para5) quoted the then Executive Director of Corporate Affairs, Ashton Stanley Brodrick as saying, "The University Language Policy recognises the increased diversity of the student population, with the majority of UKZN students being isiZulu first language speakers, the University designed to re-acculturate the intellectual space and so in January 2014, introduced this compulsory isiZulu

module for communication". The same principle and policy can be followed to factor in an entrepreneurship course effectively in every undergraduate level course.

8.4 Summary

This chapter discussed the study findings in light of the research objectives and hypothesis set out in the introduction of the thesis. The main purpose of the study was to investigate the relationship between entrepreneurship education and UKZN and DUT students' entrepreneurial intentions. The results of the study concluded a significant positive relationship between entrepreneurship education and students' entrepreneurial intentions which concurs with various previous studies (Bux & Van Vuuren, 2019; Hou et al., 2019; Manyaka-Boshiedo, 2019; Ogbari et al., 2018). It was suggested that higher education tertiary institutions must pay special attention on the design and structure of entrepreneurship education offered in their universities. Prior research must be done to ascertain the educational needs of their students and design an entrepreneurship curriculum that is best suited to addressing their needs. Entrepreneurship education must be designed with the objective of imparting both theoretical and practical entrepreneurial skills upon university students. The study also sought to determine the level of students' entrepreneurial intentions and found low levels. The results of the study concur with the statistics presented in the Global Entrepreneurship Monitor South Africa Reports from 2008- 2022. However, it would be expected that students demonstrate higher levels of entrepreneurial intentions due to exposure to entrepreneurship education and policies designed to support entrepreneurial behaviour and entrepreneurship development. The results could be attributed to the fact that the intention to engage in entrepreneurship behaviour is also a matter of personal choice and attitude, and situational and environmental factors. Furthermore, the chapter discussed the findings between demographic factors (gender, age, race, head parent's occupation) and entrepreneurship intentions. The findings of no significant differences between the demographic factors and student entrepreneurial intentions could be attributed largely to personal factors.

Chapter nine provides a summary of all the chapters presented in this thesis, addresses the limitations and provides a direction for future research.

CHAPTER NINE

CONCLUSION AND RECOMMENDATIONS

9.1 Introduction

Chapter eight discussed the study results in relation to the research objectives set out in Chapter one. The main research objective was to investigate the relationship between entrepreneurship education and entrepreneurship intention amongst University of KwaZulu-Natal and Durban University of Technology students. The study found out that there is a significant positive relationship between entrepreneurship education and students' entrepreneurship intention. In addition, the study sought to investigate the level of students' entrepreneurship intention and it concluded that students have low levels of entrepreneurship intentions. The regression analysis concluded that subjective norms are the best predictors of entrepreneurship education whilst there are no significant differences between demographic factors (gender, age, race, head parents' occupation) and students' entrepreneurial intentions.

This ninth and final chapter concludes the study. The chapter begins with a summary of the chapters that make up this thesis. The chapter furthermore discusses the research limitations, recommendations, and direction for future research.

9.2 Chapter summaries

The 1st chapter provided the study orientation. The chapter covered sections which include the background of the study, research problem, research questions and objectives, the aims and significance of the study. The chapter highlighted the main research question which entails the investigation of the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students. Furthermore, the chapter identified sub-objectives of the study which include; To determine the influence of demographic factors (gender, degree registered for, attendance of extra-curricular programs in entrepreneurship and level of study) on UKZN and DUT students' entrepreneurial intentions and to examine the entrepreneurship intentions of UKZN and DUT students. The chapter also discussed the main aim of the study which was to evaluate the impact of entrepreneurship education on the entrepreneurial intentions of UKZN and DUT students. With entrepreneurship gaining momentum over the years due to reduced economic activity and unemployment, there is a need to evaluate the role taken by universities to prepare students for the field before graduation. The chapter also discussed the significance and importance of the study. The results of the study will be useful for entrepreneurship curriculum development in higher education tertiary

institutions. In addition, the level of students' entrepreneurial intentions would inform the leadership and management of tertiary institutions of students' readiness to venture into entrepreneurship.

The 2nd chapter discusses the concept of entrepreneurship. The chapter started with defining the term entrepreneur and the characteristics of successful entrepreneurs. Successful entrepreneurs were identified as people who are dedicated, determinant and devoted to their career goals. Risk taking was identified as the most important characteristics that entrepreneurs need to possess as bigger and risky decisions have to be taken in the journey of becoming an entreprenur. The chapter went on to discuss the term entrepreneurship and its importance. Creation of employment and its positive contribution to economic development were identified as two of the greatest importance of entrepreneurship. With the rising unemployment rate in South Africa, 32.9% by Q1:2023, entrepreneurship can be seen as a remedy for flooded job markets. Chapter two also discussed entrepreneurship in South Africa taking note of the level of entrepreneurial activity and development in the country.

According to the latest report of the Global Entrepreneurship Monitor (GEM) South Africa (2021/2022), the Total early-stage Entrepreneurial Activity (TEA) for 2021 was 17.5% compared to the African region average of 16. 6% (Bowmaker-Falconer and Meyer, 2022). This TEA rate for 2021 (17.5%) increased from 10.8% in 2019 (Bowmaker-Falconer and Herrington, 2020). Despite the increase, these are relatively low results in light of the growing number of people who are unemployed in the country. South Africa's entrepreneurial intention in 2021 was 20% compared to the Africa region average of 40.6% (Bowmaker-Falconer and Meyer, 2022). These figures show the need for more work to be done on entrepreneurship development in South Africa and this begins with empirical research conducted in this field.

The 3rd chapter reviewed literature on entrepreneurship education one of the major variables in this study. The chapter opened with a discussion of entrepreneurship education. Furthermore, the chapter looked into the nature of entrepreneurship education and distinguished between formal and informal education. The study focused on formal entrepreneurship education which is offered as structured programmes with facilitators and lecturers in universities and higher education tertiary institutions. The chapter also discussed the objectives of entrepreneurship education to highlight why entrepreneurship education is offered to students and any other recipients. The chapter identified the following as the main objectives of entrepreneurship education; encouraging creativity and critical thinking, building practical knowledge for

starting a business and building practical knowledge for self-employment. The author concurs with these objectives and is of the opinion that entrepreneurship education must be augmented with practical sessions and workshops for the implementation of classroom information.

Furthermore, the chapter discussed entrepreneurship education in both developing (South Africa and Nigeria) and developed (Australia and United States of America) taking note of the differences and similarities. It was concluded that most universities in South Africa only offer entrepreneurship as a module which is part of a degree programme as compared to offering it as a complete and standalone degree programme in undergraduate programmes. This is the case for the two public universities under study; University of KwaZulu-Natal and Durban University of Technology. Even though the two Universities have entrepreneurship schools, (UKZN- School of Management and Entrepreneurship and DUT- Entrepreneurial Studies and Management Department) they do not offer complete entrepreneurship degrees as compared to Universities in Australia or the United States of America. Western Sydney University in Australia has the Bachelor of Entrepreneurship degree whilst RMIT and Torrens Universities have the Bachelor of Business Entrepreneurship.

The 4th chapter reviewed literature on entrepreneurship intention the other major variable in this study. The chapter opens with defining the concept of entrepreneurship intention. The chapter followed with a discussion on factors contributing to entrepreneurial intention and entrepreneurship education was identified as one of the factors. Various authors (Feder and Niţu-Antonie, 2017; Grecu and Denes, 2017; Hou et al., 2019; Ozaralli and Rivenburgh, 2016) identified entrepreneurship education as a major determinant of entrepreneurship intention. Ozaralli and Rivenburgh (2016) went on to say entrepreneurship education plays a key role in creating entrepreneurship awareness and inspiration, inspiration is a major driver of any behaviour including entrepreneurship.

The chapter also discussed the entrepreneurship intentions of South African university students together with entrepreneurship intentions of Australian and American University students. The GEM South Africa report (2021/2022) indicated that the level of entrepreneurial intentions for the 18-64 years age group in 2021 was 20% compared to the Africa region average of 40.6% (Bowmaker-Falconer and Meyer, 2022). Oni and Mavuyangwa (2019) conducted a study in which they sought to evaluate the entrepreneurial intentions of students from a previously disadvantaged University in South Africa. Amongst students from the faculties of health sciences, management and law, humanities and science and agriculture, the study concluded

that students from the faculty of management and law recorded higher levels of entrepreneurial intentions than others. Students from the other faculties recorded low levels of entrepreneurial intention which is a cause for concern. Entrepreneurial activity is important in every sector of the economy be it medical, tourism or agriculture.

The 5th chapter, the theoretical framework discussed theories that provide direction for this study. The chapter discussed the following theories; McClelland's Achievement Motivation Theory (1961); Human Capital Theory (1962); Theory of Reasoned Action (1980); Shapero's Model of Entrepreneurial Event (1982) and the Theory of Planned Behaviour (1987). The Theory of Planned behaviour was identifying as the one that shapes the current study. The Theory of Planned Behaviour is an extension of the Theory of Reasoned Action and was developed by Icek Ajzen in 1985 (Kan and Fabrigar, 2017). The Theory of Planned behaviour was selected as the framework for this study as it explains how behaviour occur or how individuals engage in certain behaviours, entrepreneurial activity is the behaviour at the centre of this study. Moreover, the theory recognizes intention at the core of any behavioural activity and explains that the higher the level of intention towards any behaviour the more the individual is likely to engage in the behaviour.

Entrepreneurial intention is one of the major variables in this study and the researcher postulated that the higher the level of entrepreneurial intentions the more students would want to engage in entrepreneurial activity. With a higher level of entrepreneurial intentions, individuals would be prepared to overcome any form of obstacles to achieve their entrepreneurial goals. The theory of planned behaviour states that intention is as a result of three factors; attitudes toward the behaviour, subjective norms, and perceived behavioural control (Kan and Fabrigar, 2017). The author postulated that entrepreneurship education played a key role in the development of a positive attitude towards entrepreneurial behaviour. Moreover, the support of lecturers, the University system and management influence students' entrepreneurial intentions.

The 6th chapter, methodology explained the research design that this study adopted. The study adopted a quantitative research design, and a survey was conducted with 197 undergraduate students from the College of Law and Management Studies and College of Humanities of the University of KwaZulu-Natal and the Faculty of Management Sciences of the Durban University of Technology. 1000 students registered for entrepreneurship subjects from the two Universities were the target population for the study. Students were sampled using the

probability sampling technique and a simple random sampling method. Data was collected using self-administered questionnaires which were distributed online due to remote learning and closure of Universities. Numerical data was analysed using the Statistical Package for the Social Sciences version 28. The study was conducted according to the standards of ethical research. An ethical clearance letter was obtained from the University of KwaZulu-Natal Humanities and Social Sciences Research Ethics Committee. Gate-keeper's letters giving the researcher permission to conduct the study on the two study sites were obtained from the relevant University authorities. Students were not coerced to take part in the study and an informed consent form was signed indicating their voluntary decision to partake in the study. The collected data was treated with the highest level of privacy and confidentiality, no one was allowed access to the data except the researcher and the supervisor. Students' personal information including their names, students' numbers and email addresses were not collected and the researcher made sure they were not subjected to any form of harm intended or unintended.

The 7th chapter presented the results of the study. The distribution of the sample used in the study was as follows: 51% of the respondents were female, 76% of the respondents were within the 16-25 years age group, the Indian race made up the largest proportion of the sample with 49%, 88% of the students were registered at the University of KwaZulu-Natal and 79% were 3rd years. Out of a total of 1000 undergraduate students registered for entrepreneurship courses, a sample of 280 was calculated and responses were successfully received from 197 students resulting in a 79% response rate. The main purpose of the study was to investigate the relationship between entrepreneurship education and the University of KwaZulu-Natal and Durban University of Technology students' entrepreneurial intentions.

The study also sought to measure the level of students' entrepreneurship intentions. The findings of the study concluded that there is a significant positive relationship between entrepreneurship education and students' entrepreneurship intentions ($r=. 79$, $p< 0.01$). A strong relationship between entrepreneurship education and students' entrepreneurial intentions was established ($r= .79$). However, the regression analysis indicated that subjective norms predicted the students' entrepreneurship intention scores better than entrepreneurship education and attitudes towards entrepreneurship ($B= .347$; $t= 3.785$, $p< 0.01$). Entrepreneurship education was the least predictor of entrepreneurship intention ($B= .244$; $t= 2.968$, $p< 0.01$). In addition, the study sought to measure the students' entrepreneurial intentions and concluded that students have low levels of entrepreneurship intentions ($M= 3.24$,

SD= .98). ANOVA results indicated that there were no significant differences on students' entrepreneurship scores based on age, race and head parent's occupation. Students' level of study was found to have a significant difference on their entrepreneurship scores, the mean scores for 1st year students (M= 59.56, SD = 12.71) differed significantly with the mean scores for 2nd year students (M= 44.70, SD = 18.32) and the mean scores for 2nd year students (M= 44.70, SD = 18.32) differed significantly with the mean scores for 3rd year students (M= 56.87, SD= 15.70).

The study concluded no significant differences between entrepreneurship intention scores of University of KwaZulu-Natal (M= 54.90, 16.785) and Durban University of Technology (M= 56.45, SD = 15.149). Furthermore, results from Independent samples t-tests found no significant difference between students' scores based on gender. However, it was found there are significant differences on entrepreneurship intention scores of students who read/listen or look up for information about entrepreneurship (M= 58.10, SD= 17.602) and those who do not (M= 49.13, SD= 16.807). The entrepreneurship intention scores for students who attend extra-curricular activities on entrepreneurship (M= 59.44, SD= 15.603) differed significantly from the mean scores of students who do not (M= 52.53, SD= 16.654).

The 8th chapter discussed the study results in relation to literature, research objectives and hypothesis set out in the introduction of the study. The study sought to investigate the relationship between entrepreneurship education and students' entrepreneurship intentions. The results of the study concluded a significant positive relationship between entrepreneurship education and entrepreneurial concurring with previous studies (Bux & Van Vuuren, 2019; Hou et al., 2019; Manyaka-Boshielo, 2019; Ogbari et al., 2018;). The findings indicated that entrepreneurship education can result in improved students' entrepreneurial intentions. The findings discussed practical implications to higher education institutions. Universities can focus their attention on the implementation of effective entrepreneurship education that can stimulate students' entrepreneurial interest and intentions. The discussion further emphasised the need for context specific research on students' entrepreneurship education as there is no one size fits all panacea. The design and implementation of entrepreneurship education would then take into consideration these needs.

Findings also indicated that students have low levels of entrepreneurship intentions and they concurred with the Global Entrepreneurship Monitor South Africa Reports' statistics. Global Entrepreneurship Monitor South Africa (GEM SA) 2019/2020 report indicated that young

adults (18-64years) entrepreneurship intentions levels have been low between 2008 and 2019 (Bowmaker-Falconer and Herrington, 2020). According to Bowmaker-Falconer and Meyer (2022), the entrepreneurial intentions of the South African population in 2021 was 20%, from 11.9% in 2019. However, compared with the African region average of 40.6% in the same year, South African entrepreneurial intentions are considered relatively low. The results of the current study would be expected to differ as students receive more and more entrepreneurship teaching. However, the results of the study could be as a result of students' differing career choices or personal factors.

The results of indicated no significant differences in students' entrepreneurial intentions based on demographic factors (gender, race, age, head parents' occupation). The findings of students' entrepreneurial intentions and gender were contrary to those of past studies which found significant differences between male and female students' entrepreneurial intentions with the former being more entrepreneurially active (Ahmed et al., 2010; Farrington et al., 2012; Fatoki 2014 Herrington, Kew and Mwanga 2017; Kakkonen, 2010; Ndofirepi 2016; Ndofirepi et al., 2018). The results of the study could be due to changing gender roles and shifting community values and beliefs. More and more women are taking leadership and management roles and taking up space in societies. Entrepreneurship education is offered to both genders therefore anyone male or female can take up the opportunities if they come. The findings further indicated that subjective norms is the best predictor of students' entrepreneurial intentions as compared to personal attitude towards entrepreneurship and entrepreneurship education. The University community and family must recognize their key roles in developing students' entrepreneurial intentions. Lecturers and other stakeholders must provide support and mentorship programmes to students. Perceived behavioural control was found to be positively correlated to students' entrepreneurial intentions. Students' positive perceptions of their control over entrepreneurial behaviour results in improved entrepreneurial intentions therefore they must be given the relevant support and entrepreneurial training.

9.3 A Summary of the research objectives

This study sought to achieve the following objectives:

To investigate the relationship between entrepreneurship education and entrepreneurship intention amongst UKZN and DUT students.

The study sought to investigate and understand the relationship between entrepreneurship education and students' entrepreneurial intentions at UKZN and DUT. This objective was

achieved, and the study concluded that there is a significant positive relationship between entrepreneurship education and students' entrepreneurial intentions at DUT and UKZN. The implication of these findings is that the more effective entrepreneurship education is, the more students intend to take up entrepreneurial activities. A well thought-out and student-centred entrepreneurship education curriculum would enhance students' entrepreneurial intentions better than a poorly designed curriculum. An entrepreneurship education curriculum should be designed to provide students with the relevant knowledge and skills relevant to starting and successfully managing a business.

To examine the entrepreneurship intentions of UKZN and DUT students.

The study sought to examine the entrepreneurial intentions of UKZN and DUT students. This objective was achieved and concluded that students recorded low levels of entrepreneurial intentions. Lower levels of entrepreneurial intention lead to lower levels of entrepreneurship activities as there is a direct correlation between intention and participation in a certain behaviour. These findings imply that necessary steps to increase students' entrepreneurial intentions should be taken for entrepreneurship development. Higher education institutions have a significant role to play in developing students' entrepreneurial intentions and as concluded by this study, a review of entrepreneurship education offered to UKZN and DUT students is significant.

To investigate the significant differences between UKZN and DUT students' entrepreneurship intentions based on demographic factors (head parent's occupation, level of study, age, race).

The study sought to investigate the significant differences between UKZN and DUT students' entrepreneurship intentions based on specific demographic factors. By so doing, the study sought to understand the influence of external factors on students' entrepreneurial intentions. This objective was achieved, and the study concluded that there are no significant differences on UKZN and DUT students' entrepreneurial intentions based on age, race and parents' occupation. However, the findings revealed that there were significant differences on students' entrepreneurial intentions based on level of study. It is probable that as students progress with their studies and get closer to graduation, their entrepreneurial intentions increase as they start making plans for their careers. It is at this stage that it is necessary to intensify the entrepreneurship education curriculum to effectively develop students' entrepreneurial skills and knowledge before leaving university. Entrepreneurship education should vary significantly

between the different levels of study, with the final year curriculum enriched with both theory and business practice and workshops.

To investigate the role that entrepreneurship education can play, compared with other factors (subjective norms, attitude towards entrepreneurship) that influence UKZN and DUT students' entrepreneurial intentions.

The study sought to investigate the role played by entrepreneurship education in predicting students' entrepreneurial intentions in comparison to subjective norms and attitude towards entrepreneurship. This objective was achieved, and the findings revealed that the best predictor of entrepreneurial intentions amongst the surveyed students was subjective norms. These findings imply that students should be given adequate entrepreneurial support from university, their families, the society and the government at large, more especially if they show interest towards entrepreneurial activities. Academics, which include lecturers, tutors and researchers should provide university students with the relevant knowledge whilst the society and industry players provide the mentorship required for successful entrepreneurship. Parents and families should provide the needed support for entrepreneurial development and success. As discussed earlier in this thesis, an entrepreneurial university forms a strong foundation for entrepreneurship development and all relevant stakeholders should come together to support students for a successful entrepreneurship career.

To make recommendations to the entrepreneurship education curriculum developers at UKZN and DUT based on students' perceptions on entrepreneurship education.

Finally, the study sought to make recommendations to the entrepreneurship education curriculum developers of UKZN and DUT. This objective was achieved, and recommendations were put forward, as discussed in this chapter. The researcher recommended the introduction of standalone and full entrepreneurship degrees at undergraduate level as it is evident both UKZN and DUT are yet to introduce them in their curriculum. It was shown in this study that some Australian and American universities have full entrepreneurship degrees at undergraduate level. It is probable that students registered for these degrees will develop higher levels of entrepreneurial intentions compared to those who would have done a single entrepreneurship course at undergraduate level.

9.4 Limitations of the study

This study has its limitations just like any other empirical research study. The study was conducted at UKZN and DUT which imposed a limit on the population and sample size. More

time and financial resources were needed if a larger population and sample of students were to be used for the study. The population and sample used impacted on the extent to which the study results can be generalised. The results of this study can be generalised to the population of UKZN and DUT students. Rahman (2013: 1) stated that "when a population-based study or survey is conducted, the results are usually inferred back to the bigger target population, the issue here is whether the sample selected for the study represent the population adequately". This is more especially true of quantitative studies which use the survey research design, representativeness is an important criterion in such studies. Had the study been conducted in more universities, the results could have been generalized to the population of students registered in public universities in Durban, thereby benefiting from the valuable findings presented in this research. Faber and Fonseca (2014) argued that conducting studies with smaller populations have an impact on the results, a negative result might come out as a positive and generalising the findings might be limited. It might not be sufficient to generalise the findings from this study to the entire population of students in Durban universities and come to a conclusion based on findings from two public universities. The sample was however sufficient to represent the students in the two universities used and the sample size calculation process was done efficiently.

Another limitation to this study is that it was conducted during the Covid-19 pandemic which had a negative impact on the data collection process. The researcher could not physically collect data and had to conduct an online survey. Furthermore, the data collection process took longer than expected because the researcher could not have any form of control over the process. The purpose and need for the study and ethical considerations must be communicated to research participants before data collection commences, this is imperative for the participants to understand the research. The researcher did not get that chance in this study and the target population could only be communicated with in a non-verbal manner through the informed consent form and introduction of the questionnaire. Baxter and Jack (2008) stated that it is sometimes difficult for researchers to control the environments in which they conduct research which not only affects the research process but might also have an effect on the outcome. It would not have the same impact when a researcher is physically present to speak with study participants and when communication is only through the informed consent form. "Responses often depend on particular time which again is dependent on the conditions occurring during that particular time frame" (Chetty, 2016, para. 5). The Covid-19 pandemic exerted a lot of pressure on individuals and most people suffered emotionally. Some people were stressed and

depressed whilst some suffered psychological illnesses. Conducting research and collecting data in such an environment would have a negative impact on the process as respondents might not be in their right state of mind thereby influencing their responses.

This study adopted the survey research design in which a structured questionnaire was used to collect data. Likert scales measuring the different constructs under examination in the study with responses ranging from strongly disagree to strongly agree were used and study participants only had those options to express their perception towards entrepreneurial education. Study participants were constrained from providing further responses to the given options and there was no room for verbal expression. Queirós et al. (2017) stated that survey research designs are too rigid in structure and it is difficult for researchers to capture respondents' emotions, facial expressions, behavioural patterns and their reactions to each question. Respondents' verbal and non-verbal expressions are important for the researcher to provide a comprehensive analysis and evaluation of the topic. Unlike the qualitative research design, the questionnaire used in this study did not allow the researcher to interact with respondents or probe further to some of the responses. The findings of the study were therefore limited to the statistical data analysis that was conducted with the collected quantitative data which leads to limited explanations. The questionnaire had a section where students were requested to add any other information that would be valuable to the research study. However, it would be insufficient to capture all the unverbalised responses.

9.5 Direction for future research

Most research would require a follow up study to track any changes in individuals' perception or the value of the constructs under study. A study at a later stage would be recommended for this particular study to check any changes in the status of entrepreneurship education or students' entrepreneurial intentions more especially after implementation of the recommendations proposed in this research and beyond. Future studies on entrepreneurship education and students' entrepreneurship intentions in South African students could be conducted on a larger scale with a bigger population and sample size. More than two Universities could be included in the study and the study could also look at the student population outside Durban for more conclusive research findings and explanations. Future studies could also focus on both public and private Universities for a comparison of the entrepreneurship education offered in both types of institutions and if the students have different entrepreneurship intention levels. Delice (2010) argued that the main aim of quantitative research is to infer the relationship found among variables to the general

population identified in the study. Conducting a study on entrepreneurship education and students' entrepreneurial intentions with a larger student population in South Africa would better inform the respective higher education and tertiary institution authorities and management on the position of entrepreneurship in institutions.

Respondents' verbal expressions are important more especially when their perceptions towards some concepts are examined. The research instrument and data collection process for this study restricted respondents from verbally expressing their perceptions towards entrepreneurship education and entrepreneurial intentions. Future studies can be conducted using both qualitative and quantitative research designs or a mixed method research design. It would be significant to capture respondents' true feeling towards entrepreneurship education which can be expressed verbally and through the different emotions and behaviours shared during the interviews or focus group discussions. Choy (2014) in a comparison of the qualitative and quantitative research designs concluded that both designs are appropriate; he however advocated for a complementary use of both designs for the same research topic as it provides better results as compared to using one design. Focus groups with students can be used to discuss the various issues and topics surrounding entrepreneurship education and their entrepreneurial intentions. Queiros, Faria and Almeida (2017) suggested that focus groups are effective for researchers seeking clarification and more understanding on a topic and they can get detailed and rich information from the conversations with their respondents. This would counter the rigidity of the research instrument used in this current study.

This study adopted the correlation research design which entails the collection of data once in the research process. The study was designed this way due to the limited time and resources available to execute it. Caruana, Roman, Hernández-Sánchez and Solli (2015) pointed out that researchers can analyse multiple variables at a given time using cross-sectional studies but due to its static nature no information on how time influenced the variables can be provided. Similarly, Stritch (2017) noted that scholars in the field of public management are frequently using longitudinal research to overcome the limitations of cross-sectional research. Future research studies using the longitudinal research design can be conducted on this topic. The longitudinal research design will allow the collection of data at different time intervals to track the significant changes in the variables under study, if any. Conducting studies on entrepreneurship education and students' entrepreneurial intentions would be highly desirable to check the new position of entrepreneurship education and levels of students' entrepreneurship intention after the implementation of recommended strategies and

interventions. For example, follow up studies can be conducted after implementing a new entrepreneurship education curriculum with both the theoretical and practical aspects to measure the impact on students' entrepreneurial intentions. Caruana et al. (2015: 539) posited that "longitudinal methods may provide a more comprehensive approach to research, allowing an understanding of the degree and direction of change over time".

This current study investigated the role played by entrepreneurship education in students' entrepreneurial intentions. The study therefore focused on the variable entrepreneurship education as a determinant of entrepreneurship intention. Future studies can be conducted with multiple variables to accurately ascertain the strength of entrepreneurship education in influencing students' entrepreneurial intentions. Remeikiene et al. (2013) identified the following factors as determinants of entrepreneurship intention; the culture of a country, personal factors, family history and background, state laws and unemployment rate. There is therefore room to conduct a broader study with more variables given the availability of adequate resources. Factors other than entrepreneurship education might be identified as good predictors of entrepreneurship intention and behaviour to the benefit of higher education tertiary institutions and other interested stakeholders.

9.6 Concluding recommendations

The researcher puts forward some recommendations based on the findings of the current study. These recommendations, though referring to UKZN and DUT, are applicable to other South African universities and institutions currently offering or planning to offer entrepreneurship education. The latest GEM South Africa (2021/2022) report emphasizes the need to further develop entrepreneurship education in South Africa, a nationwide rather than institution specific initiative.

1. UKZN and DUT could look at introducing entrepreneurship specific courses at all undergraduate levels, from 1st to 3rd year. The entrepreneurship courses must be designed according to the complexity of the level of study, Introduction to entrepreneurship course can be offered to 1st year students and more advanced courses to 2nd and 3rd year students.

2. UKZN and DUT could look at introducing entrepreneurship degrees like the Bachelor of Entrepreneurship or the Bachelor of Business Entrepreneurship degree. This enables students to specialise in entrepreneurship specific courses that cover the basics and higher-level entrepreneurial skills. This also applies to other South African universities and institutions that are yet to introduce standalone entrepreneurship degrees.

3. Entrepreneurship education can be offered to all students regardless of their field of study and college in which they are registered. For example, UKZN can introduce a compulsory entrepreneurship module for students in the College of Humanities, Health Sciences, Agriculture, Engineering and Sciences and College of Law and Management Studies. This can be in an attempt to instil basic entrepreneurial knowledge upon every student prior to leaving University. Graduates from other disciplines especially sciences and engineering also engage in entrepreneurial activities that lead to economic growth and development.

4. UKZN and DUT could factor in experiential learning in their entrepreneurship education curriculum. Compulsory entrepreneurship workshops, seminars and business conventions must be arranged for all students registered for entrepreneurship courses. Entrepreneurship education can be best taught using both traditional and progressive teaching methods. Local entrepreneurs can be invited as guest lecturers to talk about their entrepreneurial success and failures to stimulate students' entrepreneurial intentions. Real-world topics such as sourcing business funds, registering a business or company and international business expansion strategies must be discussed.

5. Practical business assignments must be introduced as a compulsory component of entrepreneurship courses. All students registered for entrepreneurship courses must at least engage in one group-based business project that can be a part of their formative assessment. Basically, a review of the current entrepreneurship curriculum and applying the necessary and relevant aspects of learning is highly recommended.

6. Future research can focus on the context specific entrepreneurship education needs of students. Entrepreneurship education needs to be designed with the needs of students in mind, and course content must focus on addressing the needs of students. Furthermore, future research can focus on the best teaching methods of delivering entrepreneurship education to students. Higher education institutions must focus on what works best for their students.

7. Some extra-curricular entrepreneurship activities can be made compulsory to entrepreneurship students and their promotion must be increased for effective awareness. It is possible that some students are not aware of the number of entrepreneurship programs offered on their campuses due to lack of awareness, however it could be also due to ignorance.

8. UKZN and DUT can implement the model of the entrepreneurial University when designing their entrepreneurial curriculum. The entrepreneurship curriculum must include the teaching, research and extra-curricular components, not only teaching is important for an effective

entrepreneurial environment. The Universities must factor in both external (community, mentors, invited guests, corporations, partnerships with organisations) and internal (infrastructure, student associations, a place to go if you have an idea) stakeholders for entrepreneurial success. Furthermore, the six steps identified by the model of the entrepreneurial University can be implemented: leadership commitment, centre for entrepreneurship, raising awareness, employee engagement, mechanisms for execution and performance management.

9. The Universities can have policies that guide the design and implementation of entrepreneurship curriculum. These policies can effectively communicate leadership goals and objectives, provide a framework or strategy for the implementation of an effective entrepreneurial environment and can get stakeholders to work towards the achievement of the same goals. For example, an entrepreneurship policy can communicate the need to include a compulsory entrepreneurship module in every degree programme regardless of field or college of study.

10. Universities can enter into more partnership with public and private organisations that support entrepreneurship development and provide mentorship services to university students. For example, the Start-up Weekend event that was conducted in 2013 as a result of a partnership between UKZN Graduate School of Business and Leadership, eThekwini Municipality, Sigma International and ABSA.

11. Universities can identify enthusiastic and creative entrepreneurship students for further mentorship and guidance. Such students can be introduced to government or private organisations that support entrepreneurial development. Furthermore, information on entrepreneurship support programmes must be made available to every student, some students lack entrepreneurial zeal due to lack of awareness of such programmes or support structures.

12. Universities should consider intensifying entrepreneurship education delivery through digital technologies. This is necessary for ongoing teaching and learning in the face of unforeseen circumstance such as the COVID-19 pandemic.

9.7 Conclusion

The study sought to investigate the influence of entrepreneurship education on students' entrepreneurial intentions. The findings indicated that entrepreneurship education positively influences students' entrepreneurial intentions. Based on the findings, there is a need for educational institutions to review their entrepreneurial education curriculum in view of their students' entrepreneurship education needs. Relevant learning and teaching methods that seek to effectively stimulate students' entrepreneurial needs can be employed, however research must be conducted prior, as there are context and environmental based factors that must be considered. Furthermore, subjective norms and perceived behavioural control influence students' entrepreneurial intentions. Students' must perceive total control of their entrepreneurial behaviour therefore they must be empowered and supported. Various stakeholders and parties must work towards enhancing students' entrepreneurial intentions. The University community, organisations, the government, societies and family can contribute positively to the development of students' entrepreneurial intentions.

REFERENCES

Academy for Educational Development (2006) *Introduction to Data Analysis Handbook.* Available at: https://files.eric.ed.gov/fulltext/ED536788.pdf Accessed 14 February 2021.

Ahmad, N. & Hoffmann, A. (2008) A Framework for Addressing and Measuring Entrepreneurship. SSRN Scholarly Paper ID 1090374. Rochester, NY: Social Science Research Network. doi:10.2139/ssrn.1090374.

Ahmed, I., Nawaz, M., Zafar, A., Shaukat, M. Z., Usman, A. & Ahmed, N. (2010) Determinants of students' entrepreneurial career intentions: Evidence from business graduates. *European Journal of Social Sciences*, 15(2), 14–22.

Ajzen, I. & Fishbein, M. (1980) *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice-Hall.

Ajzen, I. (1985) From Intentions to Actions: A Theory of Planned Behavior. In: Kuhl, J., & Beckmann, J. eds. *Action Control.* Berlin, Heidelberg: SSSP Springer Series in Social Psychology. Springer, https://doi.org/10.1007/978-3-642-69746-3_2.

Ajzen, I. (1991) The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.

Ajzen, I. (2019) *Icek Ajzen: TPB with Background Factors*. Available at: https://people.umass.edu/aizen/tpb.background.html (Accessed: 31 July 2020).

Alberti, F. G., Sciascia, S. & Poli, A. (2005) The domain of entrepreneurship education: Key issues. *International Journal of Entrepreneurship Education*, 2(4), 453–482.

Aldrich, H. E. & Cliff, J. E. (2003) The pervasive effects of family on entrepreneurship: toward a family embeddedness perspective. *Journal of Business Venturing,* 18(5), 573- 596.

Aliaga, M. & Gunderson, B. (2002) *Interactive statistics.* New Jersey: Prentice Hall.

Almendarez, L. (2010) Human Capital Theory: Implications for educational development. In Second Conference. Belize Country Conference. Available at: https://www.open.uwi.edu/sites/default/files/bnccde/belize/conference/papers2010/almendarez.html (Accessed: 6 September 2021).

Al-Shammari, M. & Waleed, R. (2018) Entrepreneurial intentions of private university students in the kingdom of Bahrain. *International Journal of Innovation Science*, 10(1), 43–57.

American Psychological Association (APA) (2020) *Personality.* Available at: https://www.apa.org/topics/personality (Accessed: 21 June 2021).

André, B., Aune, A. G. & Brænd, J. A. (2016) Embedding evidence-based practice among nursing undergraduates: results from a pilot study. *Nurse Education in Practice*, 18, 30–35.

Ang, S. H. & Hong, D. (2000) Entrepreneurial spirit among East Asian Chinese. *Thunderbird International Business Rev*iew 42, 285–309.

Ariff, A. H., Bidin, Z., Sharif, Z. & Ahmah, A. (2010) Predicting entrepreneurship intention among Malay University Accounting students in Malaysia. *UNITAR e-Journal*, 6(1),1–10.

Arko-Achemfuor, A. (2014) Revisiting entrepreneurship training for adults: Basic education for employability. *Anthropologist,* 17(2), 433-440.

Arogundade, B. B. (2011) Entrepreneurship education: an imperative for sustainable development in Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies*, 2(1), 26–29.

Arranz, N., Ubierna, F., Arroyabe, M. F., Perez, C. & Fdez. De Arroyabe, J. C. (2017) The effect of curricular and extracurricular activities on university students' entrepreneurial intention and competences. *Studies in Higher Education*, 42(11), 1979–2008.

Aulia, P. A. & Hadi, C. (2018) Attitude relationships with entrepreneurial intentions to students. Surabaya: Airlangga University.

Bacq, S., Geoghegan, W., Josefy, M., Stevenson, R. & Williams, T. A. (2020) The COVID-19Virtual Idea Blitz: Marshaling social entrepreneurship to rapidly respond to urgent grand challenges *Business Horizons*, 63(8), 705-723.

Bagheri, A. & Pihie, Z. A. L. (2015) Factors influencing students' entrepreneurial intentions: The critical roles of personal attraction and perceived control over behavior. *The International Journal of Management Science and Information Technology (IJMSIT)*, (16), 16–28.

Baruch, Y. (1999) Response Rate in Academic Studies-A Comparative Analysis. *Human Relations*, 52(4), 421–438.

Baseska-Gjorgjieska, M., Milevska, M. & Jankuloski, B. (2012) Formal and informal education in entrepreneurship and SME management–current situation and tendencies in Macedonia. In: *Managing Structural Changes- Trends and Requirements*, 1, 360-374.

Baumol, W. J. (1993) Entrepreneurship Theory In Economics. *Journal of Business Venturing* 8, 197-210.

Baumol, W. J. (2008) Entrepreneurs, Inventors and the Growth of the Economy. Economics Program Working Paper Series. The Conference Board.

Baumol, W. J., Schilling, M. A., & Wolff, E. N. (2009) The Superstar Inventors and Entrepreneurs: How Were They Educated. *Journal of Economics and Management Strategy*, 18(3), 711-728.

Baxter, P. & Jack, S. (2008) Qualitative Case Study Methodology: Study Design and Implementation for Novice Researchers. *The Qualitative Report*, 13(4), 544–559.

Beech, N. & Anseel F. (2020) COVID-19 and Its Impact on Management Research and Education: Threats, Opportunities and a Manifesto. *British Journal of Management*, 31(3), 447–449.

Behnke, J., Baur, N. & Behnke, N. (2006) *Empirische Methoden der Politikwissenschaft*. Paderborn, Germany: Schöningh.

Bhandarkar, P. L., Wilkinson, T. S. & Laldas, D. K. (2010) *Methodology & Techniques of Social Research*. New Delhi, India: Himalaya Publishing House.

Bird, B. (1988) Implementing entrepreneurial ideas: The case for intention. *The Academy of Management Review*, *13*(3), 442–453.

Bliemel, M. (2019) *UTS second in Australia for entrepreneurship education.* Available at: https://www.uts.edu.au/news/innovation/uts-second-australia-entrepreneurship-education. (Accessed: 21 June 2021).

Block, J. H., Fisch, C. O. & Praag, M van. (2016) The Schumpeterian entrepreneur: a review of the empirical evidence on the antecedents, behaviour and consequences of innovative entrepreneurship. *Journal of Industry and Innovation*, 24(1), 61-95.

Boldureanu, G., Ionescu, A. M., Bercu, A. M., Bedrule-Grigoruță, M. V. & Boldureanu, D (2020) Entrepreneurship Education through Successful Entrepreneurial Models in Higher Education Institutions. *Sustainability*, 12(3), 1-33.

Bowmaker-Falconer, A. & Herrington, M. (2020) Igniting startups for economic growth and social change: Global Entrepreneurship Monitor South Africa 2019/2020 Report. *Stellenbosch University.*

Brammer, S. & Clark, T. (2020) COVID-19 and management education: Reflections on challenges, opportunities, and potential futures. *British Journal of Management*, 31(1), 453-456.

Brand South Africa (2017) *State of entrepreneurship in South Africa.* Available at: https://www.brandsouthafrica.com/investments-immigration/business/state-of-entrepreneurship-in-south-africa (Accessed: 23 September 2017)

Brisbane, Australia: Australian Centre for Entrepreneurship Research, Queensland University of Technology.

Burmeister, E. & Aitken, L. M. (2012) Sample size: How many is enough? *Australian Critical Care*, 25(4), 271–274. doi:10.1016/j.aucc.2012.07.002.

Business Marketing Engine (2021) *The Benefits of an Entrepreneurship Degree*, *Business Marketing Engine*. Available at: https://businessmarketingengine.com/the-benefits-of-an-entrepreneurship-degree/.

BusinessTech (2019) *Entrepreneurship should be a subject at South African schools: Ramaphosa.* Available at: https://businesstech.co.za/news/government/352253/entrepreneurship-should-be-a-subject-at-south-african-schools-ramaphosa/ (Accessed: 12 December 2019).

Bux, S., A. & van Vuuren, J. (2019) The effect of entrepreneurship education programmes on the development of self-efficacy, entrepreneurial intention and predictions for entrepreneurial activity. *Acta Commercii*, 19(2), 1-13. doi: https://doi.org/10.4102/ac.v19i2.615

Byabashaija, W. & Katono, I. (2011) The Impact of College Entrepreneurial Education on Entrepreneurial Attitudes and Intentions to Start a Business in Uganda. *Journal of Developmental Entrepreneurship,* 16, 127-144. https://doi.org/10.1142/S1084946711001768

Cacciattolo, M. (2015) Ethical Considerations in Research. In: Vicars, M. et al. (eds) The Praxis of English Language Teaching and Learning (PELT): Beyondthe Binaries: Researching *Critically in EFL Classrooms*. Rotterdam: SensePublishers (Critical New Literacies), pp. 61–79.

Caruana, E. J., Roman, M., Hernandez-Sanchez, J. & Solli, P. (2015) Longitudinal studies. *Journal of Thoracic Disease*, 7(11), 537–540.

Castrillon, C. (2019) *Why More Women Are Turning To Entrepreneurship*, *Forbes*. Available at: https://www.forbes.com/sites/carolinecastrillon/2019/02/04/why-more-women-are-turning-to-entrepreneurship/ (Accessed: 16 May 2021).

Chaudhary, R. (2017) Demographic Factors, Personality and Entrepreneurial Inclination: A study among Indian university students. *Education and Training*, 59(2), 171–187.

Chetty, P. (2016) *Limitations and weakness of quantitative research methods*, *Project Guru*. Available at: https://www.projectguru.in/limitations-quantitative-research/ (Accessed: 20 June 2021).

Chimucheka, T. (2014) Entrepreneurship Education in South Africa. *Mediterranean Journal of Social Sciences*, 5(2), 403–416.

Chinyeake J. I., Agbodike, F. C. & Osakede, K. O. (2018) Entrepreneurial curriculum in African universities: a panacea to graduates' unemployment if? *Africa's Public Service Delivery and Performance Review*, 6(1), 1–8.

Choto, P., Tengeh, R. K. & Iwu, C. G. (2014) Daring to survive or to grow? The growth aspirations and challenges of survivalist entrepreneurs in South Africa. *Environmental Economics*, 5(4), 93-101.

Choy, L. T. (2014) The strengths and weaknesses of research methodology: Comparison and complimentary between qualitative and quantitative approaches. *IOSR Journal of Humanities and Social Science*, 19(4), 99–104.

Cohen, J. (1988) Set Correlation and Contingency Tables. *Applied Psychological Measurement*, 12(4), 425–434. doi: 10.1177/014662168801200410.

Committee on Culture and Education (1999) *Non-formal education.* Available at: https://assembly.coe.int/nw/xml/XRef/X2H-Xref-ViewHTML.asp?FileID=8807&lang=EN (Accessed: 14 December 2019).

Creswell, J. W. (2007) *Research design: Qualitative, Quantitative, and Mixed Methods Approaches.* 2nd ed. Thousand Oaks, CA: Sage Publications.

Creswell, J. W., Ebersohn, L., Eloff, I., Ferreira, R., Ivankova, N.V., Jansen, J.D., Nieuwenhuis, J., Pieterson, V.L., Plano Clark, V.L. & van der Westhuizen, C. eds. (2007) *First Steps in Research Sampling.* Pretoria: Van Schuik Publishers.

Creswell, J.W. (2014) *Research design: Qualitative, Quantitative, and Mixed Methods Approaches.* 4th ed. Thousand Oaks, CA: Sage.

Croci, C. L. (2016) *Is Entrepreneurship a Discipline?* (Honors Thesis). University of New Hamspire Scholar's Repository.

Cummings, D. (2012) 7 Characteristics of Successful Entrepreneurs, David Cummings on Startups Availableat:https://davidcummings.org/2012/05/05/7-characteristics-of-successful-entrepreneurs/ (Accessed: 12 May 2021).

Dao, T. K., Bui, A. T., Doan, T. T. T., Dao, N. T., Le, H. H. & Le, T. T. H. (2021) Impact of academic majors on entrepreneurial intentions of Vietnamese students: An extension of the theory of planned behavior. *Heliyon*, 7(3), 1–13.

Davids, F. (2017) *The Theory of Planned Behaviour and the Entrepreneurial Event Model as predictive models of entrepreneurial intention*. Unpublished thesis (M. A.). University of Cape Town.

Davidsson, P. (2016) *Researching Entrepreneurship: Conceptualization and Design.* New York: Springer.

De Jorge-Moreno, J., Castillo, L. L. & Triguero, M. S. (2012) The effect of business and economics education programs on students' entrepreneurial intention. *European Journal of Training and Development*. 36(4), 409-425.

De Vaus, D. (2001) *Research design in social research*. London, UK: SAGE Publications Inc.

Deeb, G. (2015) *Does Age Matter For Entrepreneurial Success?* Available at: https://www.forbes.com/sites/georgedeeb/2015/04/16/does-age-matter-for-entrepreneurial-success/?sh=372a775430f1 (Accessed: 28 May 2021).

DeVellis, R. F. (2003) *Scale development: theory and applications*. California, CA: Thousand Oaks.

Diandra, D. & Azmy, A. (2020) Understanding definition of entrepreneurship. *InternationalJournal of Management, Accounting and Economics*, 7(5), 235-241.

Donthu, N. & Gustafsson, A. (2020) Effects of COVID-19 on business and research. *Journal of Business Research*, 117(1), 284-289.

Dudovskiy, J. (2018) *Research Philosophy.* Available at: https://research-methodology.net/research-philosophy/ (Accessed: 12 February 2021).

Durban University of Technology (2021) *About DUT.* Available at: https://www.dut.ac.za/about-dut/ (Accessed: 13 July 2021).

DUT (2020) *The State of the University Address 2020.* Available at: https://www.dut.ac.za/wp-content/uploads/2020/03/The-State-of-the-University-Address-2020.pdf (Accessed: 25 May 2021).

DUT (2021) *Entrepreneurial Studies and Management Handbook.* Available at: https://www.dut.ac.za/faculty/management/entrepreneurial_studies_and_management/ (Accessed: 25 May 2021).

Eddy (2019) Formal and informal training in entrepreneurship. Available at: https://www.business-fundas.com/2019/formal-and-informal-training-in-entrepreneurship/ (Accessed: 29 March 2020).

Elam, A. B., Brush, C. G., Greene, C. G., Baumer, B., Dean, M. & Heavlow, R. (2019) Global Entrepreneurship Monitor 2018/2019 Women's Entrepreneurship Report. Available at: https://www.gemconsortium.org/report/gem-20182019-womens-entrepreneurship-report. (Accessed: 12 May 2021).

Elkins, K. (2016) *Facebook's Mark Zuckerberg says the most successful entrepreneurs share 3 traits', The Definitive Guide to Business*. Available at: https://www.cnbc.com/2016/09/02/facebook-mark-zuckerberg-successful-entrepreneurs-share-3-traits.html. (Accessed: 13 May 2021).

eThekwini Municipality's Communications Unit (2003) *Startup Weekend to Empower Creative Business Ideas*. Available at: http://www.durban.gov.za/Resource_Centre/Press_Releases/Pages/Startup-Weekend-to-Empower-Creative-Business-Ideas.aspx. (Accessed: 19 September 2020).

Faber, J. & Fonseca, L. M. (2014) How sample size influences research outcomes. *Dental Press Journal of Orthodontics*, 19, 27–29.

Farrington, S. M., Venter, D. J. L. & Louw, M. J. (2012) Entrepreneurial intentions: Demographic perspectives of South African business students. *South African Journal of Business Management*, 43(3), 41–49.

Farrukh, M., Alzubi, Y., Shahzad, I., Waheed, A. & Kanwal, N. (2018) Entrepreneurial intentions: The role of personality traits in perspective of theory of planned behaviour. *Asia Pacific Journal of Innovation and Entrepreneurship*, 12(3), 399-414.

Farrukh, M., Khan, A., Khan, M. S., Ramzani, S. & Soladoye, A. (2017) Entrepreneurial intentions: the role of family factors, personality traits and self-efficacy. *World Journal of Entrepreneurship, Management and Sustainable Development*, 13(4), 303-317.

Fatoki, O. (2014) The Entrepreneurial Intention of Undergraduate Students in South Africa: The Influences of Entrepreneurship Education and Previous Work Experience. *Mediterranean Journal of Social Sciences*, 5(7), 294–299.

Fayolle, A. & Liñán, F. (2014) The future of research on entrepreneurial intentions. *Journal of Business Research*, 67(5), 663-666.

Fayolle, A., Gailly, B. & Lassas-Clerc, N. (2006) Assessing the impact of entrepreneurship education programmes: a new methodology. *Journal of European Industrial Training*, 30(9), 701–720.

Feder, E. S. & Nițu-Antonie, R. D. (2017) Connecting gender identity, entrepreneurial training, role models and intentions. *International Journal of Gender and Entrepreneurship*, 9(1), 87–108.

Fellnhofer, K. (2017) 'The power of passion in entrepreneurship education: Entrepreneurial role models encourage passion?', *Journal of Entrepreneurship Education*, 20(1), pp. 58–87.

Fiet, J. O., Miao, C., Qian, S. & Bae. T. J. (2014) The Relationship between Entrepreneurship Education and Entrepreneurial Intentions: A Meta-Analytic Review. *Entrepreneurship Theory and Practice*, 217- 254.

Fincham, J. E. (2008) Response Rates and Responsiveness for Surveys, Standards, and the Journal. *American Journal of Pharmaceutical Education*, 72(2), 1–2.

Fix, B. (2018) *The trouble with human capital theory*. Working Paper 2018/07. Working Papers on Capital as Power. Available at: https://www.econstor.eu/handle/10419/181668 (Accessed: 6 September 2021).

FNB & Endeavor SA (2018) *The entrepreneurial Dialogues State of Entrepreneurship in South Africa.* Available at: https://www.sablenetwork.com/pdf/The%20Entrepreneurial%20Dialogues%20-%20State%20of%20Entrepreneurship%20in%20South%20Africa.pdf (Accessed: 30 October 2019).

Fouka, G. & Mantzorou, M. (2011) What are the major ethical issues in conducting research? Is there a conflict between the research ethics and the nature of nursing? *Health science journal*, 5(1), 3-14.

Frank, H., M. Lueger & C. Korunka. (2007) The significance of personality in business startup intentions, startup realization and business success. *Entrepreneurship and Regional Development*, 19(3), 227-251.

Fraser, J., Fahlman, D. W., Arscott, J. & Guillot, I. (2018) Pilot Testing for Feasibility in a Study of Student Retention and Attrition in Online Undergraduate Programs. *The International Review of Research in Open and Distributed Learning*, 19(1), 260–278.

Fretschner, M. (2014) Ajzen's Theory of Planned Behavior in Entrepreneurship Education Research. In: Weber, S., Oser, F. K., Achtenhagen, F., Fretschner, M. & Trost, S. (eds). *Becoming an Entrepreneur*. Professional and Vet Learning. Rotterdam: Sense Publishers. https://doi.org/10.1007/978-94-6209-596-0_15

Fubah, C. N & Moos, M. (2022) Exploring COVID-19 Challenges and Coping Mechanisms for SMEs in the South African Entrepreneurial Ecosystem. *Sustainability*, 14(4), 1-20.

Gamede, B. T. & Uleanya, C. (2017) The role of entrepreneurship education in secondary schools at further education and training phase. *Academy of Entrepreneurship Journal*, 23(2), 1–12.

Garg, A., Matshediso, I. B. & Garg, D. (2011) An individual's motivation to become entrepreneur: Evidence from a mineral based economy. *International Journal of Entrepreneurship and Small Business,* 12(1), 109 - 127.

GEM (Global Entrepreneurship Monitor) (2023). Global Entrepreneurship Monitor 2022/2023 Global Report: Adapting to a "New Normal". London: GEM.

Global Entrepreneurship Research Association (GERA) (2017) *Global Report 2016/17*.

Global Entrepreneurship Research Association (GERA) (2018) *Global Report 2017/18*.

Global Entrepreneurship Research Association (GERA) (2020) *Global Report 2019/2020*.

Godsey, M. L. & Sebora, T. C. (2010) Entrepreneur role models and high school entrepreneurship career choice: Results of a field experiment. *Small Business Institute Journal,* 5(1), 83–125.

Gorman, G., Hanlon, D. & King, W. (1997) Some Research Perspectives on Entrepreneurship Education, Enterprise Education and Education for Small Business Management: A Ten-Year Literature Review. *International Small Business Journal,* 15(3), 56–77.

Grecu, V. & Denes, C. (2017) Benefits of entrepreneurship education and training for engineering students. In: *8th International Conference on Manufacturing Science and Education –Trends in New Industrial Revolution*. MATEC Web of Conferences, edp sciences, p. 7. doi:10.1051/matecconf/201712112007.

Haliimah, N. (2010) *An Investigation of The Management of Extracurricular Programmes in Selected Inner-City Secondary Schools: A Case Study*. Unpublished thesis. (M. Ed). University of South Africa.

Hamburg, I. (2021) Social Measures and Disruptive Innovations In Entrepreneurship Education To Cope With COVID-19. *Advances in Social Sciences Research Journal*, 8(1) 70-80.

Hatak, I., Harms, R. & Fink, M. (2015) Age, job identification, and entrepreneurial intention. *Journal of Managerial Psychology*, 30, 38-53.

Heale, R. & Twycross, A. (2015) Validity and reliability in quantitative studies. *Evidence-Based Nursing*, 18(3), 66–67.

Herdjiono, I., Puspa, Y., Maulany, G. & Aldy, B. (2017) The Factors Affecting Entrepreneurship Intention. *International Journal of Entrepreneurial Knowledge*, 5(2), 5-15.

Herrington, M. & Kew, P. (2018) Is there a change in attitude towards the small and medium business sector in South Africa: Global Entrepreneurship Monitor South Africa 2017/2018. *Western Cape Government and the Global Entrepreneurship Monitor South Africa.*

Herrington, M., Kew, J. & Kew, P. (2009) Tracking entrepreneurship in South Africa: a GEM perspective. Global Entrepreneurship Monitor South Africa 2009 Report. *University of Cape Town and the Global Entrepreneurship Monitor South Africa*.

Herrington, M., Kew, P. & Mwanga, A. (2017) Can small businesses survive in South Africa? Global Entrepreneurship Monitor South Africa Report 2016/2017. *University of Cape Town and the Global Entrepreneurship Monitor South Africa*.

Higher Education Around the World. IAU Global Survey Report. The International Association of Universities the Global Voice of Higher Education. 1-16.

Hitt, M. A., Ireland, R. D., Camp, S. M. & Sexton, D. eds. (2002) *Strategic entrepreneurship: Creating a new mindset*. USA: Wiley

Hou, F., Su, Y., Lu, M. & Qi, M. (2019) Model of the Entrepreneurial Intention of University Students in the Pearl River Delta of China. *Frontiers in Psychology*, 10, 1–15.

Hulme, D. (2007) Integrating Quantitative And Qualitative Research For Country Case Studies Of Development. Global Poverty Research Group WPS-063.

Hytti, U. & O'Gorman, C. (2004) What is "enterprise education"? An analysis of the objectives and methods of enterprise education programmes in four European countries. *Education and Training*, 46(1), 11–23.

Ikebuaku, K. & Dinbabo, M. (2018) Beyond entrepreneurship education: business incubation and entrepreneurial capabilities. *Journal of Entrepreneurship in Emerging Economies*, 10(1), 154–174.

In, J. (2017) Introduction of a pilot study. *Korean Journal of Anesthesiology*, 70(6), 601–605.

Inoue, K., Yagi, Y. & Sato, N. (2018) The mere exposure effect for visual image. *Memory and Cognition*, 46(2), 181–190.

Intention (2020) *Dictionary.com*. Dictionary.com, LLC. Available at: https://www.dictionary.com/browse/intention. (Accessed: 21 June 2021).

Isenberg, D. & Schultz, E. (2020) Opportunities for entrepreneurs in the pandemic and beyond. Availableat:https://medium.com/@disen2/opportunities-for-entrepreneurs-in-the-pandemicand-beyond-f92f5fa1997b (Accessed: 21 April 2021).

Iwu, C. G., Ezeuduji, I., Eresia-Eke, C. & Tengeh, R. (2016) The Entrepreneurial Intention of University Students: The Case of a University of Technology in South Africa. *Acta Universitatis Danubius Œconomica,* 12(1), 164-181.

Iwu, C. G., Gwija, S. A., Tengeh, R. K. & Cupido, C. (2016) The necessity for education and training within the survivalist retail entrepreneurship sector. *Journal of Economics and Behavioral Studies*, 8(2), 56–64.

Jhangiani, R. S., Chiang, I. A. & Price, P. C. (2015) *Research Methods in Psychology - 2nd Canadian Edition*. 2nd Canadian, *https://opentextbc.ca/researchmethods/*. 2nd Canadian. Canada: BC Campus. Available at: http://doer.col.org/handle/123456789/5600. (Accessed 25 June 2020).

Johannisson, B. (1991) University training for entrepreneurship: Swedish approaches. *Entrepreneurship & Regional Development*, 3(1), 67–82.

Johnson, R. B. & Christensen, L. (2019) *Educational Research: Quantitative, Qualitative, and Mixed Approaches*. 7th ed. AL: SAGE Publishing.

Jovancic, N. (2019) 5 Data Collection Methods for Obtaining Quantitative and Qualitative Data. Available at: https://www.leadquizzes.com/blog/data-collection-methods/. (Accessed: 24 June 2021

Kabir, S. M. S. (2016) *Basic guidelines for research: An introductory approach for all disciplines*. Chittagong, Bangladesh: Mohammad Javed Rahim Book Zone Publication.

Kadir, M. B. A., Salim, M. & Kamarudin, H. (2010) Factors affecting entrepreneurial intentions among Mara professional college students. In *Proceeding International Conference on Learner Diversity*.

Kaiser, H. F. (1974) An index of factorial simplicity. *Psychometrika*, 39(1), 31–36.

Kakkonen. M. (2010) International business students' attitudes of entrepreneurship. *Advances in Business-Related Research Journal*, 1(1), 67-77.

Kan, M. P. H. & Fabrigar, L. R. (2017) Theory of Planned Behavior. In: Zeigler-Hill, V. & Shackelford, T. K. (eds). *Encyclopedia of Personality and Individual Differences*. Cham: Springer International Publishing, 1–8. doi:10.1007/978-3-319-28099-8_1191-1.

Karimi, S., Chizari, M., Biemans, H. J. A. & Mulder, M. (2010) Entrepreneurship Education in Iranian Higher Education: The Current State and Challenges. *European Journal of Scientific Research*, 48(1), 35–50.

Karlsson, J., Engebretsen, L. & Dainty, K. (2003) Considerations on sample size and power calculations in randomized clinical trials. *Arthroscopy: The Journal of Arthroscopic & Related Surgery*, 19(9), 997–999.

Kautonen, T. (2008) Understanding the older entrepreneur: Comparing Third Age and Prime Age entrepreneurs in Finland. *International Journal of Business Science & Applied Management,* 3(3), 3-13.

Kautonen, T., van Gelderen, M. & Fink, M. (2015) Robustness of the Theory of Planned Behavior in Predicting Entrepreneurial Intentions and Actions. *Entrepreneurship Theory and Practice*, 39(3), 655–674.

Kelley, D. J., Singer, S. & Herrington, M. (2012) The Global Entrepreneurship Monitor 2011 Global Report. Available at: https://www.gemconsortium.org/report/gem-2011-global-report (Accessed: 20 February 2018).

Kelly, P. J., Webster, A. C. & Craig, J. C. (2010) How many patients do we need for a clinical trial? Demystifying sample size calculations. *Nephrology*, 15(8), 725–731.

Kirby, D. A. (2004) Entrepreneurship education: Can business schools meet the challenge? *Education and Training*, 46(8/9), 510–519.

Kirkley, W. W. (2017) Cultivating entrepreneurial behaviour: entrepreneurship education in secondary schools. *Asia Pacific Journal of Innovation and Entrepreneurship*, 11(1), 17-37.

Kiyani, S. A. (2017) Role of entrepreneurship education on student attitudes. *Abasyn Journal of Social Sciences*, 10(2), 270–293.

Kolomiiets, U. & Petrushenko, Y. (2017) The human capital theory. Encouragement and criticism. *Socio Economic Challenges*. 1(1), 77–80.

Kong, F., Zhao, L. & Tsai, C. H. (2020) The Relationship Between Entrepreneurial Intention and Action: The Effects of Fear of Failure and Role Model. *Front. Psychology*, 11(229), 1-9.

Krejcie, R. V. & Morgan, D. W. (1970) Determining Sample Size for Research Activities', *Educational and Psychological Measurement,* 30(3), 607–610.

Kreuger, L. W. & Neuman, W. L. (2005) *Social Work Research Methods: Qualitative and Quantitative Qualitative and quantitative applications.* Boston: Pearson, Allyn, and Bacon.

Krishnamurthy, S. (2020) The future of business education: A commentary in the shadow of the COVID-19 pandemic. *Journal of Business Research*, 117(1), 1-5.

Krishnamurthy, S. (2020) The future of business education: A commentary in the shadow of the Covid-19 pandemic. *Journal of Business Research*, 117, 1-5.

Krueger, N. (1993) The Impact of Prior Entrepreneurial Exposure on Perceptions of New Venture Feasibility and Desirability. *Entrepreneurship Theory and Practice*, 18(1), 5–21.

Krueger, N. F., Reilly, M. D. & Carsrud, A. L. (2000) Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15, 411-432.

Kruger, M. E. (2004) *Entrepreneurship theory and creativity*. Pretoria: University of Pretoria.

Kumar, R. (2011) *Research Methodology: A Step-by-Step Guide for Beginners*. 3rd ed. New Delhi: Sage

La Trobe University (2019) *Embedding entrepreneurship in education*. Available at: https://www.latrobe.edu.au/news/articles/2019/release/embedding-entrepreneurship-in-education. (Accessed: 24 June 2021).

LaCaille, L. (2013) Theory of Reasoned Action. In: Gellman, M. D. & Turner, J. R. (eds). *Encyclopedia of Behavioral Medicine*. New York, NY: Springer, 1964–1967. doi:10.1007/978-1-4419-1005-9_1619.

Lackéus, M. (2015) Entrepreneurship in Education: What, why, when, how (Entrepreneurship360 background paper)'. Organisation for Economic Co-operation and Development (OECD). Available at: https://www.oecd.org/cfe/leed/BGP_Entrepreneurship-in-Education.pdf.

LaMorter, W. W. (2019) The Theory of Planned Behavior. Available at: https://sphweb.bumc.bu.edu/otlt/mph-modules/sb/behavioralchangetheories/BehavioralChangeTheories3.html (Accessed: 13 June 2020).

Landström, H., Harirchi, G. & Åström, F. (2012) Entrepreneurship: Exploring the knowledge base. *Research Policy*, 41(7), 1154-1181.

Lee, S., Chang, D. & Lim, S. (2005) Impact of Entrepreneurship Education: A Comparative Study of the U.S. and Korea', *International Entrepreneurship and Management Journal* 1(1), 27-43.

Lévesque, M. & Minniti, M. (2006) The effect of aging on entrepreneurial behavior. *Journal of Business Venturing*, 21(2), 177-194.

Liguori, E. & Winkler, C. (2020) From Offline to Online: Challenges and Opportunities for Entrepreneurship Education Following the COVID-19 Pandemic. *Entrepreneurship Education and Pedagogy*, 3(4), 346–351.

Liguori, E. & Winkler, C. (2020) From Offline to Online: Challenges and Opportunities for Entrepreneurship Education Following the COVID-19 Pandemic. *Entrepreneurship Education and Pedagogy*, *3*(4), 346–351.

Liñán, F. & Chen, Y. W. (2006) Testing the entrepreneurial intention model on a two-country sample. Working Papers 0607. Departament Empresa, Universitat Autònoma de Barcelona.

Liñán, F. (2004) Intention-Based Models of Entrepreneurship Education. *Piccola Impresa / Small Business*, 11-35.

Liñán, F., & Chen, Y. W. (2009) Development and Cross-Cultural Application of a Specific Instrument to Measure Entrepreneurial Intentions. *Entrepreneurship Theory and Practice*, 33(3), 593-617.

Lindquist, M. J., Sol, J. & Van Praag, M. (2015) Why Do Entrepreneurial Parents Have Entrepreneurial Children? *Journal of Labour Economics*, 33(2), 269-296.

Lussier, R. N. & Achua, C. F. (2007) *Leadership: Theory application, skill development*. 3rd ed. Mason, OH: Thomson South-Western.

Lüthje C. & Frank, N. (2003) The Making of an Entrepreneur, Testing a Model of Entrepreneurial Intent Among Engineering Students at MIT. *Research and Development Management*,33(2), 135-147.

Maduna, L. (2019) 'UKZN Holds Firm On Zulu Language Policy', *The Daily Vox,* 26 June. Available at: https://www.thedailyvox.co.za/ukzn-holds-firm-on-zulu-language-policy/.

Malebana, M. J. (2014) The Effect of Knowledge of Entrepreneurial Support on Entrepreneurial Intention. *Mediterranean Journal of Social Sciences*, 5(20), 1020–1028.

Malebana, M. J. (2015) Gender differences in entrepreneurial intention in the rural provinces of South Africa. *Journal of Contemporary Management*, 12(1), 615–637.

Malone, H. E., Nicholl, H. & Coyne, I. (2016) Fundamentals of estimating sample size. *Nurse researcher*, 23(5),

Manyaka-Boshielo, S. (2019) Towards entrepreneurship education: Empowering township members to take ownership of the township economy. *HTS Teologiese Studies / Theological Studies*, 75(1), 1-7.

Manyaka-Boshielo, S. J. (2017) Social entrepreneurship as a way of developing sustainable township economies. *HTS Teologiese studies/Theological Studies*, 74(4), a3830.

Marczyk, G. R., DeMatteo, D. & Festinger, D. (2005) *Essentials of research design and methodology*. New York: John Wiley & Sons, Inc.

Maresch, D., Harms, R., Kailer, N. & Wimmer-Wurm, B. (2016) The impact of entrepreneurship education on the entrepreneurial intention of students in science and engineering versus business studies university programs. *Technological Forecasting and Social Change*, 104, 172–179.

Marginson, S. (2017) Limitations of human capital theory. *Studies in Higher Education*, 44(2), 287–301.

Marinoni, G., van't Land, H. & Jensen, T. (2020) The Impact of Covid-19 On

Marire, E. (2015) *A comparison of entrepreneurial intentions of generation Y students in South Africa and Zimbabwe*. Unpublished thesis. (M.A). North-West University South Africa. Vaal Triangle Campus.

Maritz, J., Nieuwenhuizen, P., Duke, L., Moolla, A., Rieger, F., Moodley, S. & Huxtable (2016) *Entrepreneurship for the Media*. 2nd ed. Cape Town: Sage Publications.

Maritza, A. (2020) A Multi-Disciplinary Business Approach to Covid-19: La Trobe Business School Perspectives. *The International Journal of Organizational Innovation*, 13(1), 45-62.

Marshall, A. & Wolanskyj-Spinner, A. (2020) COVID-19: Challenges and opportunities for educators and generation Z learners. *Mayo Clinic Proceedings*, 95(6), 1135-1137.

Martin, B. C., McNally, J. J. & Michael J. K (2013) Examining the formation of human capital in entrepreneurship: A meta-analysis of entrepreneurship education outcomes. *Journal of Business Venturing*, 28(2), 211-224.

Martin, R. L. & Osberg, S. (2007) Social entrepreneurship: The case for definition. *Standford Social Innovation Review*, 29–39.

Martin, W. E. & Bridgmon, K. D. (2012) *Quantitative and Statistical Research Methods: From Hypothesis to Results.* (Vol. 42). Hoboken, NJ: John Wiley & Sons.

Martinez-Gregorio, S., Badeness-Ribera, L. & Oliver, A. (2021) Effect of entrepreneurship education on entrepreneurship intention and related outcomes in educational contexts: a meta-analysis. *The International Journal of Management Education*, 19, 1-15.

Masunda, M. M., Chitumba, C., Mushayavanhu, T. P. & Simuka, J. (2018) An investigation of the profiles of Zimbabwean STEM undergraduate freshmen as input to entrepreneurship education for STEM students. *Journal of Language, Technology and Entrepreneurship in Africa*, 9(1), 69–89.

Mazzarol, T. (2014) *How Do Australia's Universities Engage with Entrepreneurship and Small Business?* SSRN Scholarly Paper ID 2428008. Rochester, NY: Social Science Research Network.

McClelland, D. C. (1961) *The achieving society*. New York, NY: The Free Press.

McIntyre, J. R. & Roche, M. (1999) University education for entrepreneurs in the United States: A critical and retrospective analysis of trends in the 1990s', in. Atlanta, GA: Georgia Institute of Technology. Available at: https://www.scheller.gatech.edu/centers-initiatives/ciber/projects/workingpaper/1999/99_00-21.pdf. (Accessed: 21 June 2021).

Mehmood, T., Alzoubi, H. M., Alshurideh, M., Al-Gasaymeh, A. & Ahmed, G. (2019) Schumpeterian Entrepreneurship Theory: Evolution and Relevance. *Academy of Entrepreneurship Journal, 25*(4), 1-10.

Mei, H, Lee, C. H & Xiang, Y (2020) Entrepreneurship Education and Students' Entrepreneurial Intention in Higher Education', *Education Sciences*, 10(9), 1-18.

Moore, L. L., Grabsch, D.K. & Rotter, C. (2010) Using achievement motivation theory to explain student participation in a residential leadership learning community. *Journal of leadership education*, 9(2), 22–34.

Morgan, G. A. & Harmon, R. J. (2001) Data collection techniques. *Journal of the American Academy of Child and Adolescent Psychiatry*, 40(8), 973-976.

Morris, M. H., Sexton, D. & Lewis, P. (1994) Reconceptualizing entrepreneurship: An input-output perspective. *SAM Advanced Management Journal*, 59(1), 21-31.

Morton, S. M., Bandara, D. K., Robinson, E. M. & Carr, P. E. A. (2012) In the 21st century, what is an acceptable response rate?', *Australian and New Zealand Journal of Public Health*, 36(2), 106–108.

Motsepe Foundation (2020). Global Initiatives. Available at: https://www.motsepefoundation.org/global-initiatives/ (Accessed: 5 December 2020).

Muhammad, A. D., Aliyu, S. & Ahmed, S. (2015) Entrepreneurial Intention Among Nigerian University Students. *American Journal of Business Education (AJBE)*, 8(4), 239–248.

Muijs, D. (2011) *Doing Quantitative Research in Education with SPSS*. 2nd ed. London, UK: SAGE Publications Inc.

Mwange, A. (2018) An evaluation of entrepreneurship intention theories. *Journal of Social Science and Humanities Research*, 3(9), 127–160.

Mwasalwiba, E. S. (2010) Entrepreneurship Education: A Review of Its Objectives, Teaching Methods and Impact Indictors. *Education and Training*, 52(1), 20-47.

Nabi, G., Holden, R. & Walmsley, A. (2006) Graduate career-making and business start-up: a literature review. *Education and Training*, 48(5), 373–385.

Nasr, K. & Boujelbene, Y. (2014) Assessing the Impact of Entrepreneurship Education. *Procedia - Social and Behavioral Sciences*. 109, 712-715.

Nasr, K. B. & Boujelbene, Y. (2014) Assessing the Impact of Entrepreneurship Education. *Procedia - Social and Behavioral Sciences*, 109, 712-715.

National Bureau of Statistics (2020) *Key Statistics*, *National Bureau of Statistics*. Available at: https://www.nigerianstat.gov.ng/ (Accessed: 27 March 2020).

Ndaghu, J. T., Gwems, J. A. M., Wajiga, H. & Augustine, M. V. (2016) Shapero's model: A veritable tool for explaining entrepreneurial intentions and attitudes among management technology students in Mautech Vola, Adamawa state, Nigeria. *International Journal of Business and Management Invention*, 5(12), 19–26.

Ndofirepi, T. M. (2016) *The Impact of Technological Creativity and Entrepreneurship Education on The Entrepreneurship Intentions of Students at Particular Tertiary Institutions In Zimbabwe And South Africa.* Unpublished Thesis. (PhD). Central University of Technology, Free State.

Ndofirepi, T. M., Rambe, P. & Dzansi, D.Y. (2018) An exploratory study on the gender-based differences in entrepreneurial intention and its antecedents amongst students of a South African University of Technology. *Southern African Business Review*, 22(1), 1–28.

Ndofirepi, T.M. (2020). Relationship between entrepreneurship education and entrepreneurial goal intentions: psychological traits as mediators. *Journal of Innovation and Entrepreneurship*, 9(2), 1-10.

Ngugi, J. K., Gakure, R. W., Waithaka, S. M. & Kiwara, A. N. (2012) Application of Shapero's model in explaining entrepreneurial intentions among university students in Kenya. *International Journal of Business and Social Research (IJBSR)*, 2(4), 125–148.

Nguyen, C. (2018) Demographic factors, family background and prior self-employment on entrepreneurial intention - Vietnamese business students are different: why? *Journal of Global Entrepreneurship Research*, 8(10), 1-17.

Nicolaides, A. (2011) Entrepreneurship-the role of Higher Education in South Africa', *Educational Research*, 2(4), 1043-1050.

Nunnally, J. & Bernstein, I. (1994) *Psychometric theory*. New York, NY: McGraw-Hill.

Nunnally, J. C. (1978) Psychometric Theory. 2nd ed. New York: McGraw-Hill

Nwambam, A. S., Nnennaya, O.O. & Nwankpu, I. S. (2018) Evaluating the Entrepreneurship Education Programme in Nigerian Universities for Sustainable Development. *Journal of Entrepreneurship Education*, 21(1), 1–13.

Odia, J. & Odia, A. A. (2013) Developing Entrepreneurial Skills and Transforming Challenges into Opportunities in Nigeria. *Journal of Educational and Social Research*, 3(3), 289- 298.

Odoh, M. & Chinedum, I. E. (2014) Research Designs, Survey and Case Study. *IOSR Journal of VLSI and Signal Processing (IOSR-JVSP)*, 4(6), 16-22.

Ogbari, M. E., Olokundun, M. A., Uzuegbunam, J., Isiavwe, D. T., Ilogho, J. E., Obi, J. N. & Moses, C. L. (2018) Data on entrepreneurship education and entrepreneurial performance of aspiring entrepreneurs in selected Nigerian universities. *Data in Brief,* 20, 108-112.

Olawale, F. & Garwe, D. K. (2010) Obstacles to the growth of new SMEs in South Africa: A principal component analysis approach. *African Journal of Business Management*, 4, 729-738.

Omotosho, A. O., Gamede, B. T., Vezi-Magigaba, M. F & Ayandibu, A. O. (2022) Is South Africa's Entrepreneurship Education Program Successful? A Framework for Policy and Practice. *Journal of Entrepreneurship Education*, *25*(4), 1-17.

Oni, O. & Mavuyangwa, V. (2019) Entrepreneurial intentions of students in a historically disadvantaged university in South Africa. *Acta Commercii,* 19(2), 1-7.

Osemeke, M. & Adegboyega, S. (2017) Critical review and comparism between Maslow, Herzberg, and McClelland‟ s theory of needs. *Funai Journal of Accounting, Business and Finance*, 1(1), 161–173.

Ottawa University Entrepreneurship @ Telfer (2021) Start-up Weekend. Available at: https://sites.telfer.uottawa.ca/entrepreneurship/events/startup-weekend/ (Accessed: 17 June 2021).

Ozaralli, N. & Rivenburgh, N. K. (2016) Entrepreneurial intention: antecedents to entrepreneurial behavior in the U.S.A. and Turkey. *Journal of Global Entrepreneurship Research,* 6(3), 1- 32.

Pallant, J. (2010) *SPSS survival manual: A step by step guide to data analysis using the SPSS program.* 4th ed. New York: McGraw Hill.

Parimala R. & IIham. S. (2016) An Empirial Study on the Effectiveness of Entrepreneurship Education in Developing Entrepreneurial Intention Among Malaysian University Students. *Education Journal*, 5(4), 53-61.

Park, C. (2017) A study on effect of entrepreneurship on entrepreneurial intention: Focusing on ICT majors. *Asia Pacific Journal of Innovation and Entrepreneurship*, 11(2), 159-170.

Peterman, N. E. & Kennedy, J. (2003) Enterprise education: Influencing students' perceptions of entrepreneurship. *Entrepreneurship Theory and Practice*, 28(2), 129–144.

Pittaway, L. & Cope, J. (2007) Entrepreneurship Education: A Systematic Review of the Evidence. *International Small Business Journal*, 25(5), 479–510.

Ployhart, R. E. & Moliterno, T. P. (2011) Emergence of the human capital resource: A multilevel model. *The Academy of Management Review*, 36(1), 127–150.

Polenakovikj, R. (2015) Entrepreneurial Learning: formal vs. in- and non-formal education and training. *European Entrepreneurship Education Network*. Available at: http://www.ee-hub.eu/consortium-media/blog/356-education/www.ee-hub.eu (Accessed: 29 March 2020).

Polit, D. F. & Beck, C. T. (2010) Generalization in quantitative and qualitative research: Myths and strategies. *International Journal of Nursing Studies*, 47(11), 1451–1458.

Potishuk, V. & Kratzer, J. (2017) Factors affecting entrepreneurial intentions and entrepreneurial attitudes in higher education. *Journal of Entrepreneurship Education*, 20(1), 25–44.

Pretheeba, P. & Venkatapathy, R. (2018) Entrepreneurial lntentions Among Students in India. In: Inclusive Growth - Need to Rethink the Business Model. India: Bloomsbury Publishing India Pvt Limited.

Public Universities in South Africa (2020) *Universities South Africa*. Available at: https://www.usaf.ac.za/public-universities-in-south-africa/. (Accessed: 20 November 2020).

PwC South Africa (2020) *PwC supports and promotes entrepreneurship and innovation across the African continent.* Available at: https://www.pwc.co.za/en/press-room/vision-to-reality.html (Accessed 12 December 2020).

Queiros, A., Faria, D. & Almeida F. (2017) Strengths And Limitations Of Qualitative And Quantitative Research Methods. *European Journal of Education Studies*, 3(9), 369-387.

Rahman, A. P. D. J. A. (2013) Sample size in research. When can you break the rule?', *IIUM Medical Journal Malaysia*, 12(2), 1–2.

Rai, R. S., Prasad, A. & Murthy, B. K. (2017) A Review on Intention Models for Predicting Entrepreneurial Behavior. *Journal of Entrepreneurship Education*, 20(2), 1–9.

Rajgopaul, D. (2017) *Finalists selected for Sanlam entrepreneur competition.* Available at: https://www.iol.co.za/business-report/entrepreneurs/finalists-selected-for-sanlam-entrepreneur-competition-10833644 (Accessed: 19 November 2019).

Ramchander, M. (2019) Reconceptualising undergraduate entrepreneurship education at traditional South African universities. *Acta Commercii*. 19(2), 1-9.

Ratten, V. & Jones, P. (2021) Covid-19 and entrepreneurship education: Implications for advancing research and practice. *The International Journal of Management Education,* 19(1), 1-10.

Ratten, V. & Usmanij, P. (2021). Entrepreneurship education: Time for a change in research direction? *The International Journal of Management Education,* 19(1). Available at: https://doi.org/10.1016/j.ijme.2020.100431

Ratten, V. (2020) Coronavirus disease (COVID-19) and sport entrepreneurship. *International Journal of Entrepreneurial Behavior and Research*, 26(6), 1379-1388.

Rauf, R., Wijaya, H. & Tari, E. (2021) Entrepreneurship education based on environmental insight: Opportunities and challenges in the new. *Cogent Arts & Humanities,* 8, 1-15.

Remeikiene, R., Startiene, G. & Dumciuviene, D. (2013) Explaining entrepreneurial intention of university students: The role of entrepreneurial education. In: Management, Knowledge and Learning. International conference. Zadar, Croatia, 299–307.

Renando, C. & Moyle, C. (2021) Global Entrepreneurship Monitor 2019: Australia Report.

Rengiah, P. & Sentosa, I. (2016) An empirical study on the effectiveness of entrepreneurship education in developing entrepreneurial intention among Malaysian university students. *Education Journal*, 5(4), 53–61.

Rezai, G., Mohamed, Z. & Shamsudin, M. N. (2011) Informal education and developing entrepreneurial skills among farmers in Malaysia. *International Journal of Humanities and Social Sciences*, 5(7), 906–913.

Ribeiro, A.T.V.B., Ferragi, C.A., Trivinho-Strixino, F., & Cardoso, A.C.F. (2021) Entrepreneurship education going remote: A response to Covid-19 restrictions. *Journal of Entrepreneurship Education,* 24(1), 1-8.

Robinson, P. & Josien, L. (2014) Entrepreneurial Education: Using “the Challenge” in Theory and Practice. *Journal of Entrepreneurship Education*, 17(2), 172–185.

Royle, M. T. & Hall, A.T. (2012) The Relationship between McClelland’s Theory of Needs, Feeling Individually Accountable, and Informal Accountability for Others. *International Journal of Management and Marketing Research*, 5(1), 21–42.

Saeed, S., Yousafzai, S. Y., Yani-De-Soriano, M. & Muffatto, M. (2014) The role of perceived university support in the formation of students' entrepreneurial intention. *Journal of Small Business Management*, 53(4), 1127-1145.

Samuel, A. B & Rahman, M. M. (2018) Innovative teaching methods and entrepreneurship education: A review of literature. *Journal of Research in Business, Economics and Management*, 10(1), 1807–1813.

Sani, L. I. (2013) Data collection techniques a guide for researchers in humanities and education. *International Research Journal of Computer Science and Information Systems (IRJCSIS),* 2(3), 40-44.

Saunders, M., Lewis, P. & Thornhill, A. (2009) *Research Methods for Business Students.* New York: Pearson.

Scanlon, C. & McCormack, S. (2018) Challenges and Opportunities: A Closer Look at Entrepreneurship Education in Australian Universities. Available at: https://uiin.org/2018/12/11/challenges-opportunities-closer-look-entrepreneurship-education-australian-universities/. (Accessed: 20 June 2021).

Schlaegel, C. & Koenig, M. (2013) Determinants of entrepreneurial intent: A meta–analytic test and integration of competing models. *Entrepreneurship Theory and Practice,* 38 (2), 291-332.

Schleicher, A. (2020) *The Impact of Covid-19 On Education Insights from Education at A Glance 2020. Insights From Education at A Glance 2020.* Available at: https://www.oecd.org/education/the-impact-of-covid-19-on-education-insights-education-at-a-glance-2020.pdf (Accessed: 20 March 2023).

Sekaran, U. & Bougie, R. (2016) *Research Methods for Business: A Skill Building Approach*. 7th ed. UK: John Wiley & Sons.

Shah, I. A., Amjed, S. & Jaboob, S. (2020) The moderating role of entrepreneurship education in shaping entrepreneurial intentions. *Economic Structures 9*(19), 1-9.

Shambare, R. (2013) Barriers to Student Entrepreneurship in South Africa. *Journal of Economics and Behavioral Studies*, 5(7), 449-459.

Shane, S. A. (2003) *A general theory of entrepreneurship: The individual-opportunity nexus*. Cheltenham, UK: Edward Elgar Publishing.

Shapero, A. & Sokol, L. (1982) The Social Dimensions of Entrepreneurship. In: Kent, C. A., Sexton, D. L. & Vesper, K. H. eds. *Encyclopedia of Entrepreneurship.* Englewood Cliffs, NJ: Prentice-Hall, 72-90.

Sharaf, A., El-Gharbawy, A. & Ragheb, M. A. (2018) Factors That Influence Entrepreneurial Intention within University Students in Egypt. *Open Access Library Journal*, 5(10), 1–14.

Singh, K. (2007) *Quantitative social research methods*. New Delhi: SAGE Publications Inc.

Soetanto, D. P., Pribadi, H. & Widyadana, G. A. (2010) Determinant Factors of Entrepreneurial Intention Among University Students. *IUP Journal of Entrepreneurship Development*, 7(1/2), 23–37.

Statistics South Africa (2020) Quarterly Labour Force. Available at: http://www.statssa.gov.za/ (Accessed: 10 August 2021).

Stats South Africa (2023) *Quarterly Labour Force Survey Quarter 1: 2023.* Available at https://www.statssa.gov.za/publications/P0211/P02111stQuarter2023.pdf (Accessed:19 May 2023)

Steffens, P. & Omarova, A. (2019) Global Entrepreneurship Monitor (Gem) 2017/18 Australian National Report. Available at: https://eprints.qut.edu.au/127058/1/GEM%20AUS%20Report%20CLIENT%20corrected.pdf (Accessed: 27 December 2019).

Stockemer, D. (2019) *Quantitative methods for the social sciences: A practical introduction with examples in SPSS and Stata*. Switzerland: Springer International Publishing.

Stokes, D., Wilson, N. & Mador, M. (2010) *Entrepreneurship*. Hampshire, UK: South-Western/Cengage Learning EMEA.

Streeter, D. H., Jaquette, J. P. & Hovis, K. (2002) University-wide Entrepreneurship Education: Alternative Models and Current Trends. Charles H. Dyson School of Applied Economics and Management, Cornell University. Available at: https://hdl.handle.net/1813/57923. (23 August 2012).

Stritch, J. M. (2017) Minding the Time: A Critical Look at Longitudinal Design and Data Analysis in Quantitative Public Management Research. *Review of Public Personnel Administration*, 37(2), 219–244.

Swanson, R. A. & Holton, E. F (2001) *Foundations of Human Resource Development.* San Franciso: Berrett-Koehler.

Tadesse, S. & Muluye, W. (2020) The Impact of COVID-19 Pandemic on Education System in Developing Countries: A Review. *Open Journal of Social Sciences*, 8, 159-170.

Taherdoost, H. (2016) Sampling Methods in Research Methodology; How to Choose a Sampling Technique for Research. *International Journal of Academic Research in Management (IJARM)*, 5(2), 18–27.

Tarkar, P. (2020) Impact of Covid-19 Pandemic on Education System. *International Journal of Advanced Science and Technology*, 29(9), 3812-3814.

Tavakol, M. & Dennick, R. (2011) Making sense of Cronbach's alpha', *International Journal of Medical Education*, 2, 53–55.

Terjesen, S., Bosma, N. & Stam, E. (2016) Advancing Public Policy for High-Growth, Female, and Social Entrepreneurs', *Public Administration Review*, 76(2), 230–239.

Terrell, S. R. (2016) *Writing a proposal for your dissertation: Guidelines and examples.* New York, NY: The Guilford Press.

Thakurta, G. S. & Chetty, P. (2015) Understanding research philosophy. Available at: https://www.projectguru.in/research-philosophy/ (Accessed: 28 Oct. 2020).

The Allan Gray Orbis Foundation (2019) *The State of Entrepreneurship in South Africa.* Available at https://www.allangrayorbis.org/entrepreneurship-blog/the-state-of-entrepreneurship-in-south-africa/ (Accessed: 4 May 2019).

The World Bank (2021) Female Entrepreneurship Resource Point - Introduction and Module 1: Why Gender Matters. Available at: https://www.worldbank.org/en/topic/gender/publication/female-entrepreneurship-resource-point-introduction-and-module-1-why-gender-matters (Accessed: 15 March 2021).

Thomas, G. (2011) A Typology for the Case Study in Social Science Following a Review of Definition, Discourse, and Structure. *Qualitative Inquiry.* 17(6), 511–521.

Thompson, E. R. (2009) Individual Entrepreneurial Intent: Construct Clarification and Development of an Internationally Reliable Metric. *Entrepreneurship Theory and Practice*, 33, 669-694.

Thompson, E. R. (2009) Individual Entrepreneurial Intent: Construct Clarification and of an Internationally Reliable Metric. *Entrepreneurship Theory and Practice*, 669-694.

Thrasher, R. G., Andrew, D. P. S. & Mahony, D. F. (2007) The Efficacy of the Theory of Reasoned Action to Explain Gambling Behavior in College Students. *College Student Affairs Journal*, 27(1), 57–75.

Timmons, H. N. J. A., Eisenman, E. & O'Connor, A. (2015) Entrepreneurship education: A global consideration from practice to policy around the world. Executive summary of the 2015 wise

research report. Qatar Foundation, Qatar. Available at: www.qspace.qu.edu.qa (Accessed: 20 June 2020).

Tobias, J. M. & Ingrams, A. (2010) Creating a different kind of an innovator: Using health communication theory in Entrepreneurship education to foster behaviour change among entrepreneurship students in Sub-Saharan Africa. *Journal of education for International Development*, 4(3), 1–20.

Turker, D. & Sonmez Selcuk, S. (2009) Which factors affect entrepreneurial intention of university students? *Journal of European Industrial Training*, 3(2), 142-159.

Twaalfhoven, B. & Prats, J. (2000) Entrepreneurship Education and its Funding. EFER,

Udoye, R. N. & Mba, P. T. (2017) Strategies to Promote Entrepreneurship Education among Tertiary Education Students In Delta State. *Nigerian Journal of Business Education (NIGJBED)*, 4(2), 124-130.

Ugorji, U. & Ani, F. (2018) Entreprenuership education: A panacea to graduate unemployment in a dwindling economy. *Nigerian Journal of Business Education (NIGJBED)*, 4(1), 69–75.

UKZN (2021) *About UKZN*. Available at: https://ukzn.ac.za/about-ukzn/history/ (Accessed: 14 May 2021).

UKZN Ndabaonline (2017) *Innovative Entrepreneurship Programme Being Launched at UKZN*. Available at: https://ndabaonline.ukzn.ac.za/StoryPrinter.aspx?id=3734 (Accessed: 14 May 2020).

UKZN School of Management, IT and Governance (2017) *Placing Student Entrepreneurship in the Forefront.* Available at: https://smitg.ukzn.ac.za/news/placing-student-entrepreneurship-in-the-forefront/ (Accessed: 14 May 2020).

UKZNDABAonline (2018) *UKZN hosts Inqubate Business Pitch Finals, 6(43).* Available at: https://ndabaonline.ukzn.ac.za/UkzndabaStory/Vol6-Issue43/UKZN%20hosts%20Inqubate%20Business%20Pitch%20Finals/ (Accessed: 23 May 2020).

UKZNDABAonline (2019) *UKZN hosts Student Entrepreneurship Week, 7(57).* Available at: https://ndabaonline.ukzn.ac.za/UkzndabaStory/Vol7-Issue57/UKZN%20hosts%20Student%20Entrepreneurship%20Week%20/ (Accessed: 23 May 2020).

UKZNDABAonline (2020) *KZN's InQubate Showcases its Entrepreneurship Success Stories, 8(55).* Availableat:https://ndabaonline.ukzn.ac.za/UkzndabaStory/Vol8-

Issue55/UKZNs%20InQubate%20Showcases%20its%20Entrepreneurship%20Success%20Stories/ (Accessed: 23 May 2020).

United Nations (2022) *WHO reveals countries to produce first COVID-busting mRNA vaccines in Africa.* Available at: https://news.un.org/en/story/2022/02/1112212 (Accessed: 20 March 2023).

Vaidya, S. (2014) *Developing Entrepreneurial Life Skills: Creating and Strengthening Entrepreneurial Culture in Indian Schools*. New Delhi, India: Springer Science & Business Media.

van Teijlingen, E. & Hundley, V. (2002) The importance of pilot studies. *Nursing Standard (Royal College of Nursing (Great Britain): 1987)*, 16(40), 33–36.

VanderStoep, S.W. & Johnson, D. D. (2009) *Research Methods for Everyday Life: Blending Qualitative and Quantitative Approaches*. San Francisco, CA: Jossey-Bass.

Wang, C. K. & Wong, P. K. (2004) Entrepreneurial interest of university students in Singapore. *Technovation*, 24(2), 163–172.

Wang, W., Lu, W. & Millington, J. K. (2011) Determinants of entrepreneurial intention among college students in China and USA. *Journal of Global Entrepreneurship Research*, 1(1), 35–44.

Weber, P. & Schaper, M. (2004) Understanding the Grey Entrepreneur. *Journal of Enterprising Culture (JEC), World Scientific Publishing Co. Pte. Ltd*., 12(02), 147-164.

Welman, C., Kruger, F. & Mitchell, B. (2005) *Research methodology*. 3rd ed. Cape Town, South Africa: Oxford University Press Southern Africa.

Welsh, D., Tullar, W. & Nemati, H. (2016) Entrepreneurship education: Process, method, or both? *Journal of Innovation & Knowledge*, 1(3), 25-132.

Wilson, F., Marlino, D. & Kickul, J. (2004) Our entrepreneurial future: examining the diverse attitudes and motivations of teens across gender and ethnic identity. *Journal of Developmental Entrepreneurship*, 9(3), 177-198.

Wilson, K. E. (2008) Chapter 5: Entrepreneurship education in Europe. In: Entrepreneurship in Higher Education. OECD. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1392369 (Accessed: 20 June 2021).

Yu, C. W. (2018) Understanding the Ecosystems of Chinese and American Entrepreneurship Education. *Journal of Entrepreneurship Education*, 21(2), 1-18.

Zajonc, R. B. (1968) Attitudinal effects of mere exposure. Journal of Personality and Social Psychology, 9(2), 1–27.

Zinth, K. (2007) *Entrepreneurial Education Laws in the States*. Denver, CO: Education Commission of the States, p. 8. Available at: https://www.ecs.org/clearinghouse/73/08/7308.pdf. (Accessed: 20 June 2020).

Žukauskas, P., Vveinhardt, J. & Andriukaitienė, R. (2018) Philosophy and paradigm of scientific research. In: Management Culture and Corporate Social Responsibility. BoD – Books on Demand, 121–139.

APPENDIX A: GATE KEEPER'S LETTER

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

30 March 2020

Miss Wimbayi Chasaya (SN 210546057)
School of Management, IT and Governance
College of Law and management Studies
Westville Campus
UKZN

Email: wchasaya@gmail.com Phirim@ukzn.ac.za

Dear Miss Chasaya

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:

"Entrepreneurship Education and Students' Entrepreneurial Intentions at selected Tertiary Institutions in Durban".

It is noted that you will be constituting your sample as follows:

- With a request for responses on the website. The questionnaire must be placed on the notice system http://notices.ukzn.ac.za. A copy of this letter (Gatekeeper's approval) must be simultaneously sent to (govenderlog@ukzn.ac.za) or (ramkissoonb@ukzn.ac.za).

Please ensure that the following appears on your questionnaire/attached to your notice:

- Ethical clearance approval letter;
- 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 PAIA and POPI 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

DR KE CLELAND: REGISTRAR

Office of the Registrar
Postal Address: Private Bag X54001, Durban, South Africa
Telephone: +27 (0) 31 260 8005/2206 **Email:** registrar@ukzn.ac.za
Website: www.ukzn.ac.za

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APPENDIX B: GATEKEEPER'S 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

4th November 2020
Ms Wimbayi Chasaya
c/o College of Law & and Management studies
School of Management Information Technology & Governance
University of KwaZulu-Natal

Dear Ms Chasaya

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 "Entrepreneurship Education and Student's Entrepreneurial Intentions at Selected Tertiary Institutions in Durban" 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 would be submitted to the IRIC on completion of your studies.

Kindest regards.
Yours sincerely

DR LINDA ZIKHONA LINGANISO
DIRECTOR: RESEARCH AND POSTGRADUATE SUPPORT DIRECTORATE

APPENDIX C: RESEARCH QUESTIONNAIRE

UNIVERSITY OF KWAZULU-NATAL
School of Management, Information Technology and Governance

Dear Respondent,

PhD (Entrepreneurship) Research Project
Ms P Ximba

Humanities and Social Science Ethics (HSSREC) Research Office,
Govan Mbeki Building, Westville Campus, Private Bag X54001, DURBAN 4000
Tel: 031 260 3587 Email: ximbap@ukzn.ac.za

Researcher: Wimbayi Chasaya (Cell: 0730622203)
Supervisor: Professor Maxwell A. Phiri (033 260 5843)

I, Wimbayi Chasaya a PhD Entrepreneurship student, at the School of Management, Information Technology and Governance, of the University of Kwazulu Natal. You are invited to participate in a research project entitled: Entrepreneurship Education and Students' Entrepreneurial Intentions at Selected Tertiary Institutions in Durban. The aim of this study is to understand the impact of entrepreneurship education on the entrepreneurial intentions of university students.

Through your participation I hope to understand the extent to which entrepreneurship education offered to University students plays a role in the development of their entrepreneurial intentions. The results of the survey are intended to inform curriculum developers and the University leadership and especially impact positively on the development of an augmented entrepreneurship curriculum in Universities. Additionally, the results of the study will address students' perceptions on the entrepreneurship education received based on empirical findings.

Your participation in this project is voluntary and anonymous. You may refuse to participate or withdraw from the project at any time with no negative consequence. There will be no monetary gain from participating in this survey. Confidentiality and anonymity of records identifying you as a participant will be maintained by the School of Management, Information Technology and Governance, UKZN.

If you have any questions or concerns about completing the questionnaire or about participating in this study, you may contact me or my supervisor on the numbers listed above.

The survey should take you about 15 minutes to complete. I hope you will take the time to complete this survey.

Sincerely

Investigator's signature_____ Date_____

CONSENT

I……(full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project.

I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT DATE

……

QUESTIONNAIRE

Entrepreneurship Education and Students' Entrepreneurial Intentions at Selected Tertiary Institutions in Durban

SECTION A: BIOGRAPHICAL INFORMATION

Please circle the correct option or fill in your details.

1.What is your age?

a) 16 -25years b) 26- 35years c) 36- 45 years d) 46 years and above

2. What is your gender

a) Male b) Female c) Other

3. What is your race?

a) African b) Indian c) White d) Coloured e) Other

4. Which institution are you registered at?

a) University of KwaZulu-Natal (UKZN). b) Durban University of Technology (DUT).

5. Name of degree registered for…….

6. What is your Level of Study?

a) 1st year b) 2nd year c) 3rd year

7. What is the main reason why you chose the Entrepreneurship modules?

a) It is a prerequisite module b) I am interested in Entrepreneurship

c) It was recommended by a friend/family d) To improve my entrepreneurial knowledge

e) It is one of my majors

8. What is your academic Major/s……

9. Head parents' Occupation

a) Unemployed b) Private Sector employee c) Public Sector employee d) Self-employed

10. Do you/have you attended any extracurricular (workshops, conferences, seminars) entrepreneurship programs offered on campus?

a) Yes b) No

11. Do you have any Entrepreneur as a Role Model?

a) Yes b) No

12. Do you read/listen or look up for information about entrepreneurs and entrepreneurship?

a) Yes b) No

13. If answer to question 12 above is Yes, where do you read/get information about entrepreneurs and entrepreneurship?

a) Internet/Social Media b) Lectures c) Entrepreneurship programs offered on campus d) Role Model Entrepreneurs e) Other sources…… f) I do not read/listen or look up for information about entrepreneurs and entrepreneurship

14. Are you aware of any government bodies/programs or private organisations that support entrepreneurial or small business development

a) Yes b) No

SECTION B: PERSONAL ATTITUDE TOWARDS ENTREPRENEURSHIP

On a scale of 1-5, tick in the appropriate box on how you agree or disagree with the statements given.

SCALE	**1**	**2**	**3**	**4**	**5**
	STRONGLY DISAGREE	**DISAGREE**	**NEUTRAL**	**AGREE**	**STRONGLY AGREE**

Statement	**1**	**2**	**3**	**4**	**5**
Being an entrepreneur implies more advantages than disadvantages to me					
A career as an entrepreneur is attractive for me					
If I had the opportunity and resources, I would like to start a firm					
Being an entrepreneur would entail great satisfaction for me					
Among various options, I would rather be an entrepreneur					
Immediately after finishing my degree, I would like to work as an employee					
Immediately after finishing my degree, I would like to start up my own firm/become an entrepreneur					
Being an entrepreneur is the best option available for me					
Starting and running a firm is one of my future career goals					
Being an entrepreneur is a form of personal achievement for me.					

SECTION C: PERCEIVED BEHAVIORAL CONTROL

On a scale of 1-5, tick in the appropriate box on how you agree or disagree with the statements given.

SCALE	**1**	**2**	**3**	**4**	**5**
	STRONGLY DISAGREE	**DISAGREE**	**NEUTRAL**	**AGREE**	**STRONGLY AGREE**

Statement	**1**	**2**	**3**	**4**	**5**
To start a firm and keep it working would be easy for me					
I am prepared to start a viable firm					
I can control the creation process of a new firm					
I know the necessary practical details to start a firm					
I know how to develop an entrepreneurial project					
If I tried to start a firm, I would have a high probability of succeeding					
I have a satisfactory level of opportunity recognition to become an entrepreneur					
I have a satisfactory level of creativity to become an entrepreneur					
I have a satisfactory level of problem solving to become an entrepreneur					
I have a satisfactory level of leadership and communication skills to become an entrepreneur					
I have a satisfactory level of development of new products and services to become an entrepreneur					
I have a satisfactory level of networking and making professional contacts to become an entrepreneur					
I am confident that I can start a business and keep it running					

SECTION D: SUBJECTIVE NORMS

On a scale of 1-5, tick in the appropriate box on how you agree or disagree with the statements given.

SCALE	**1**	**2**	**3**	**4**	**5**
	STRONGLY DISAGREE	**DISAGREE**	**NEUTRAL**	**AGREE**	**STRONGLY AGREE**

Statement	**1**	**2**	**3**	**4**	**5**
If I decided to start a firm, my close family would approve of such a decision.					
If I decided to start a firm, my friends would approve of such a decision.					
If I decided to start a firm, my colleagues and mates would approve of such a decision.					
My close family values entrepreneurial activities better than other activities and careers.					
My friends value entrepreneurial activities better than other activities and careers					
My colleagues and mates value entrepreneurial activities better than other activities and careers.					
Entrepreneurial activity clashes with the culture in my country					
The entrepreneur's role in the economy is not sufficiently recognized					
Many people consider it hardly acceptable to be an entrepreneur					
Entrepreneurial activity is considered too risky to be worth while					
If I decided to start a firm, my lecturer would approve of such a decision.					
My lecturer values entrepreneurship as a career					
My lecturer will be a source of moral support if I choose to become an entrepreneur.					
My lecturer would be a good role model if I choose to become an entrepreneur.					
The environment in my society is suitable for me to become an entrepreneur.					

My society values entrepreneurship and support upcoming entrepreneurs.					
There are good role models for entrepreneurship in my society.					

SECTION E: ENTREPRENEURIAL INTENTION

On a scale of 1-5, tick in the appropriate box on how you agree or disagree with the statements given.

SCALE	**1**	**2**	**3**	**4**	**5**
	STRONGLY DISAGREE	**DISAGREE**	**NEUTRAL**	**AGREE**	**STRONGLY AGREE**

Statement	**1**	**2**	**3**	**4**	**5**
I am ready to do anything to be an entrepreneur					
My professional goal is to become an entrepreneur					
I will make every effort to start and run my own firm					
I am determined to create a firm in the future					
I have very seriously thought of starting a firm					
I intend to set up a company in the future.					
I am saving money to start a new venture.					
I spend time learning about starting a new venture.					
I search for business start-up opportunities					
I read books on how to set up a firm					
I read financial planning books					
I read business newspapers					
I have plans to launch my own business					
I plan my finances carefully					
Starting my own firm is the best option available for me.					
If I start my own firm, I would have achieved one of my goals.					
I always dream of owning my own company and becoming own boss.					

SECTION F: ENTREPRENEURIAL EDUCATION

On a scale of 1-5, tick in the appropriate box on how you agree or disagree with the statements given.

SCALE	**1**	**2**	**3**	**4**	**5**
	STRONGLY DISAGREE	**DISAGREE**	**NEUTRAL**	**AGREE**	**STRONGLY AGREE**

Statement	**1**	**2**	**3**	**4**	**5**
The entrepreneurship modules or courses I have taken helped me to develop knowledge about the entrepreneurial environment.					
The entrepreneurship modules or courses I have taken helped me to develop greater recognition of the entrepreneur's figure.					
The entrepreneurship modules or courses I have taken helped me to develop the preference to be an entrepreneur					
The entrepreneurship modules or courses I have taken helped me to develop the necessary abilities to be an entrepreneur					
The entrepreneurship modules or courses I have taken helped me to develop the intention to be an entrepreneur.					
Because of the entrepreneurship modules or courses I have taken I can assess the business environment and develop a SWOT analysis.					
The entrepreneurship courses I have taken helped me to think about innovative business ideas.					
Because of the entrepreneurship modules I have taken, I can take business risks.					

Because of the entrepreneurship modules I have taken, I know how to develop a business plan.					
Because of the entrepreneurship modules I have taken, I know how to develop a business idea into a working business.					
With the entrepreneurship modules I have taken, I can start my own company or practice.					
Because of the entrepreneurship modules I have taken, I can provide solutions to the gaps in the market.					
The entrepreneurship modules I have taken enhanced my critical thinking skills.					
Because of the entrepreneurship modules I have taken, I can say I know how to source capital and manage money in a business.					
The entrepreneurship modules I have taken gave me the opportunity to meet successful entrepreneurs.					
The entrepreneurship modules I have taken gave me the opportunity to work on a practical business project.					

What do you feel must be added to your entrepreneurship modules or courses that can adequately prepare you to become an entrepreneur? ----------
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THE END!

APPENDIX D: CERTIFICATE OF EDITING

KZN LANGUAGE INSTITUTE

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Certificate of editing

10 February 2022

Name: **Wimbayi Chasaya**

Document title: **Entrepreneurship education and students' entrepreneurial intentions in selected tertiary institutions in Durban.**

This serves to confirm that the above document was edited substantively by members of the KZN Language Institute's professional English language editing team. The document was returned to the author with tracked changes and comments intended to correct errors and to clarify meaning. It was the author's responsibility to attend to these changes.

Ms J. Kerchhoff

Director of the KwaZulu-Natal Language Institute

KZN Language Institute – Transforming Words

APPENDIX E: ETHICAL CLEARANCE LETTER

UNIVERSITY OF KWAZULU-NATAL
INYUVESI YAKWAZULU-NATALI

27 October 2020

Ms Wimbayi Chasaya (210546057)
School of Management, IT & Governance
Westville Campus

Dear Ms Chasaya,

Protocol reference number: HSS/1903/018D
Project title: Entrepreneurship Education and Students' Entrepreneurial Intentions at selected Tertiary Institutions in Durban

Approval Notification – Amendment / Recertification Application

This letter serves to notify you that your application and request for an amendment and recertification received on 16 September 2020 has now been approved as follows:

- Change in title
- Amendment to Questionnaire
- Recertified for 1 year (until 27 October 2021)

Any alterations to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form; Title of the Project, Location of the Study must be reviewed and approved through an amendment /modification prior to its implementation. In case you have further queries, please quote the above reference number.

PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

Best wishes for the successful completion of your research protocol.

Yours faithfully

Professor Dipane Hlalele (Chair)

/ms

Cc Supervisor: Professor Maxwell A Phiri
cc Academic Leader Research: Professor Isabel Martins
cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee
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Founding Campuses: Edgewood | Howard College | Medical School | Pietermaritzburg | Westville

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