



**DEVELOPING ENTREPRENEURIAL SELF-EFFICACY AND
INDIVIDUAL ENTREPRENEURIAL ORIENTATION: AN ACTION
ORIENTED APPROACH**

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**A thesis submitted in partial fulfilment of the requirements for the degree
of**


Doctor of Philosophy

**School of Management, IT and Governance
College of Law and Management Studies**

Supervisor: Thea van der Westhuizen

2021

Supervisors Permission to Submit Thesis/ Dissertation for Examination

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Qualification: Doctor of Philosophy		School: Management, IT and Governance	
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DECLARATION

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DEDICATION

This research work is dedicated to God Almighty, the incomprehensible, my light and my fortress who guided me through my PhD programme.

This research is also dedicated to my parents, Pa. Jacob Awoniyi and Alice Osuolale Awoniyi, and my two aged grandmothers, Asiyanbi Anke Awotunde and Sidikat Amope Olayiwola.

Finally, I dedicate this research to the memory of my grandfather, the late Pa. Joseph Akangbe Awotunde, who enrolled me in school to begin my formal education. May his gentle soul rest in peace.

ACKNOWLEDGEMENTS

This research was made possible with the support of the National Research Foundation of South Africa (Grant Number: 107003). I must also acknowledge the support received from other contributors such as Shifting Hope, Activating Potential Entrepreneurship (SHAPE), UKZN Teaching and Learning Innovation and Quality Enhancements, UKZN Doctoral Research Grant and numerous others who made the SHAPE social technology and this research possible.

My appreciation goes to my supervisor, Dr. Thea van der Westhuizen, for her academic and intellectual support throughout my Ph.D. programme. I recognise her proactive efforts towards guiding me through the complex task without compromising her integrity and ethical standards. I wish to thank her for actively seeking research funds to support my project and for hosting me as a grant holder-like bursar under her SHAPE research initiative for three and a half years.

I would also like to thank the SHAPE 2017 participants and the coordinating team members, namely Dr. John, Wade and Fezile, I enjoyed the “UBUNTU” spirit among you guys, especially during data collection. I also appreciate the co-operation and efforts of the management, staff and students at the School of Management, IT and Governance at the University of KwaZulu-Natal, especially Ms. Angela Pearce, Nadia Ally, Dyil Nomalizo, Eric Ncube and Praveena. Your kindness will never be forgotten.

I wish to express my sincere gratitude to Snr. Pastor Adelodun, Apostle ‘Dele Adelodun, Rev. (Dr. ‘Moye Opatola Surveyor ‘Tayo Ogundiran, Rasheed Fasasi, Tiamiyu Lukman, Muraina Adepoju, Giwa Abdu-Razaq, Rasheed Aregbeshola, Pa. Joe Omodare, Adeoye Samuel, Toyin Adeleke and Neliziwe Zungu Dlamini. Thanks for your unrelenting support of my quest for academic excellence.

I would like to express my appreciation to the Westville Baptist Church Durban, South Africa for the support, especially during the Covid-19 Pandemic lockdown. Ms. Pravina, you demonstrated Christ-like love and kindness during this period of need. To Gloryland Baptist Church Egbe, Ikotun Lagos, thank you all for the prayers and support.

I wish to acknowledge my mentors; Barrister ‘Sola Kolawole and Professor Olufemi Fatile, I greatly appreciate your mentorship, guide and support in all stages of my academic development, and my senior colleagues and friends; Dr. Ganiyu, Dr. Atiku, Dr. Ojugbele, Dr. Adelakun, Dr. Ayandibu and my peers in the Ph.D. journey at the University of KwaZulu-Natal, Yemisi Adelakun, Taiwo Ajadi, Olufemi Oladejo, Okehingbo Olusola A., Dotun Lisoyi,

Ashade, Kehinde Oladele, ‘Lekan Adisa, Lukmon Gafar and Ibrahim Lawal. My siblings,
Oluwayemisi,

Rachael, Timothy, Idowu and Tope. I must also remember my late siblings, Pastor Bolaji Johnson and Kehinde. May their gentle souls rest in perfect peace.

My utmost appreciation and thanks go to my dearest Queen Latifat Ajike Awotunde and my children, Adeniyi, Ojuolape, Oyelami and Oluwanisola for their endurance, love, encouragement, prayers and support during my long absence from home. God bless you all.

ABSTRACT

This study was conducted to determine how entrepreneurship self-efficacy (ESE) can be developed to activate individual entrepreneurial orientation (IEO) in the South African students who participated in a systemic action learning action research programme. It has been widely acknowledged that the Department of Higher Education and Training has come a long way in incorporating various learning pedagogies to overcome entrepreneurship education and training challenges, yet the issue of youth unemployment remains a significant problem. Although studies have been conducted by scholars to proffer lasting solutions to the limited entrepreneurial activities and individual entrepreneurial orientation, the development of youth entrepreneurship action remains a challenge both in theory and practice. The challenges are associated with the systemic disconnect in the entrepreneurship ecosystem that affects the entrepreneurial development of the youth. The study adopted a quantitative design within the concept of nondualism philosophy in developing entrepreneurial self-efficacy to activate the individual entrepreneurial orientation of South African university students. The study was integrated into the longitudinal systemic action learning action research (SALAR) project SHAPE (Shifting Hope Activating Potential Entrepreneurship). where 230 registered students volunteered and recruited for participation in the training in the South African province of KwaZulu-Natal.

Findings that emerged from the longitudinal study revealed that entrepreneurial self-efficacy development predicts individual entrepreneurial orientation behaviour, change and action, therefore, n=73 from the overall registered participants signified their intention to act immediately after the training as a result of the combined application of SALAR, SHAPE action-training model and Theory U. The study contributed to existing knowledge and practice through the developed SHAPE action-training model which can be applied for entrepreneurship development, and the refined instrument also, can be applied for entrepreneurship development in higher institutions of learning in South Africa and other developing nations who want to develop youth entrepreneurship.

Based on the findings, the study recommends further research be conducted into ESE and IEO's relationship with Entrepreneurial Intent (EI) and Entrepreneurial Action (EA). Expanding this research testing to other provinces in South Africa as well as other African countries will provide insight into the proposed models and instruments' potential to boost youth entrepreneurship. This study also recommends that Higher Education Institutions that wish to enrich their youth entrepreneurship teaching and learning offerings should develop an institution-tailored model such as the SHAPE social technology and apply SALAR to monitor the process. Lastly, this study recommends fostering the youth entrepreneurship ecosystem and the continuous involvement of eco-systemic stakeholders in entrepreneurship teaching and learning offerings to ensure the sustainable long-term development of youth's ESE and IEO – hopefully resulting in increased EI and possible

Key words: Entrepreneurship self-efficacy, Individual entrepreneurial orientation, Shifting Hope Activating Potential Entrepreneurship, Entrepreneurship intention, Entrepreneurship action, Action learning and action research, and Nondualism.

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LIST OF ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
ALAR	Action Learning Action Research
ASGISA	Accelerated and Shared Growth Initiatives for South Africa
AVE	Average Variance Extracted
BEE	Black Economic Empowerment
BI	Black Industrialists
BMC	Business Model Canvas
CFA	Confirmatory Factor Analysis
DHE	Department of Higher Education
DHET	Department of Higher Education and Training
DTI	Department of Trade and Investment
SALAR	Systemic Action Learning Action Research
EA	Entrepreneurship Action
EDHEs	Entrepreneurship Development in Higher Educations Entrepreneurship Development Programme
EE	Entrepreneurship Education
EET	Entrepreneurship Education and Training
EFA	Exploratory Factor Analysis
EI	Entrepreneurial Intention
EO	Entrepreneurial Orientation
ESE	Entrepreneurial Self-Efficacy
ESP	Entrepreneurship Strategic Posture
GDP	Gross Domestic Product
GEAR	Growth, Employment and Redistribution
GEM	Global Entrepreneurship Monitor
GIBS	Gordon Institute of Business Science
HEIs	Higher Education Institutions
IEO	Individual Entrepreneurial Orientation
KMO	Kaiser Meyer Olkin
LED	Local Economic Development
UKZN	University of KwaZulu-Natal
MSE	Managerial Self-efficacy
NDP	National Developmental Plan

NGO	Non-Governmental Organisation
OI	Opportunity Identification
PBC	Perceived Behavioural Control
PCA	Principal Component Analysis
PPMC	Pearson's Product-Moment Correlation Coefficient
REL-ESE	Relationship Self-efficacy
RDPs	Reconstruction Development Programmes
RQ	Research Questions
SAQA	South African Qualification Authority
SE	Student Entrepreneurs
SHAPE	Shifting Hope Activating Potential Entrepreneurship
SME	Small and Medium Enterprise
SMMEs	Small, Medium and Micro Enterprises
SD	Standard Deviation
SPSS	Statistical Package for Social Sciences
STATS SA	Statistics South Africa
TL	Teaching and Learning
TTM	Traditional Teaching Methods
TPB	Theory of Planned Behaviour
TOL-SE	Tolerance Self-efficacy
UNESCO	United Nations Educational, Scientific and Cultural Organisation
YE	Youth Entrepreneurship

CHAPTER ONE

INTRODUCTION AND BACKGROUND TO THE STUDY

1.1 INTRODUCTION

This report provides an account of a longitudinal systemic action learning and action research initiative, where the purpose of the study was to investigate how students' entrepreneurial orientation and entrepreneurial self-efficacy developed over time, by applying an action-oriented approach to learning. Entrepreneurship and innovation have been the focus and main mechanisms for transformation and development in both developed and emerging economies (Gamede & Uleanya, 2018). Entrepreneurship is seen as a critical engine of economic development that engages various activities in the sector, including entrepreneurial creativity, to solve societal and individuals' problems through opportunity and its advantages (Chai, Lysova, Bart & Bossink, 2019; Kheiravar & Qazvini, 2012). Globally, governments and individual people are encouraged to engage in entrepreneurial activities (Koe, 2016; Herrington & Kew, 2016) thereby ensuring that education institutions serve as links between theoretical knowledge and practical skills in various sectors. According to Light and Bhachu (2017), the practice of entrepreneurship tends to improve the lives of entrepreneurs and the societies within which entrepreneurship is practiced.

As a result of the recognition of the importance attached to entrepreneurship and the quality of entrepreneurial ecosystems in developed nations, Herrington & Kew (2016) reported that approximately 40% of the people interviewed in Europe indicated intentions to begin entrepreneurship as a career and 50% perceive creating a new venture as a good opportunity, although this percentage is lower in some regions. Such regions reflect limited entrepreneurial activity, particularly in nations in which the education and training systems are not aligned with the economic environment and therefore produce graduates that are misinformed about the working conditions and requirements of entrepreneurship. The implication of this is a skill mismatch that threatens the sustainability of new ventures (Bo, Artal, Barakat, Brown, Davies, Dooley & Larsen, 2018).

African economies have not been able to provide jobs for the plentiful labour force as a result of the skill mismatch that led the universities to produce more graduates than the labour market could absorb (Herrington & Kew, 2016). Scholars such as Akinyemi, Oyebisi and Odot-Idoro

(2018) and Maric, Jeraj and Znidarsic (2010) agree that the relationship between unemployment and entrepreneurship has been an interesting drive for economic development. According to Olutuase, Brijlal, Yan and Ologundudu (2018), since 2010 there has been a growing amount of scholarly research and discussion pertaining to the entrepreneurial ecosystem. It is worth noting that entrepreneurship does not provide social security as does regular employment but depends largely on the ecosystem the country provides, whether or not it is open to competition and entrepreneurship activities.

According to Lekgotla (2019), developing entrepreneurship and entrepreneurs has attracted the interest of several scholars and practitioners in the entrepreneurship ecosystem and higher education in Africa. Entrepreneurial self-efficacy (ESE) was used to denote an individual's belief or capability of performing a given task (Mohd, Kirana, Kamaruddin, Zainuddin & Ghazali, 2014). The concept of self-efficacy has been the constant subject of research and has been defined as a personal belief in one's ability to perform a given task or perform a specific role at a level that can influence events that affect one (Bandura, 1977). Self-efficacy, in the early stage, was defined by its proponent (Bandura) as a multidimensional construct that is related to entrepreneurship and as such can be examined in individual entrepreneurial orientation to produce a significant entrepreneurship result. Therefore, entrepreneurship self-efficacy is germane to further scrutinise and activate the individual entrepreneurial orientation (IEO) of young adults.

Various scholars have observed that entrepreneurship teaching and learning requires pedagogies and training frameworks (Valerio, Paton & Robb, 2014; Wahid, Ibrahim & Hashim, 2016; Piperopoulous & Dimov, 2015) with versatile and qualified academics in the field (Mutanda, Lekanya & Moyo, 2018). Lekgotla (2019) observes that engaging undergraduate students in entrepreneurship training should be recognised as a solution to the problem of rising youth unemployment in South Africa, noting that graduates from higher education institutions lack the skills and ability to create new ventures to curb unemployment. Extant literature has also revealed that in many African countries' entrepreneurship courses are only taught in business schools and may not translate into entrepreneurship action (venture creation) but may facilitate intrapreneurship (Doe, 2017). This development has made the integration of an entrepreneurship teaching, learning, and training framework scarce in entrepreneurship curriculum development in South African higher education. There is thus a need to address the systemic disconnection in society by paying attention to students'

entrepreneurship development. This would ensure a paradigm shift of youth entrepreneurship behaviour towards developing their ESE and activating their IEO by applying a nondualism approach that will involve the incorporation of all interrelated and integrative systems.

To achieve this, the study examined ESE and individual entrepreneurial orientation (IEO) development through the application of Theory U to activate students' and youth's entrepreneurial orientation and intention in a training project referred to as SHAPE (Shifting Hope Activating Potential Entrepreneur), which is a social technology that can be seen both as a 'systemic action learning action research' methodology (SALAR) and as a theoretical framework used to drive development training to activate entrepreneurship potential. SHAPE can also be referred to as a process of developing the entrepreneurial spirit in an individual and moving from a reactive thought process to a generative process, where the ideation of entrepreneurial opportunities can be transformed into action (Van der Westhuizen, 2016).

This chapter presents a discussion of the background, problem statement and significance of the study, the study's objectives, the research questions derived from the problem statement and the structure of the thesis.

1.2 BACKGROUND TO THE STUDY

The main challenges affecting students' ESE and IEO development outcomes in South Africa are the entrepreneurship ecosystem and environmental factors such as culture, policy, religion, finance and market (Van der Westhuizen, 2016). The systemic disconnect in the entrepreneurship ecosystem has affected all stakeholders in the sector such that the will, heart and mind to grow and develop entrepreneurship are not functioning in line with global development. This has a negative effect on related systems such as the economy, education and social life that results in unemployment among the youth.

There has been a consistent rise in the unemployment rate since the 4th quarter of 2017 from 54.7% to 55.2%. By the second quarter of 2018, the rate of unemployment increased from 26.0% to 27.5%, 28.19% in 2019 and 30.1% in the first quarter of 2020. This was attributed to a lack of start-up skills in entrepreneurship in the country (Stats SA, 2020) that could be a result of the systemic disconnect in the various sectors, as mentioned earlier. A distribution of the above-mentioned statistics, province by province beginning with the lowest indicated 18.9%, 20.4%, 23% and 36.3% in Limpopo, Western Cape, Kwa-Zulu Natal and Free State

respectively (Stats SA, 2018). It is instructive to note that before this period, and in a bid to address the systemic disconnect that accounted for this problem, the national plan for higher education set a target of a 20% development participation rate by 2011/2016. This plan has negative results on economic and social development. Cloete (2009) argues that the failure of the national development plan for higher education is not only an educational problem but also a systemic disconnect that constitutes economic woes. There is an urgent need for opportunity expansion for post-school education and training for secondary and higher education. The number of job seekers increased from 35 000 to 44 000 in the second and third quarters of 2019, which resulted in a net increase of 9 000 in the portion of the population that is not economically active (Stats SA, 2019).

Also, a new pool of successful entrepreneurs referred to as the Black Industrialists (BI) was established to provide templates for small enterprises to use for development into larger enterprises, but this was unable to impact the sector positively (DTI, 2016). The foregoing discussion revealed that there has been a consistent increase in the rate of youth unemployment in South Africa, which explains why Herrington and Kew (2017) argue for a more spirited approach to building an entrepreneurial ethos from the grassroots up to tackle this problem. This study attempted to reconceptualise the system by applying a nondualism approach to solve the systemic disconnect challenges, especially in the development of the youth in higher institutions, to promote their entrepreneurial orientation.

Development has its roots in various systems and higher education institutions have the task to impart knowledge, competence and skills that will enable graduates to contribute to economic development that is geared towards social equality and economic development. For university graduates to have entrepreneurship skills that could lead to entrepreneurial action, there is a consensus among scholars that students' participation in the systemic action learning action research (SALAR) initiative will lead to increased self-confidence and enthusiasm for engaging in entrepreneurial action (Van der Westhuizen, 2016; Mutanda et al., 2018; Nyamuda, 2018). A study conducted by Bonotto revealed that social technology training and intervention allows students to work on development issues to become creative and innovative, which assists in addressing the problem of unemployment (Bonotto, 2013). Such is the aim of the systemic action learning action research employed in this study to address students' entrepreneurship behaviour and development to find a possible solution to the problem of graduate and youth unemployment in South Africa.

It is against this backdrop that this research, within the framework of systemic action learning and action research, explored how entrepreneurial self-efficacy and individual entrepreneurial orientation develops through the application of Theory U amongst the South African youth who participated in the SHAPE 2017 training project. This study sought to develop an entrepreneurship model for the training of participants in the SALAR (a form of entrepreneurial pedagogy) project known as SHAPE.

1.3 PROBLEM STATEMENT

Numerous studies have been carried out globally to solve unemployment challenges and entrepreneurship development, which remain global issues that significantly affect world economic growth and development. Students' entrepreneurship development was identified as one of the solutions to the unemployment challenge and research in that direction has been gaining momentum with a focus on the development of nascent entrepreneurship self-efficacy (Fayolle & Matlay, 2010; Avis, 2012).

In the study conducted by Maritz and Brown (2013) in Australia, ESE was empirically measured in the nascent entrepreneur using effectuation in a longitudinal study. The findings revealed that more women than men have high motivation for entrepreneurship and venture creation. This explains the role played by women in the sector globally, as women own 25% of the businesses in advanced market economies (Wilson, Kickul & Marlino, 2007). Although the study was carried out using a vocational entrepreneurship education programme, it was limited to the formal education ecosystem because entrepreneurship development is now recognised in the business sector, universities and government for its ability to grow market economies, but it has failed to transform learners into venture creators and business owners.

A similar study was conducted in Croatia by Krekar and Coric (2013), which examined exit level economics students. Two t-tests were carried out to examine student development at the one year five months' interval. This interval was selected because it has been established that changes linked to entrepreneurship status often occur within this time frame. The results indicated variance in entrepreneurship behaviour among the participants, which implies that entrepreneurship changes along with the status (Krekar & Coric, 2013).

Damani (2020) conducted a study on Caribbean students and explored the influence of technology usage, their parental background and school type on their self-efficacy and how it uniquely affects adolescent students' background. The study noted that this context was

underexplored despite academic self-efficacy being commonly explored globally. It regarded technology usage as ubiquitous in modern learning contexts and concluded that technology usage influences all types of self-efficacy and that academic self-efficacy has a direct association with technology used for homework. It also revealed that African students had lower academic self-efficacy than their Indian counterparts and concluded that professional teachers and infrastructure development are critical for the development of students' self-efficacy and suggested domain-specific rather than general self-efficacy testing as each type of self-efficacy is influenced differently (Damani, 2020).

Matlay, Abaho, Olomi and Urassa (2015) examined traditional teaching methods in a cross-sectional approach and how these methods relate to ESE in Ugandan universities. The study revealed that there was no statistical relationship between ESE and some teaching methods and therefore suggested that various alternative methods should be applied for teaching and the development of ESE. Matlay et al. (2015) noted that various studies have been conducted that employed traditional teaching methods in Australia, Croatia and Uganda that failed to translate into new venture creation. This might not be unconnected with the fact that there is a systemic disconnect between entrepreneurship teaching content, the facilitator and the learning ecosystem (Matlay et al., 2015). The challenge now is how best to develop potential and nascent entrepreneurship students to harness their potential to become self-reliant.

Ahmed and Kayat (2020), in their empirical research into developing entrepreneurship, studied the moderating effect of entrepreneurial education on the relationship between ESE, social support components and entrepreneurial intention among final year female tourism undergraduate students in Egypt. The study revealed that ESE and family support determine females' entrepreneurial intention, which implies that entrepreneurship education plays a significant moderating role in strengthening ESE but has no significant effect on the relationship between family support and female entrepreneurial intention. The study concluded with the implications of females' entrepreneurial literature suggesting that higher institutions should focus on female students' attitude modification through entrepreneurship education and courses to promote entrepreneurial activities.

Many studies have been conducted into individual entrepreneurial orientation in South Africa not translating into entrepreneurship intention and job creation to solve the unemployment challenge (Koe, 2016; Morales & Feldman, 2013). Koe (2016) argues that the existing individual entrepreneurial competencies have not been fully harnessed because ESE and IEO

have not been investigated together to determine how they can bring about a significant turnaround in entrepreneurship and the trade sector. The need to ascertain students' ESE level to inform entrepreneurial action remains a serious concern. Despite the existence of studies on IEO, very few studies have attempted to align entrepreneurial development with ESE, IEO and individual entrepreneurial intention (Mat & Razak, 2011; Morales & Feldman, 2013). This is because IEO alone cannot translate into venture creation (Taltila & Down, 2012) unless entrepreneurial self-efficacy is developed. Most of these studies were limited to non-entrepreneurship exit level students with classroom teaching experience, which might be the reason for their inability to transform the learners into entrepreneurs or activate their intention to become entrepreneurs. The possibility of engaging in entrepreneurship relates more strongly to individual elements such as ways of being and thinking, information processing using the mind, will and heart and developing entrepreneurial self-efficacy and individual entrepreneurial orientation than traditional classroom teaching. This study therefore examined the two variables from the perspective of nondualism. Studies have previously been carried out, but the present study examined the link between ESE and IEO and sought to develop a conceptual framework that measures the effectiveness of entrepreneurship training on individual entrepreneurial orientation, intention, and action.

It was considering the foregoing discussion that this current study sought to examine the development of ESE and IEO through a suitable systemic action learning action research in a longitudinal training programme for entrepreneurship students, having realised that traditional teaching methods cannot transform students entrepreneurially. This study sought to carry out entrepreneurship training to examine how entrepreneurship students' behaviour changed after regular classroom teaching and developed because of the entrepreneurship training to improve their entrepreneurial self-efficacy and to proffer solutions to the challenges or failures of previous studies.

Several studies have been carried out from a variety of perspectives and backgrounds on the development of entrepreneurship self-efficacy, individual entrepreneurship orientation and factors that affect its development in students and nascent entrepreneurs, as discussed earlier. An interesting result of most of the studies was that the research was unable to persuade the learners to act on their intentions or to create a new venture. In the 21st century of the knowledge economy, the development of individual entrepreneurial orientation is inseparable from a high sense of entrepreneurial self-efficacy, for example, failure to transform the intention into

action, inability to access funding for business start-up, lack of managerial skill and low innovative and creativity skills because of low cognition and emotions.

The current research collaborated with the SHAPE 2017 training project to develop both entrepreneurial self-efficacy and individual entrepreneurial orientation among a group of university students, noting that neither would be able to transform learners' thoughts about entrepreneurship into action on its own (Taltila & Down, 2012). The study adopted a nondualism philosophy and employed multiple systems to develop the students' ESE and IEO. These systems included a development training project that employed various industry experts to facilitate the training project with the academics, students as the research population, assuming dual roles and utilising the university learning environment with the support of various bodies that included Local Economic Development in the Municipality, the university entrepreneurship incubator directorate and university media. Theory U was also applied in the development training project because of its relevance to development and transformation and because of several theories in the Management Sciences that proved to be unsuccessful in transforming the learners. Contents, context and time horizons were considered for the learning and development, as these were gaps identified in previous studies. The result was that a longitudinal study was considered to be suitable.

1.3.1 Aim

Within the concept of nondualism, this study aimed firstly to develop entrepreneurial self-efficacy by activating individual entrepreneurial orientation through the application of Theory U amongst South African youth who participated in a longitudinal training project. Secondly, to develop a new model to increase the effectiveness of the systemic action learning action research offered by universities.

1.4 RESEACH QUESTIONS AND OBJECTIVES

1.4.1 Research questions

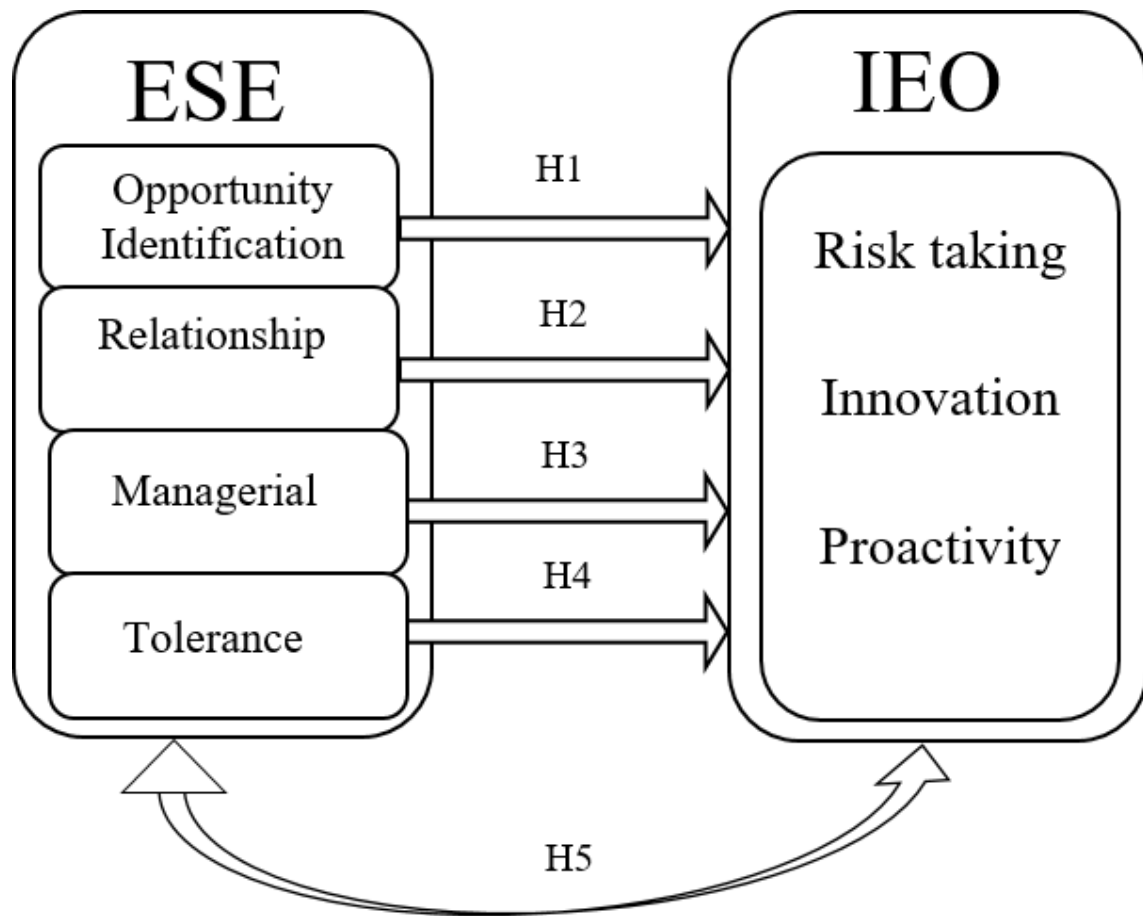
1. To what extent does opportunity identification entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
2. To what extent does relationship entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?

3. To what extent does managerial entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
4. To what extent does tolerance entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
5. What is the relationship between entrepreneurial self-efficacy propensities and individual entrepreneurial orientation?
6. What conceptual framework can be developed to test the effectiveness and development of the ESE and IEO of entrepreneurship students at universities?
7. What model can be created to enhance successful entrepreneurship education, training and development at higher institutions in developing countries?

1.4.2 Research objectives

1. To examine the influence of opportunity identification entrepreneurial self-efficacy on students' individual entrepreneurial orientation over time.
2. To investigate the effect of relationship entrepreneurial self-efficacy on students' individual entrepreneurial orientation over time.
3. To examine the influence of managerial entrepreneurial self-efficacy on students' individual entrepreneurial orientation over time.
4. To investigate the influence of tolerance entrepreneurial self-efficacy on students' individual entrepreneurial orientation over time.
5. To examine the effect of entrepreneurial self-efficacy propensities on students' individual entrepreneurial orientation over time.
6. To develop a conceptual framework to test the effectiveness and development of ESE and IEO of entrepreneurship students at universities.
7. To create a model for entrepreneurship education, training and development in higher institutions in developing countries.

Figure 1.1: A conceptual framework to measure the effectiveness of ESE



Source: Author's compilation

1.4.1 Research hypotheses

The following hypotheses were formulated for empirical testing.

- H1:** There is a significant relationship between opportunity identification entrepreneurial self-efficacy propensity and individual entrepreneurial orientation.
- H2:** There is a significant association between relationship entrepreneurial self-efficacy propensity and individual entrepreneurial orientation.
- H3:** There is a significant relationship between managerial entrepreneurial self-efficacy propensity and individual entrepreneurial orientation.

H4: There is a significant relationship between tolerance entrepreneurial self-efficacy propensity and individual entrepreneurial orientation.

H5: There is a significant relationship between entrepreneurial self-efficacy propensity and individual entrepreneurial orientation.

1.5 CONCEPTUAL FRAMEWORK

1.5.1 Self-efficacy

Self-efficacy (SE) refers to an ability to enhance motivation, material and cognitive resources and take the necessary action to make a decision about an event (Bandura, 2010). Self-efficacy is a significant characteristic in numerous psychology theories, some of which pertain to motivation, thought patterns, cognitive processes, future orientation and everyday behaviour (Tian, Zhang & Atinc, 2016). The confidence that comes with self-efficacy can lead to a high level of aspirations, consistency and the achievement of goals and objectives (Brown & Lent, 2016). The definition of self-efficacy advanced by Bandura (1986, 1997) was derived from social learning theory and refers to one's ability to show decisive judgements and behaviour when faced with unfavourable situations or challenges; to effectively perform the task and overcome challenges and problems (Bandura, 1978; 1997). Betz and Hackett (2006), in their effort to extend the theory of self-efficacy to a career field, later applied it to entrepreneurship to generate entrepreneurial self-efficacy (Betz & Hackett 2006; Lent, Brown & Hackett, 1994). Self-efficacy can be built through a process of receiving information and the brain processing that information to enable the active performance of a profitable task. Weinberg (2020) refers to this as a neurological process that supports consciousness and emotion working within the human brain. Although the process is more complex, there is a relative functionality that integrates and relates to self-efficacy through the fundamental functions of memory and recall, emotion, and motivation.

1.5.2 Entrepreneurial self-efficacy

Extant literature has emphasised the importance of entrepreneurship education and alternative learning systems on the premise that self-confidence can be developed through teaching and learning with the ability to tackle the rigors of venturing into a new start-up. Hence the emergence of entrepreneurial self-efficacy that is germane to start-up venture creation was introduced into the entrepreneurship curricula in the various colleges for mastering

entrepreneurship (Bandura, 2010). Many scholars in the field of entrepreneurship opined that entrepreneurship can be taught (Oliveira, Fazion & Alfonso, 2014; Azim & Al-Khatani, 2014) but the debate about how best to impart the skills to the potential entrepreneur students in the colleges has remained a challenge because the best way has yet to be identified.

Entrepreneurial self-efficacy is defined by Barbosa according to the underlying constructs that examine the relationships between cognitive styles and four task-specific types of ESE (opportunity self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy) (Barbosa et al., 2007). The concept of entrepreneurship self-efficacy was later defined with three dimensions: to apply self-efficacy to specific areas of entrepreneurship spirit; to emphasise the content and level of self-efficacy and the validity of self-efficacy belief (Drnovsek, Wincent & Cardon, 2010). Self-efficacy has individual and unequal relationships with multiple dependent variables, particularly entrepreneurial intention and nascent entrepreneurial behaviour. The multi-dimensional nature of the ESE construct was researched and confirmed by Mueller and Goic (2003) in that an individual's level of ESE differs in accordance with the phases of the venture creation process (searching, planning, marshalling and implementing).

Bandura (2006) regards entrepreneurial self-efficacy as a variant of self-efficacy that is based on variables such as; a) observation; b) social context and c) behaviour in social learning, while Newman, Obschonka, Schwarz, Cohen and Nielsen (2019) view entrepreneurial self-efficacy as being rooted in six backgrounds: a) work experience; b) education and training; c) presence of mentors; d) individual differences; e) company characteristics and f) cultural and institutional environment.

The definition of entrepreneurship self-efficacy provided by Barbosa, Gerhardt and Kickul (2007) draws upon the work of DeNoble et al. (1999) and Chen et al. (1998) and was adopted for this study because it is built upon the four elements of ESE identified and explained as task-specific constructs, namely: opportunity identification self-efficacy; relationship self-efficacy; managerial self-efficacy and tolerance self-efficacy. The conceptual framework depicted in Figure 1.2 illustrates the development of ESE constructs (opportunity, identification, relationship, managerial and tolerance self-efficacies), as it activates the students' individual entrepreneurial orientation and action to take calculated risks, creatively innovate and proactively search for business gaps or opportunities that, through SALAR, can effectively change their behaviour.

1.6 THEORETICAL FRAMEWORK

Theory U, a social science tool used for the development of people and organisations was developed by Scharmer (Scharmer & Kauffer, 2013). Theory U was adopted for this study because it is a social technology and a model for transformational change that drives ideas to fulfilment through the five-stages of the Theory U curve that affirms change and development. It was noted that previous approaches to the research did not incorporate the entire system in the study or training conducted for entrepreneurship development (Schweikert, Meissen & Wolf, 2013). The theory identifies gaps in the immediate environment, transforms from the initiation stage through to the evolving stage and encourages a nondualism approach of incorporating the entire system in the application (mundo, meso, macro and micro). It involves the observation of a gap with specific decisions about a desired future process and outcomes (Arawana & Scharmer, 2010).

The researcher in this study noted that there was a scarcity of studies that combined Theory U, ESE and IEO in the extant literature pertaining to entrepreneurship training and development with the nondualism paradigm application. This is consistent with the argument advanced by Van der Westhuizen (2016) that no study has investigated the reactive or generative response field quality of IEO in relation to Theory U. Previous studies failed to incorporate systemic action learning action research that involves the stakeholders in the entrepreneurship ecosystem, such as the government and her agencies, practitioners, academics, youth and the students enrolled for the training and development, thereby failing to transform the participants. Consequently, this research adopted Theory U in the context of nondualism of the system and the relationship that exists between entrepreneurial teaching, entrepreneurial self-efficacy and individual entrepreneurial orientation. Theory U, a social science tool used for the development of people and organisations, was developed by Scharmer (Scharmer & Kauffer, 2013). The theory was employed in this study because it is a model for transformational change.

1.7 MOTIVATION FOR THE STUDY

The research was motivated by the gap identified in the literature, hence the need to expand the frontiers of knowledge by providing insights into the relationship between students' entrepreneurial self-efficacy and their individual entrepreneurial orientation in South African universities by means of Theory U's theoretical framework of development stages. The reason for this was because South African universities are beset with challenges with regard to turning

out graduates that are not able to create jobs or become self-reliant because of shortcomings in the current curricula and a lack of qualified entrepreneurship lecturers (Mutanda et al., 2019).

Technological innovation, efficacy, creativity and the inability to take risks proactively are also factors. The study emanated from the need to eradicate the challenges of unemployment and associated social vices by developing entrepreneurial students through systemic action learning action research and the establishment of an entrepreneurship university. To achieve these goals for entrepreneurial development, growth and expected outcomes, a formidable educational policy overhaul, curriculum restructuring and entrepreneurial development initiatives are necessary so that entrepreneurship students will become self-reliant and employers of labour.

1.8 JUSTIFICATION FOR THE STUDY

The principal justification for this research was to address the problem of limited entrepreneurial activity to create employment for the youth and graduates and to halt unemployment through the development of entrepreneurship universities to prepare students for venture creation, employment creation and self-reliance. The study was motivated because of the outdated entrepreneurship curricula that do not promote learning and entrepreneurship action. The study examined the influence of entrepreneurship action learning action research on students' ESE and IEO in UKZN as alternatives to traditional entrepreneurship classroom teaching. The study promoted the desired synergy between the government and scholars while drawing attention to the need to enhance entrepreneurial action in South Africa. This is achievable through youth empowerment programmes that will enhance new venture and employment creation and result in a new order and new ways of thinking of the bigger picture.

1.8.1 Contribution to Theory

The study produced new knowledge pertaining to how ESE can potentially activate individual entrepreneurial orientation and intention through SALAR among university students. This study contributed some thoughts to the extant literature relevant to entrepreneurial intention and action by providing academia with insight into the future after the application of Theory U in entrepreneurship training.

The SHAPE action-training model: This can be used in the future iterations of SHAPE systemic action learning action research training circle. The proposed action-training model can be applied for entrepreneurship development in higher institutions of learning in South Africa and other developing

nations who want to develop youth entrepreneurship. Interrelationship between the two variables can boost youth entrepreneurship momentum development in relation to IEO development over time. The instrument can be applied for entrepreneurship development in higher institutions of learning in South Africa and other developing nations who want to develop youth entrepreneurship. The SHAPE Ideation Model: This social technology can be used to drive development and transformative training in South Africa and other developing nations.

These could be beneficial to the transformation of higher education and the current curricula. It could inform the introduction of systemic action learning action research hubs and incubation and skill acquisition centres in universities, which would lead to the achievement of the objectives of developing entrepreneurial students and creating an enabling environment for learning. This could also result in producing graduate entrepreneurs and create a basis for a future investigation into entrepreneurial behavioural outcomes.

The conceptual framework was created to test and validate the study's objective, and this can be replicated in future research. The study's findings led to the suggestion of an action plan for the Department of Higher Education (DHE) and the need for the government to budget for education beyond what the United Nations Educational, Scientific and Cultural Organisation (UNESCO) recommends. It also encourages the disbursement of funds to the parastatals and other agencies for effective entrepreneurial pedagogy in higher education institutions.

1.8.2 Contribution to Praxis

As applied research, the study served as a reconfiguration drive for government policy pertaining to entrepreneurship development in higher education institutions through the developed model recommended for entrepreneurship training. This will assist in designing training, incubation programmes and workshops for youth and student entrepreneurship development by creating an enabling environment for students to learn, innovate and venture. It would add value to the economy by creating jobs, reducing unemployment, checking rural and urban drift and social and economic restiveness among youth. The study also recommends the introduction of professional mentorship, learning and incubation hubs for the youth in every central business district of every municipality and province and financial empowerment that enables small and medium enterprises (SMEs) to survive.

1.9 CONCEPT CLARIFICATION

The key concepts discussed hereunder were used throughout the study and require clarification.

1.9.1 Entrepreneurship Pedagogy

Entrepreneurship pedagogy is a method of imparting skills to learners and inducing them to acquire practical knowledge, unlike classroom teaching. The aim is to improve the development of entrepreneurial action and to build the capacity and potential of would-be entrepreneurs (Gibb, Hannon, Price & Robertson, 2014). It began in the 1970s with the notion to encourage an enterprise culture by teaching people how to start a new venture and inculcate a new entrepreneurial mindset with broader goals of developing self-efficacy by focusing on training and venture creation. It is seen as an emergent practice that focuses on experimentation and innovation (Lindholm-Dahlstrand, Andersson & Carlson, 2019).

1.9.2 Individual Entrepreneurial Orientation (IEO)

IEO relates to the process, practices and decision-making activities of student entrepreneurs in relation to risk taking, innovation and proactiveness (Van der Westhuizen, 2016). This concept, which was developed by Muller in 1983, comprises three dimensions identified as risk taking, innovativeness and proactiveness. These three dimensions are referred to as entrepreneurial strategic posture (ESP). Lumpkin and Dess (1996) refined IEO and suggested the adoption of a five-dimensional model consisting of autonomy, innovativeness, risk taking, proactiveness and competitive aggressiveness. Individual entrepreneurial orientation motivates students and youth to create an invaluable future for themselves i.e. create employment rather than seek white- and blue-collar jobs (Aja-Okorie et al., 2013).

1.9.3 Entrepreneurial Environment/Ecosystem (EE)

The entrepreneurial environment or ecosystem refers to a set of factors that can enhance the growth of entrepreneurship in any society. These factors could be legal, economic, socio-cultural or political and can make or break any young entrepreneur. For instance, the prevailing entrepreneurship environment may attract new businesses to cities in any given country. South Africa is currently unattractive to potential entrepreneurs due to the uncertain and turbulent business and political environments caused by an economic recession, xenophobic attacks and unsympathetic state policy (Barnard & Luiz, 2018). Universities should be involved in the early-stage entrepreneurial education and training of students to make them more aware of

entrepreneurship as a viable career. If a student is not fully aware of entrepreneurship as a career option, a positive attitude towards it will not be developed (Rasli, Khan, Malekifar & Jabeen, 2013).

1.9.4 Entrepreneurial Action

The term entrepreneurial action refers to individuals' aspirations and visions that motivate them to become independently entrepreneurial (Van der Westhuizen, 2016). This can simply be described as those qualities in individuals that make them act on their desire to become entrepreneurs. Scharmer (2013) posits that the success of our actions as change-makers does not depend on what we do or how we do it but on the inner place from which we operate. Similarly, Hays (2013) views entrepreneurial action as an inner place in which an individual holds his or her values, aspirations and dreams.

1.9.5 Systemic Action Learning Action Research (SALAR)

Systemic action learning action research is an interactive process among entrepreneurship students, their intermediaries and researchers to investigate and proffer possible solutions to challenges young entrepreneurs encounter (Van der Westhuizen, 2016). It enables the participants to exchange ideas, suggest initiatives and engage in dialogue, which allows the researchers to observe and act upon the dynamics at the systemic level (Schweikert et al., 2013). For the purpose of this research, it refers to an activity or interaction between the stakeholders in the learning process, building students' self-efficacy and activating individual entrepreneurial orientation towards acting on intention.

1.9.6 Entrepreneurial Self-Efficacy

Self-efficacy is the reliance of an individual on his or her competencies to perform and one's judgment of how well one can execute the courses of action required to successfully deal with a situation or accomplish a task (Mohd et al., 2014). It is a construct that evaluates individuals' trust in their strength to act entrepreneurially.

1.10 SHAPE

The acronym stands for Shifting Hope, Activating Potential Entrepreneurs (SHAPE). This initiative was founded in 2014 by a scholar, Thea van der Westhuizen, at the University of KwaZulu-Natal and is referred to as a social technology that can be seen both as a 'systemic-

action-learning-action-research' methodology (SALAR) and a theoretical framework that serves to develop an individual's entrepreneurial spirit by moving from reactive thought processes to generative processes, thereby allowing the ideation of entrepreneurial opportunities to be activated (Van der Westhuizen, 2019, 2017, 2016). The focus is on developing student entrepreneurs to bring students, the youth and stakeholders together in a learning hub. Here, the systemic action learning action research training project is offered with a focus on growing the national economy and building confident entrepreneurs. The second edition of the project SHAPE 2017 served as the study site for this research.

1.11 NONDUALISM

Nondualism can be regarded as an 'inseparable system' or 'not two'. Nondualism implies that all things are interconnected and not separate, while at the same time all things retain their individuality (Katz, 1997; Van der Westhuizen, 2016).

For this research, nondualism refers to systems that cannot be separated from one another (on the mundo, macro, meso and micro levels).

1.11.1 Reactive and Generative Stages

These are the two stages of Theory U that explain a deeper way of human thinking or paying attention to learning from the left to the right of the U curve. According to Scharmer (2009), it is a response field where the mind, will and heart can react without improvisation and mindfulness. Scharmer (2009) posits that it is a stage of dropping the old ways of reasoning or thinking and being open to a new future emerging in the present through deeper listening.

1.11.2 Student Entrepreneurship (SE)

This is a new focus of entrepreneurship research where entrepreneurship consciousness and attitude towards an entrepreneurial career are developed. It is an attempt to launch a new venture undertaken by one or a group of students and such involvement depends on their career plan and attitude focusing on self-reliance that is contingent on various factors (Shirokpva, Osiyevskyy & Bogatyreva, 2016). It also refers to activities that cannot only enhance students' success academically but also strengthen their confidence and inculcate the qualities and skills that will be valuable for their success upon graduation (Appleby, 2017). The author views

student entrepreneurs as individuals that gain hands-on experience during their education, grow their networks and have no choice but to become more diligent with their studies.

For this study, a student entrepreneur is an individual student who identifies the potential in him/herself and submits to a coach or mentor through action learning on how to sustain his or her inner potential and proactively venture with it. They are referred to as “studentpreneurs” in this study where intention, behaviour and development are linked using a sample of the SHAPE project participants at the University of KwaZulu-Natal and focusing on activating IEO as a driver of entrepreneurship action.

1.11.3 Youth Entrepreneurship

Herrington and Kew (2017) refer to youth as those in the age range of 18-34 years. For this study, the youth are the participants in this study that requested to be part of the project for their self-development.

Youth entrepreneurship is defined as the people within the age of 18-34 years channelling their ability to be enterprising, taking initiatives, innovating, creating and taking risks either in self-employment or in small start-up firms and utilising the skills necessary to grow and develop the economy (Van der Westhuizen, 2016).

1.12 SCOPE AND LIMITATIONS OF THE STUDY

The scope of this study was limited to the development of entrepreneurial self-efficacy and activating individual entrepreneurial orientation among the students and youth in a South African university. Entrepreneurial self-efficacy and individual entrepreneurial orientation were utilised as variables to offer comprehensive explanations of the relationship between student entrepreneurial development and student entrepreneurial intention. The explanations provided in this research were limited to the interplay between entrepreneurial self-efficacy and individual entrepreneurial orientation outcomes to inform intention and action. This study did not consider the utilisation of other variables of entrepreneurship outcomes but focused on monitoring training project participants' individual entrepreneurial action.

The population of this research was limited to a focus group at the University of KwaZulu-Natal in Durban, South Africa. It has been suggested that entrepreneurship training be employed within all universities' disciplines at all levels to promote the self-reliance of every

individual youth. This study could be replicated in other developing countries' universities to curb the challenge of unemployment. The University of KwaZulu-Natal was selected based on the availability of entrepreneurship as a discipline in the school. More importantly, the university is situated in a province that had the third-highest rate of unemployment in South Africa in 2018 (Stats SA, 2018). The empirical outcomes of this study were limited to the data collected from the SHAPE 2017 participants at the University of KwaZulu-Natal.

1.13 ETICAL CONSIDERATIONS

The researcher followed the research ethical standard laid down by the University of KwaZulu-Natal to ensure the study's authenticity and credibility. Preliminary ethical clearance was granted for project SHAPE 2017 for subsequent build on approval to be applied for accordingly when research commences. A letter of approval from the Human and Social Science Research Ethics Committee of the University of KwaZulu-Natal was issued linking the research with the initial research project SHAPE held in 2014. The University's ethical clearance and gatekeeper's letter with the number HSS/1546/018D are attached as appendix B

Avoiding plagiarism was a high priority and all the secondary data that were collected and used for this study were adequately cited and referenced. All other ethical considerations in research were treated as important when conducting this study. The participants were notified of the purpose and objectives of the study and informed that their participation was voluntary. They were therefore required to complete an informed consent form before taking part, indicating their willingness to voluntarily take part in the project. Anonymity and confidentiality of the participants were guaranteed throughout and after the study. The researcher only disseminated the final thesis within the university; only the supervisor and one other student involved in the research had access to the raw data that were collected. Upon completion of the study, the researcher would deposit the data that were collected in this study with the School of Management, IT and Governance at the University of KwaZulu-Natal for record and reference purposes. Copies of the ethical clearance, informed consent form and the questionnaire that was employed as a data collection instrument are attached as appendices.

1,14 STRUCTURE OF THE THESIS

This thesis is structured into seven chapters as described hereunder.

Chapter One: Introduction

This chapter serves as an introductory chapter. It presents the background of the study, statement of the research problem, research objectives, research questions and significance of the study, clarification of the concepts and the scope and limitations of the study.

Chapter Two: Entrepreneurship development and education policy in South Africa

This chapter marks the beginning of the literature review by presenting the historical background of entrepreneurship development and policy in South Africa. It also assesses the impact of entrepreneurship education on South African universities. This is achieved by examining the impact of post-apartheid education policy in South African institutions of higher education.

Chapter Three: Entrepreneurial pedagogy, entrepreneurial self-efficacy, individual entrepreneurial orientation dimensions and theoretical framework underpinning the study

This chapter presents a literature review on the concepts of learning, entrepreneurial self-efficacy and the dimensions of individual entrepreneurial orientation as they develop entrepreneurship students. The entrepreneurial self-efficacy and individual entrepreneurial orientation dimensions are examined to identify their relationship with venture creation in South Africa. This chapter also presents the theoretical framework of the link between entrepreneurial self-efficacy and individual entrepreneurial orientation development. Theory U

as a transformative learning approach is explored in relation to its contributions to entrepreneurship development in systemic action learning action research.

Chapter Four: Application of Development Training Model, Theory U and SALAR

This chapter presents the report pertaining to the systemic action learning and action research (SALAR) activities of the 'SHAPE' 2017 project. It presents discussions of 'before', 'during' and 'after' the SHAPE programme in relation to the application of the development training model and Theory U's five stages of movement for developing student entrepreneurs.

Chapter Five: Research methodology

This chapter presents a discussion of various research philosophies, enumerating their strengths and weaknesses leading to the adoption of nondualism as an appropriate philosophical stance for this research. It explains the methodology and research design employed for the study and justifies their selection. The study adopted an experimental research design utilising a correlational approach. This was necessary to explain the relationship between entrepreneurial self-efficacy and the individual entrepreneurial orientation of entrepreneurship students in higher education institutions in South Africa. A quantitative methodology was adopted for this study. The chapter also presents a discussion of the study's population, sampling techniques, research instruments and administration of the instruments, data collection procedures and processing and specifies the limitations to the research methodology.

Chapter Six: Data analysis and interpretation of results

This chapter analyses, interprets and presents the results of the quantitative data collected for the study pertaining to the development and relationship between entrepreneurial self-efficacy and the individual entrepreneurial orientation of a South African University's entrepreneurship students. The results are presented in tables and the research questions formulated that were are tested using descriptive statistics as well as inferential statistics such as correlations and regression. The empirical findings of the study are discussed in this chapter. The findings are based on the empirical evidence presented in the tables and in relation to the research questions and objectives.

Chapter Seven: Summary, conclusion, and recommendation

This chapter presents the summary of the findings according to the research objectives 1, 2, 3, 4 and 5 of the study. This is followed by the conclusions that were drawn based on the findings, the implication of the findings, recommendations and needs for further research.

CHAPTER TWO

ENTREPRENEURSHIP DEVELOPMENT AND HIGHER EDUCATION POLICY IN SOUTH AFRICA

2.1 INTRODUCTION

The main aim of this chapter is to discuss entrepreneurship development and higher education policy in South Africa. An attempt is made in this chapter to carry out a comprehensive review of current and relevant literature pertaining to entrepreneurship development as presented by various scholars in the field of entrepreneurship. This chapter explores empirical studies pertaining to the influence of entrepreneurship education and training on entrepreneurial self-efficacy and individual entrepreneurial orientation.

The chapter also explores the influence of entrepreneurship training on entrepreneurial self-efficacy (ESE) and individual entrepreneurial orientation (IEO) in the development of entrepreneurship students in a South African university. This was aimed to shape our understanding of individual entrepreneurial orientation in line with higher education institutions' (HEIs') curriculum policy and roles in the South African education sector. It also provides an exploratory analysis of the interplay between entrepreneurship education, entrepreneurial self-efficacy and the IEO development constructs in South African university.

It also examines the influence of action learning action research on entrepreneurship at the outset of a student's entrepreneurial action. The importance of this development cannot be over-emphasised due to the nexus and systemic disconnect that exist between the university education curriculum and youth unemployment. With the worsening rate of graduate unemployment in the last eight years, it increased to 48% among the youth in the 15 to 34 age brackets in the third quarter of 2016; this development may likely arouse frustration and impatience among the youth and increase the societal poverty level (Mushongera, Zikhali & Ngwenya, 2017). Numerous adults and graduates have given up searching for employment with an increased and alarming rate of discouragement of 8% between 2008 and 2015 (Baldry, Graham & Dee Lannoy, 2019). These challenges need the urgent attention of all stakeholders in the sector, namely government agencies, educators, students, entrepreneurs, and other practitioners. This explains why higher education institutions (HEIs) and the Department of Trade and Investment's (DTI) policy swiftly addressed the adjustment in the curricula in high

schools and universities by introducing schemes that ensure easy access to financial and non-financial support through South African agencies and institutions (Taylor, Alhamud, Kouwe, Saleh, Laughton & Meintjes, 2016).

Over the past two decades, entrepreneurship in South Africa has been criticised for a lack of excellence in the field. Since 1990, educators and curriculum experts have introduced entrepreneurship into the education curricula of higher education institutions by means of various programmes and projects (Gerba, 2012). Through the curricula restructuring project, it was observed that there is a need for entrepreneurship education to be included in the school curriculum but not to be offered as a subject in isolation (Lackeus & Middleton, 2015; Frolova, Zotov, Kurilova, Mukhin & Tyutrin, 2019). Abramosky, Harrison and Simpson (2004) opined that the government needs to search, grow, and develop new entrants from culture, home, schools, institutions and colleges to become skilled, trained and inspired. For the universities to demonstrate their relevance to the nation, there is a need to ensure that they are responsive to the country's National Developmental Plan (NDP) and produce graduates with the required skills to promote national development. The most effective ways to address the challenge are to review policy pertaining to basic support for the youth in South Africa and the development of entrepreneurship. This could reduce unemployment and promote entrepreneurship in South Africa, as discussed in the ensuing section (Graham, Lannoy, Rosa & Breakey, 2019).

2.2 CONCEPT OF ENTREPRENEURSHIP

The concept of an 'entrepreneur' has its origins in French and is defined as someone that creates a venture or initiates a business (Hayes, Subhan & Herzog, 2020). Such a venture can be for-profit or it can be a non-profit enterprise. While entrepreneur is a French word, 'entreprendre' and 'unternehmen' are German words that connote "to undertake". The word entrepreneur was first used by an economist, Jean Baptiste, to describe innovation, formation and development of a business entity. In contention with Baptiste, Dess (2011) aligned with Drucker's position that initiating a business or firm does not imply that the initiator is an entrepreneur or that starting a business automatically transforms one into an entrepreneur (Dess, Pinkham & Yang, 2011).

Before discussing the subject of entrepreneurship development, it is paramount to explore various definitions of the term 'entrepreneurship'. Audretsch, Cunningham, Kuratko, Lehmann and Menter (2019) argue that research has had to contend with inconsistent definitions of

entrepreneurship and noted that many of the scholars emphasised the economic value of entrepreneurship. Schumpeter views entrepreneurs as innovators that turn creative ideas into commodities and services for human satisfaction (The Economist, 2014). A more popular definition of an entrepreneur includes venture ownership, managing a self-established organisation and self-reliance (The Economist, 2014). As the various definitions comprise several characteristics of entrepreneurship and list traits and the life experiences of entrepreneurs, researchers agree that entrepreneurship is an elusive concept that can be interpreted in several ways and from various perspectives (Dimova & Pela, 2018).

This research was built upon the Economist's (2014) definition that views entrepreneurship as ownership of a small business venture, personally managing a firm and being self-reliant. This definition was considered appropriate for this study because of its simplicity. The reality of this definition when compared with other definitions discussed earlier is that it can produce unexpected results when considering entrepreneurship from the perspectives of diverse economies (The Economist, 2014). At this juncture and by way of setting the groundwork for students' ESE and IEO development, there is a need to discuss the development of entrepreneurial education and training as it affects entrepreneurship development.

2.2.1 Entrepreneurship

Entrepreneurship is a distinct concept and a core factor of the economic activities described by various scholars to mean an action.

Table 2.1 presents a comparison of different definitions of entrepreneurship within the context of entrepreneurship development. It presents various scholars' perspectives of entrepreneurship and the most suitable definition was aligned with the study.

Table 2.1: A comparison of contrasting definitions of entrepreneurship

AUTHOR	DATE	DEFINITION
Jean Baptiste		Entrepreneurship implies shifting economic resources out of an area of low and into an area of high productivity and greater yield.
Schumpeter	1942	An entrepreneur is an innovator that has turned a creative idea into commodities and services for human satisfaction (“a creative destruction”).
Gartner	1990	Entrepreneurship is three-fold with eight different themes, namely: the entrepreneurs, innovation, organisation, creation, creating value, profit or non-profit, growth, uniqueness and management.
Ahmad and Seymour	2008	Entrepreneurship involves the creation of a new micro or macro venture; enhancing each other in developing entrepreneurship from the individual and institutional perspectives.
Drucker and Kirziner	2014 and 2015	Entrepreneurship is an action that involves the combination of materials or resources to create and increase value to satisfy end users.
Kovacevich and Callaghan	2013	Entrepreneurship is a medium of identifying and pursuing opportunities with regard to the alienable and inalienable resources currently controlled with the notion of adding value.
Murphy Jnr	2014	Entrepreneurship is the continuous utilisation of opportunities without regard for the resources currently controlled.
The Economist	2014	Entrepreneurship implies venture ownership, managing a self-established organisation and being self-reliant.
Eyser	2018	Entrepreneurship is a process by means of which an individual, either by oneself or as an organisation, pursues opportunities without regard for the resources currently controlled.
Dimoya and Pela	2018	Entrepreneurship is an elusive concept that can be interpreted in a variety of ways.

Source: Author’s compilation

Entrepreneurship as an action involves combining materials or resources to create and increase value to satisfy end users (Drucker, 2014; Kirzner, 2015). Various scholars have described entrepreneurship as an act of “creative destruction”. Schumpeter (1942) asserts that entrepreneurship creates as it destroys and destroys as it creates, which leads to a cycle of creative destruction (Arenas, 2019). It is a medium of identifying and pursuing opportunities regarding the alienable and inalienable resources currently controlled with the notion of adding value (Kovacevich & Callaghan, 2013). To Murphy Jnr. (2014), it is the continuous exercise of seizing opportunities without regard for the resources currently controlled. Eyser

(2018) views entrepreneurship as a process by means of which individuals, either alone or as an organisation, pursue opportunities without regard for the resources currently controlled.

Scholars have agreed that there is no universally accepted definition of entrepreneurship, which explains why there is an array of definitions in the literature on the subject provided by a few researchers. Gartner (1990), in his quest to define entrepreneurship rooted in the epistemology and ontology thereof, carried out a three-phase study to elicit peoples' opinions about entrepreneurship by administering a questionnaire to three sets of respondents comprising academics, politicians and business leaders respectively. He came up with eight different themes to buttress the earlier definition of entrepreneurship, namely the entrepreneur; innovation; organisation creation; value creation; profit or non-profit; growth; uniqueness and management. This explains the epistemological overview of the three perspectives of nondualism for a deeper understanding of what entrepreneurship entails. Most of the definitions of entrepreneurship provided by scholars can be traced to these three broad perspectives: individualism; institutional and educational that cannot be separated.

Individualism. Watson (2013) described entrepreneurship individualism as a method by means of which an individual identifies a gap or opportunity, engages man and materials to create value and effects the necessary changes in society. This implies engaging in an economic process of business venture creation to produce goods and services, maximise profit, satisfy society and develop the economy. Ahmad and Seymour (2008) view this concept as the creation of a new venture regarding micro and macro entities; enhancing each other in developing entrepreneurship from individual and institutional perspectives. The afore- mentioned definitions recognise the entrepreneur as the main individual actor that brings about change in a society and economy through the integration and interconnection of factors of production for producing goods and services. An individual entrepreneur identifies a gap as an opportunity to initiate a business and beyond simply starting a business, to add value to the system. Various scholars have defined the individual entrepreneurship mindset and its relevance to the business start-up based on individual behaviour and attitude. The entrepreneurship mindset outcome can be said to be the main value from the orientation of any individual that reshapes minds towards entrepreneurial action. Based on this orientation, individual mindsets are drawn to value creation and satisfactory change in an economy (Adam & Fayolle, 2015).

The focus of this research was the development of specific constructs of entrepreneurial self-efficacy (ESE) and individual entrepreneurial orientation (IEO), which are discussed in detail in line with entrepreneurial pedagogy in the subsequent chapters. Scholars have recognised the influence of pedagogy, entrepreneurial mindsets and outsets through entrepreneurial self-efficacy (ESE) and its elements, which include opportunity identification (OI); managerial self-efficacy (MSE); relationship self-efficacy (RSE) and tolerance self-efficacy (TSE) to activate individual entrepreneurial orientation with the mindset to initiate a new venture (Ndou,Secundo, Schiuma & Passiante, 2018; Koe, 2016). The entrepreneurial mind and outsets enable individuals to act upon their intention and add essential value to a country's economy in terms of poverty alleviation, wealth distribution, gap closure between the 'rich white and poor black' and drastic reduction in social restiveness and violence in South Africa. One can deduce that it is not enough to have an intention but acting upon that intention is the added value of the efficacy and change in behaviour that propelled the action. Thus, the essence of developing ESE is to activate individual entrepreneurial orientation. The preceding discussion indicates that the variables cannot stand alone; they inter-connectively activate the youth mindset with the application of the nondualism philosophy.

Institutional. This is an entrepreneurship feature that entails the management of a mission and vision collectively by introducing innovation to a business or an inherited family firm thus creating a new product market and developing the self-prowess of entrepreneurship. It is a field of practice in which innovation and creativity are built for market achievement (Sotarauta & Mustikkamaki, 2015; Hardy & Maguire, 2008). This occurs when either the employees as a group or an individual is highly innovative and chooses to work for change, adding value to the existing organisation or institution thereby creating intrapreneurship in the establishment. The act changes or expands the organisation by introducing a new venture, products or services, thus becoming a conglomerate. This involves strategic thinking and identifying legal violations and activities that are detrimental to the organisation and incrementally and creatively bringing about improvements. In institutional entrepreneurship, resources are pooled for transformation of the organisation or in a quest to improve the goods and services supplied. This involves forging government contacts and accessing funding or power for the desired change (Jolly, Spondniak & Raven, 2016). Education institutions affects its operational system and innovation in many ways through which multiple concepts affecting the relationship have manifested: institutional thickness (Beer & Lester, 2015), institutional infrastructure (Acs,

Szerb, Lafuente & Lloyd, 2018), institutional environment (Escandon, Urbano & Ayala, 2019) and institutional capacity (Healey et al., 2017).

Educational. This is a field of study in which entrepreneurship as a career is initiated and taught by various means to enable students to venture or become a manager or entrepreneurship practitioner after studying the relevant curriculum (Welsh, Tullar & Nemati, 2016). Over the last two decades, entrepreneurship education (EE) has been criticised for the lack of excellence in the field and suggestions have been advanced about WHAT should be taught and HOW it should be taught (Sirelkhatim & Gangi, 2015). Entrepreneurship education is mainly aimed at developing an entrepreneurship culture but also for the creation, sustenance and growth of new ventures and businesses. This has encouraged educationists and curriculum experts to engage in research and projects that can lead to the introduction of entrepreneurship into education curricula. Because of this restructuring of curricula, it has been observed that there is a need for entrepreneurship education and pedagogy inclusion in the school curriculum that will not be offered as a stand-alone subject but will be based on entrepreneurship education principles (Savva, Souleles & Ferreira, 2020). This approach will be three-fold and will include: teaching the rudiments and principles of entrepreneurship; enlightenment in terms of educating would-be entrepreneurs and encouraging the youth to choose entrepreneurship as a career (Fretschner & Weber, 2013) and becoming an entrepreneur through mentoring, encouraging and enhancing their self-efficacy leading to intentions for future action (Piperopoulos & Dimov, 2015). The implication is that creativity, innovativeness, and inspiration aid adaption to change and the ability to cope with business failure (Fretschner & Weber, 2013; Piperopoulos & Dimov, 2015). The implication of the foregoing is that the government and scholars have identified the invaluable contributions of educational entrepreneurship to the development of the world's economy. Universities have received more attention over the last two decades about this transformation and there have been efforts to effectively link universities and their research agendas to the private sector. This demand has encouraged the management of some universities to introduce entrepreneurship modules or courses into their curricula (Linton & Klinton, 2019).

The foregoing discussion contradicts the assertion that entrepreneurship should be learnt based on the three concepts of educational entrepreneurship, namely learning about, for and to. These attributes will change learners' behaviour towards entrepreneurship as a profession and enable them to acquire new skills and add value to the economy (Observatorio Nacional del

Emprendedor, 2015). The importance of this to the economy informs the restructuring of higher education institutions' curricula to enhance entrepreneurship in all its ramifications. Entrepreneurial education promotes developing the required skills for entrepreneurship action by means of entrepreneurship pedagogy both in formal and informal education settings. The formal entails structured processes in which learning attributes are structured and refined in a formal setting, while the informal entails processes of hands-on-learning such as apprenticeships that require experienced-based learning (Thakur & Ncert, 2014).

The three perspectives (individual, institutional and educational) discussed in the foregoing sections negate decades of argument pertaining to the youth being faced with external factors that adversely affect initiating a start-up, such as institutional regulations and frameworks; youth orientation; finance; technical ability; collateral security for loans; skill; socio-economic environment and duplication of agencies (Olugbola, 2017). Government intervention will proffer solutions to these challenges, particularly in the education sector where changes in the curricula and orientation towards entrepreneurship education and training are likely to impart the required skills for entrepreneurship management and practice. The three perspectives indicate the level at which scholars view how individual entrepreneurs can acquire skills to re-orientate their mindsets to act on their entrepreneurial intentions, which may be achieved by means of an institutional system.

The ensuing section focuses on entrepreneurship development as a push factor for its development in developing countries such as South Africa.

2.3 ENTREPRENEURSHIP DEVELOPMENT IN SOUTH AFRICA

The late development of entrepreneurship as a career opportunity and profession in South Africa is a result of the greater importance assigned to Mathematics and Science rather than the Social Sciences and entrepreneurship because until recently the latter subjects were not viewed as a path to success for the best and brightest students (Adrian & Malik, 2009). It was found that despite been included in the high school curriculum, 60% of high schools in South Africa still do not offer any exposure to entrepreneurship (Cassim, Soni & Karodia, 2014). Also, fewer than sixty higher education institutions in sub-Saharan Africa offer courses in entrepreneurship or small business management with fewer still offering entrepreneurship as an area of specialisation (Kabongo & Okpara, 2010). For this reason, different developmental programmes were introduced, such as awareness and modular training for people between the

ages of 14 and 34. The focus was on creating a conducive environment for emerging start-ups or entrepreneurs to have access to relevant skills, attitudes and values for entrepreneurship development (NYDA, 2015).

The South African Government, having recognised that entrepreneurship adds value to the nation's economy, has been promoting the concept through policy (Acs, Astebro, Audretsch & Robinson, 2016) and ensuring that funding is accessible for start-ups through various government agencies such as the Small Enterprise Development Agency (SEDA) and the Investment Development Commission (IDC). Herrington, Kew and Kew (2010) posit that for such policy to achieve the desired development, the incorporation of modern training, social and cultural norms and accessibility of the regulatory system in the education sector needs to be revisited. This is germane to entrepreneurship development in South Africa as most black South African entrepreneurs have grown up with little or no experience of enterprise, perceiving themselves to be entrepreneurially incapable. This is due to the lack of entrepreneurship education (Van der Westhuizen, 2019) and inappropriate theoretical learning methods that do not focus on skills development and outcomes (Martin, McNally & Kay, 2013).

The dearth of entrepreneurial activity in South Africa is one of the country's 'Gordian knots' (complex and unresolved challenge) and is viewed as a major goal to consolidate the gains attained by the democratic government (Turton, 2016). Entrepreneurship is perceived to be a solution to all social ills in the country and is viewed as the heartbeat of every booming economy globally (Holliday, 2019). Scholars have reiterated that the world's advanced markets were built on small scale business and developing economies are also promoting a business environment that is conducive for entrepreneurship to thrive (Spigel & Harrison, 2018). All three levels of government in South Africa are directing material resources towards entrepreneurship growth and development (Akinyemi & Adejumo, 2018) to promote employment creation and economic development and offer a solution to the country's economic problems.

Policy development inefficiencies and bureaucracy in government departments hinders the development of entrepreneurship and the initiation of new start-ups. The Department of Trade and Investment (DTI) has taken the opportunity to identify inter-departmental conflict and duplicated policies and functions that have an adverse effect on the framework for attaining a strategic fit for SMME programmes (DTI, 2005).

Besides the considerable advantages that entrepreneurship can provide for a society, any economy that can provide an enabling environment for start-up businesses to thrive will have a competitive advantage in global markets (Ahmad & Xavier, 2012). Arguably, entrepreneurship education can be an important initiative for any economy to become globally competitive and promote a business environment that is moving towards an integrated economy and free trade. Building on different assertions and positions regarding entrepreneurship, globalisation and internalisation of business perspectives relevant to South Africa, Smallbone, Landstrom and Jones-Evans (2009) note the stream of migrants as a basis for globalisation from micro to mundo, which could be used as a yardstick for entrepreneurship development. The Urban Consolidation Act of 1945 discouraged the emergence of black capitalists in urban areas, but a pioneering black manufacturer named Shikwane was celebrated for his victory against this discrimination and humiliation that was actively encouraged during the apartheid era.

“During the height of apartheid, blacks were not allowed to own a manufacturing business in Soweto and other ‘white areas’. But Shikwane defied the authorities and started a manufacturing concern in Orlando. However, during the forceful removal and relocation of blacks in early 1970s Mr. Shikwane and Mr. Kagbo, leather product manufacturers were forced out of the urban areas. They became the only two successful black pioneer manufacturers operating in the homelands of Bophutatswana and Venda respectively” (Potgieter, 2012).

This implies that South Africa has a low entrepreneurial density and as such, any policy that is formulated should address entrepreneurial education as a matter of the utmost importance before proffering solutions. The low entrepreneurial density has been attributed to former policies that were unfavourable to individual entrepreneurs but favourable to large corporations and businesses (Leboea, 2017; Lloyd, 2018).

This development informs the emergence of black economic empowerment (BEE) in South Africa which was to ensure and assist the system to deracialise the economy and society (BUSA, 2017; Acemoglu, Gelb & Robinson, 2007; Mbeki, 2000). BEE was at that time referred to as the economic pressure movement that supported a political transformation from apartheid to a democratic government, empowering the low-income earners such as those in the mini-bus taxi industry as an example of an ideal small business prototype. BEE was faced with several challenges that led to the closure of several businesses for lack of entrepreneurial education. A lack of efficiency on the part of the new government in terms of control and plans to encourage and inspire the black community to create much-needed jobs and a sustainable

environment for growing business was also a factor (National Development Plan, 2013). By the time South Africa was on the verge of transformation, BEE was recognised as part of the movement for the actualisation of the reconstruction and development programme and the demand for equal representation in economic affairs to ensure the sustainability of the reconstruction and development plan (RDP) (Black, 2002).

The lack of a designated research department in the government to identify investment opportunities (Atkins, 2019) in the economic sector led to a call for the government to be involved through the Department of Higher Education and Training (DHET), to restructure education and the curricula to support entrepreneurial pedagogy and individuals' entrepreneurial orientation as the foundation for economic buoyancy. Against this backdrop, BEE Commission proposed a piece of legislation to the then President, Thabo Mbeki, for an "Integrated National BEE Strategy, and Black Empowerment Act, with National Empowerment Commission (NEC) that would accelerate black participation in the economy within the following decade and would report to the presidency and relevant cabinet minister" (Ponte, Roberts & Van Sittert, 2007). This implied that the target should have been achieved by 2011 in terms of the Integrated National BEE Strategy. In support of this move, various agencies were introduced to promote micro-enterprises but were unable to accelerate development to the expected level. This led to a call to overhaul the relevant department and promote an entrepreneurial education system at all levels.

The Vision 2030 goals were introduced as a National Development Plan in 2011 to pave the way for South Africa to eliminate poverty, reduce inequality and change the lives of those that were disadvantaged by apartheid (National Development Plan, 2013). The people of South Africa must be provided with ample opportunities to access quality education and training to develop skills that will enable them to thrive. The launch of Vision 2030 as part of the national development plan 2011 may have been necessitated by a rise in the rate of unemployment, an inability to fully introduce entrepreneurship education curricula that employed alternative learning methods and a workshop to enhance college output. Entrepreneurship self-efficacy development is important because of the need for the NDP to promote innovation and the development of knowledge and the need for the higher education system to diversify and expand the skill and specialisation training currently offered (National Development Plan, 2013).

From the foregoing discussion, it is clear that numerous entrepreneurship opportunities can benefit the South African economy, in both the service and production sectors. South Africa is a country of approximately 60 million people, which provides a large customer base for businesses to grow (Mahanjan, 2014). It has a GDP of 1.6% on a 5-year scale measure but due to political and governmental issues, there has been a decline in growth. However, the economy holds numerous opportunities for start-ups for new and extant entrepreneurs in the business sector (Derera, Chitakunye & O'Neill, 2014).

2.4 TYPOLOGY OF BUSINESS OPPORTUNITIES

MakeInBusiness (2020) identifies the types of business opportunities available for entrepreneurs both nascent and established that could be accessed once students and youth self-efficacy have been developed by engaging all academic disciplines in entrepreneurship development modules.

Off-Grid Solar. This is an entrepreneurship opportunity that is essential to the economy and that is open to investors and entrepreneurs at this time of energy transition. The market is open for renewable energy sources (solar energy) that can be developed into a multi-billion-rand industry. The South African Renewable Energy Council (SAREC) is enhancing and building markets for renewable energy to become the main source of energy by 2022 (SAREC, 2019).

Healthcare Access. Lack of access to healthcare services has made the healthcare sector competitive and provided business opportunities that could be taken advantage of by would-be entrepreneurs to engage in healthcare delivery services such as on-demand ambulance facilities, on-demand doctors' advice and other health related applications. The fact that few of the South African cities are surrounded by ocean open up business opportunities for entrepreneurs in the health sector to reinforce healthcare services through the Covid-19 pandemic global experience.

Human Capital. One of the recently emerging business opportunities is training, coaching or educating to bridge the education gap within South Africa (Crampton, 2019). This is an avenue for skill and knowledge development, as South Africa's global ranking with regard to education and computer literacy is 56th out of 60 countries that were surveyed (Jeff, 2019). This opportunity for a business start-up could be long term and profitable.

Delivery Services. Delivery service is a lucrative business opportunity that was particularly well received during the Covid-19 pandemic. Although the market for such businesses is competitive, the service was crucial to the sustainability of lives and businesses during the pandemic.

Farming. South Africa is blessed with an abundance of arable land all over the country that allows farmers to thrive. Apart from farming itself, several business activities are associated with farming. The country has one of the six floral kingdoms in the world with the ecosystem supporting 9 600 plant species, 70% of which cannot be found anywhere else on the planet (Cherry & Lewton, 2019). This provides an opportunity for research into the market and the economic demand focusing on how it can develop agriculture. Entrepreneurs or investors can grow produce if there is a demand.

Laundry Services. This is also one of the lucrative business opportunities in South Africa that do not require additional skills to initiate except for a few requirements. It is a promising business venture that could be carried out at a domestic level with a healthy profit margin, depending on the financial capability of the entrepreneur.

2.5 ENTREPRENEURSHIP ENABLERS IN SOUTH AFRICA

Entrepreneurship enablers are essential for entrepreneurs and the sector's development generally. They are simply the forces behind the scenes of the creation, growth and development of a business and social regeneration. They are known to entrepreneurs as the factors and initiatives that would not have occurred without their intervention (Thompson, 2010). An 'entrepreneurship enabler' works with and supports a potential entrepreneur and makes it possible for that person to initiate and sustain a venture; they affect all aspects of business regeneration, such as culture and infrastructure. Various factors are regarded as entrepreneurship enablers, including those discussed hereunder.

Educational intervention. According to the GEM report (2015), in South Africa, the low rate of entrepreneurship among the youth is affecting the entrepreneurship sector. Education is an important intervention and as an enabler can ensure that entrepreneurship can be learnt. Graduates will need to be positioned in a context that is conducive to entrepreneurship, as this will shape their attitudes and motives and make them aware of both the constraints and opportunities that they will encounter in the future as entrepreneurs. It is worth noting that a

highly skilled and knowledgeable entrepreneurial graduate will enhance the country's economic growth and development.

Investors. Numerous nascent and established entrepreneurs depend on the presence of large corporations and companies for their sustainability and receive informal assistance from other entrepreneurs. The large corporations provide new business opportunities or gaps for exploitation by entrepreneurs either in the form of trade ties, services or franchises. Investors are enablers that serve as network providers and collaborators in the sector and can become role models to nascent entrepreneurs.

Infrastructure and business incubation. This is a major factor that is usually developed to affect culture and is essential for regeneration, which cannot occur without the assistance of an entrepreneurship enabler that builds the infrastructure projects and other initiatives to grow and develop entrepreneurs. Business incubation in South Africa, several small businesses are faced with crises in the entrepreneurship sector because entrepreneurs lack the requisite skills to successfully initiate new ventures (Thwaites, 2017). Some of these businesses fail or disappear within five years of inception because they did not pass through an incubation period that serves as an enabler for success.

Public sectors and agencies. Government agencies and departments such as Local Entrepreneurship Development (LED), Black Entrepreneurship Empowerment (BEE) and the Small Enterprise Development Agency (SEDA) that fall under the local, regional and national spheres of government serve as entrepreneurship enablers in South Africa. In these agencies and departments, policy changes and simplification of business registration and other documentation, affirmative action, tax procedures, micro-lending, plans and programmes are in place to serve as enablers of entrepreneurship development.

Gender-based enablers. A limited number of support programmes have been initiated to encourage female entrepreneurs, such as community seminars and workshops, support with funding and awareness campaigns that explain the rules and regulations applicable to operating in the sector. Financial education and financing schemes to access loans are provided to sustain their businesses. This is consistent with the global trend, although the operating systems may vary across national boundaries (Faisal, Jabeen & Darus, 2016).

Information flows for micro-entrepreneurs. This has to do with various types of support from the government and media organisations in terms of entrepreneurship information provision and dissemination, market awareness, marketing, raw materials availability, pricing and networking with collaborators and investors. These enablers could assist the ecosystem to develop, as they have been identified as enabling forces for support, growth and the development of potential among nascent and established entrepreneurs. These enablers will encourage and support them, either to identify opportunities, mentor or educate them to venture into the ecosystem. This study focused on training students on the constructs of ESE to activate their orientation and act on their intention with the support of the enablers that were discussed.

Although there are several entrepreneurship enablers for entrepreneurship to thrive in South Africa, various challenges have been identified that hinder the growth and development of youth and potential entrepreneurs, as discussed in the ensuing section.

2.6 ENTREPRENEURSHIP CHALLENGES IN SOUTH AFRICA

Scholars have identified business challenges from various perspectives. Maleka and Fatoki (2016) posit that the most significant challenge is when the business venture is no longer economically viable and there is no sense in continuing. Legally, it simply means liquidation but practically, it means halting the business operation permanently. Challenges in the entrepreneurship ecosystem affect the system as a whole and the education sector is particularly affected where human capital is developed. The challenges include outdated curricula and lack of technical know-how that adversely affect the quality of the graduates that are produced.

In South Africa, it is difficult to develop a high level of ESE that can inform entrepreneurial action, mostly because of environmental challenges and a discouraging outlook that leads to seventy to eighty percent of SMMEs failing within five years of start-up (Olawale & Garwe, 2010). Although these authors' findings are generally accepted as fact, Nyamuda (2018) argues that most of the figures upon which these results were based were estimated and included owners retiring and businesses that ceased operation for a variety of reasons.

Numerous factors have been attributed to business failure in developing countries such as South Africa. Chimucheka (2014) posits that internal and external environments and controllable and uncontrollable factors are responsible for the high failure rate of businesses, which can be seen from the perspectives of the poor quality of education and training (Steenekamp, 2013), lack

of skilled manpower (Horwitz, 2013), insufficient managerial skills (Fatoki, 2014a; Van Scheers & Makhitha (2016), inability to access funding (Agwa-Ejon & Mbohwa, 2015), inaccessibility of markets (Bureau for Economic Research, 2016), lack of access to technology (Abor & Quartey, 2010) and lack of support structures (Gwija, Eresia-Eke & Iwu, 2014). Several of these factors are discussed hereunder.

2.6.1 Lack of quality education and training

One of the main challenges facing entrepreneurship in developing countries, including South Africa, is the lack of quality education and training. The South African traditional educational curricula and policies have failed to address the salient needs of the economy and this adversely affected growth and sustainability in the sector (Mutanda, Lekhanya & Moyo, 2018). According to these authors, the business and entrepreneurship training content is confusing and does not produce the expected results. Despite the various government efforts and support for entrepreneurship development programmes in South Africa, these efforts have not translated into an increase in the number of entrepreneurship start-ups (Vanevenhoven, 2013). It has been observed that one of the major challenges in the sector is the lack of skilled entrepreneurship graduates from higher institutions of learning (Herrington & Kew, 2010) and this can be attributed to the poor quality of the modules taught as well as theoretical and traditional classroom teaching being employed rather than a hands-on learning application (Steenekamp, 2013). This has led to an increase in unemployment among graduates (Oluwajodu, Greyling, Blaauw & Kleynhans, 2015). This development has underscored the need to introduce and develop entrepreneurial universities in South Africa (Mutanda et al., 2018).

2.6.2 Lack of skilled manpower

The development and growth of any nation depend on the quality of the available manpower. However, in South Africa, there is a high rate of unemployment and a shortage of skilled manpower in all sectors of the economy (Horwitz, 2013). Concerning the shortage of skilled manpower, Horwitz (2013) opines that South Africa is faced with a 40% shortage of artisans, which translates to one engineer to every 3 200 people compared to countries such as China and India with 1:150 ratios. This identified shortage of skilled manpower has contributed significantly to the low growth and development of SMMEs in South Africa. This is a result of the high premium, above market wage placed on scarce skills by formal organisations and the private sector (Horwitz, 2013) that cannot be matched by SMMEs and other entrepreneurial

activities (TEA). This problem is compounded by the lack of entrepreneurial institutions, inferior education and training, inadequate curricula content and a shortage of qualified academics to impart the skills necessary to develop youth ESE and IEO (Mutanda et al., 2018).

2.6.3 Inefficient managerial ability

Inability to differentiate between a business administrator and an entrepreneur remains a major problem in the practice and this is one of the main causes of business failure in South Africa (Radipere & Van Scheers, 2005; Fatoki, 2014). This challenge has led to a lack of managerial skills and experience and a poor attitude among business stakeholders (Fatoki, 2014). A lack of adequate managerial skills required to run a business is one of the main causes of business failure. Other causes are lack of education, access to markets and business information (Radipere & Van Scheers, 2005). Scholars have found that a lack of proper managerial skills tends to lead to business failure within the first five years after start-up. In a study conducted by Choto, Tengeh and Iwu (2014), it was argued that SMMEs' sustainability and financing could be improved if key managerial skills were applied in the business. Martinez-Coneza, Soto-Acosta & Carayannis (2017) also noted that this can be achieved if the government provided the required support in building managerial capacity throughout the business sector. All the issues raised pertaining to inefficient managerial skills can be attributed to either a lack of relevant education (Chimucheka, 2014) or poor-quality education among the youth (Steenekamp, 2013).

2.6.4 Lack of financial education

Many potential entrepreneurs in South Africa are not financially literate and this has hindered their access to funds coupled with an inability to meet the banking loan requirements due to a lack of business finance education (Lekgotla, 2019). These are significant challenges facing SMME development in the country. Agwa-Ejon and Mbohwa (2015) posit that lack of access to finance and funding are the most significant causes of business failure and early closure. Mamabolo, Kerrin and Kele (2017) opine that the financial operating environment is not sufficiently supportive of entrepreneurs. In a study undertaken by Choto et al. (2014), it was reported that 60% of entrepreneurs were faced with financial challenges and 75% of all financial and loan applications were rejected by the banking sector as a precautionary measure (Agwa-Ejon & Mbohwa, 2015), which prevented nascent entrepreneurship from developing. Berg and Fuchs (2013), in their research pertaining to small business financing, asserted that

only 8% of the total number of entrepreneurship financial applications were approved for business support by the banks in South Africa.

This study believed that entrepreneurs who are willing to take out a loan will need to improve their financial literacy and education so that the financial management of the business will not be a challenge. Nascent entrepreneurs should be business ready by fulfilling all the financial or loan requirements specified by financial institutions (collateral and back up documents), while entrepreneurship education, training and workshops are suggested for other types of management training (Fatoki & Asah, 2011).

2.6.5 Inaccessible markets

The inability of entrepreneurs to access relevant markets is another significant challenge in developing economies and this has no doubt rendered numerous businesses impotent and resulted in the failure of small businesses (Davis, 2016).

To bail the entrepreneurs and businesses out, the government needs to support the sector by enforcing the regulatory policy associated with access to markets, and put in place efficient logistics systems and promote market-support agencies (George, Corbishley, Khayesi, Hass & Tihanyi, 2016). However, this should not be the responsibility of the government alone. Eresia-Eke (2013) suggests that established businesses should be linked with the SMMEs and building public sector markets through market diversity and procurement. A lack of entrepreneurship education has been identified as a significant hindrance to market accessibility by entrepreneurs that lack the skills and information to present their goods and services on international markets or network for healthy competition, experience, quality control and access to global partners (Abor & Quartey, 2010).

Free trade zones and international markets should be encouraged by the government to enable entrepreneurs to access the relevant markets and partners and create different types of business and jobs for the unemployed youth in the country. To promote market efficiency, entrepreneurs and the youth should be encouraged to engage in market surveys with feedback and attend seminars and workshops to gain knowledge and information. This will build their ESE and IEO and encourage them to engage in ethical business practice.

2.6.6 Lack of access to technology

The emergence of the Fourth Industrial Revolution has introduced another dimension to business, production, manufacturing and services globally and for any SMME and established business to stand the test of time, it must have access to relevant technology. Technology is an important factor in any business today and is crucial in the development of SMMEs. Technology can assist in improving service and the timely delivery of goods and services (Olawale & Garwe, 2010). The challenge of access is due to a lack of funding to acquire appropriate technology (Abor & Quartey, 2010) and the technical know-how (technicians and engineers) to put the technology to good use. The inability of most entrepreneurs to harness the global village for business connectivity and the internet for information is a major setback (Cant & Wiid, 2016). Youths should be able to incorporate technology into their businesses to create jobs and introduce innovation and creativity into the business.

2.6.7 Lack of support structures

The numerous support structures that have been put in place by the South African Government for the development of entrepreneurship, both in the SMME and education sector, have not translated into the provision of employment opportunities or eradicated unemployment in the country (Sambo, 2015). The reason for this is connected with a lack of awareness and support for entrepreneurship in South Africa and this is one of the main challenges facing the youth of the Western Cape in particular (Gwija et al., 2014). This informs the suggestion that awareness should be made available by government agencies through various means (roadshows, radio and television stations) to educate people about the available support systems (Fatoki & Chindoga, 2011). For entrepreneurship to thrive, there must be a proper understanding and clarification of the entrepreneurship concept and momentum must be maintained by means of education and training.

Considering the foregoing discussions and with particular reference to the South African entrepreneurship ecosystem, poor ESE is a challenge that affects the sector. This research sought to address the challenge through a systemic action learning action research training project to develop students' ESE and change their individual entrepreneurial orientation. This was an opportunity to apply the nondualism philosophy to develop youth both individually and collectively to act on their entrepreneurial dream or idea with the application of related systems. The training was employed to transform the students progressively with the application of

Theory U and the study examined behavioural changes at periodic intervals during the longitudinal study. The study sought to train the students to master their ESE to gain the skills and ability to accomplish entrepreneurial tasks to become self-reliant and employers of labour. For entrepreneurship to thrive, there must be an enabling operating environment where acceptable standards and regulations are taken into consideration for practical application because entrepreneurship is perceived to be an economic tool that enhances and renews economic activities positively at various levels of the economy and contributes to the economy by means of innovative products and services (Karodia, Soni & Shaikh, 2014; Lackeus & Middleton, 2015).

The next section presents a discussion of the subject of the study and how it aids students' entrepreneurial learning and development during and after studies.

2.7 CHALLENGES OF UNEMPLOYMENT IN SOUTH AFRICA

Unemployment is a global challenge affecting the world's economy and this can only be addressed by putting in place mechanisms to check its growth. Different countries experience the menace of unemployment in their societies in different ways. Naidoo (2012) describes unemployment as 'active and partially unemployed individuals' who are actively seeking employment but are unable to secure a job. This group of individuals is referred to as the active unemployed, while those engaged in part-time or voluntary services are partially unemployed because full-time employment is not available.

Based on the International Labour Organisation (ILO) Convention, Ehinomen and Afolabi (2015) categorise unemployment into three groups, namely: a population of people that are active and willing to be engaged in work but have been unable to secure employment; those who voluntarily depart from their employment for career progression and those who have lost their employment for a variety of reasons. Femi, Dada & Ayibaabi (2015) assert that unemployment is a situation in which an able workforce comprising a set of individuals in a society that is willing to be employed or provide their services for wages cannot do so because there are no jobs for them.

Youth unemployment is of significant concern to international communities and its implication on developing nations is felt in slow socio-economic growth and increasing crime rates (Asamu et al., 2015). Oduwale (2015) and Olorundare and Kayode (2015) posit that the unemployment

rate is more conspicuous amongst high school dropouts and graduates because they have often failed to channel their strength towards economic development and business creation. A major concern for the South African Government is unemployment among the youth and the need to direct efforts towards the development of SMEs because of their implication for the country's GDP. Scholars are concerned about inexperienced students graduating from universities every year without job prospects and the continuously rising rate of unemployment in the country (Akpan & Etor, 2013). The youth unemployment situation in South Africa is a time bomb waiting to explode and the main casualty may likely be the youth, as there has been no significant growth in employment in the country since 2016 to 2020. The unemployment rate dropped to 23.3% in the second quarter of 2020 from 30.1% percent in 2019. This was the lowest level recorded since the second quarter of 2009, as the Covid-19 pandemic period distorted labour force numbers with few job seekers searching for employment. The number of unemployed dropped by 2.8million to 4.3million and the number of employed citizens dropped by 2.2million to 14.1million (statistics South Africa, 2020), the highest since the survey began in 2008. There is no doubt that the menace of unemployment that is affecting society is caused by a lack of entrepreneurial skills, new business creation strategies among the youth population and the higher educational institutions curricula that do not teach critical thinking and creativity. Therefore, drastic measures need to be taken to develop and encourage the youth to be self-reliant and to create sustainable ventures to avert a future rise in the unemployment rate in South Africa.

Figure 2.1: South Africa's Unemployment Rate (2017-2020)



Source: Tradingeconomics.com Statistics South Africa (2020)

The unemployment rate depicted in Figure 2.1 reveals that with the development and growth in the education sector and the annual production of graduates, government provision for employment is far below the population of graduates and the youths are not thinking out of the box to explore other means of employment such as entrepreneurship.

2.8 ENTREPRENEURSHIP POLICY IN SOUTH AFRICA

The introduction of a new business in a society must be achieved in accordance with the relevant rules and regulations pertaining to the start-up, operation, and dissolution thereof. The structured policy and regulations will guarantee good results that are socially optimal and will possibly improve the lives of all stakeholders (King, King & Roberts, 2013). Therefore, the state's intervention blueprint for growth through redistribution, a Keynesian idea for redistributing wealth, promotes growth that in turn addresses the needs of the poor in terms of health, housing, education, and quality of life. This calls for reengineering the financial sector focusing on the economy and inflationary financing to satisfy society's basic needs.

It must be noted that the entrepreneurship policy domain is extensive in the economic development arena and the development thereof in the aftermath of 1994's successful democratic election in South Africa paved the way for various national policies to restructure economic and government sectors by means of initiatives such as the reconstruction and development programme (RDP). Some of the RDP's main socio-economic policy objectives were the establishment of a more equal society and strengthening the new democracy for all South Africans. The RDP outlines five major policies but recorded only limited success in establishing a social security welfare system (Cameron, 1996). The failure of the RDP to stimulate more rapid economic growth led to the introduction of the macroeconomic policy framework known as Growth, Employment and Redistribution (GEAR) to cater to society's investment needs. GEAR dated back to 1996 and was viewed as the economic policy to address the structural problems of the apartheid economy that were inherited by the new government. This policy took on the difficult task of restructuring South Africa's economy following the global trend, by promoting investment that would create employment and guarantee better conditions for the implementation of the National Development Plan (Vision, 2030). While this policy was successful in the achievement of macroeconomic objectives, its shortfalls were in the social challenges of the nation, especially in poverty reduction and employment creation. Unemployment among the youth prevailed and those that did have jobs earned low wages,

which adversely affected economic growth and led to the government formulating development strategies.

With the nations of the world struggling to emerge from the prevailing economic crisis, venture and job creation topped the policy agenda of policymakers around the world. Entrepreneurship education has seen exponential growth globally and inclusion in higher education institutions (Lackeus, 2015; Markina, Safonov, Zhylinska, Gaidai & Kahanov, 2019), although training in this field is offered in only approximately 1 200 business schools in the United States of America. Entrepreneurship education has thus become a development challenge for promulgating industrial and education policy in numerous countries (Nicita, Ognivtsev & Shirotori, 2013). These challenges are not limited to creating more jobs but also the provision of an enabling environment for businesses to strive to enhance economic growth. This requires a strong policy environment that will address issues such as access to finance, business training and learning, regulations, entrepreneurship, and innovation (Agupusi, 2007). The justification for this is the distortion caused by the apartheid regime in business, which needs to be corrected by the democratic government (Smallbone, 2010).

Accelerated and Shared Growth Initiatives for South Africa (ASGISA) replaced GEAR in 2005 and was envisioned to reduce poverty in the country by 2010 and reduce unemployment to half its original level by 2014, from 28% in 2004 to 14% by 2012 (Mlambo-Ngcuka, 2006). Sound policy implementation was to be at the forefront of economic policy decisions. Unfortunately, unemployment remained rampant, and millions of people remained poverty stricken, workers were oppressed and inequalities remained deep-rooted in the system. The government then introduced the New Growth Path (NGP) (Habib, 2010).

New trends that led to the introduction of new regulations and policy globally exposed flaws in the implementation of former policies. The government's long-term plan for socio-economic development was introduced in 2013 as the National Development Plan (NDP) and set economic recovery policy targets of eradicating poverty and bridging inequality in South Africa by 2030. This was in response to the policy framework suggested by the United Nations Conference on Trade and Development (UNCTAD) that countries develop and promote entrepreneurship policy, awareness and network building, entrepreneurship education and skills, research, and development (R & D) technology transfer and a regulatory environment (Kominos, 2009).

South Africa has strength in policy formulation, but a lack of policy implementation is a challenge throughout all the various sectors of the economy (Van der Linde, 2014). It is instructive to note that the NDP focuses on SMMEs as the main drivers of continuous economic growth and how this sector affects HEI's development, entrepreneurial policy, and entrepreneurial education regarding the development of the ESE and IEO of the country's youth. This is discussed in the ensuing section.

2.9 HIGHER EDUCATION INSTITUTIONS IN SOUTH AFRICA

Higher education institutions (HEIs) are institutions that offer and award advanced degrees in various disciplines (Benjamin & Dunrong, 2010). HEIs are established to promote nation building and development and encourage wider participation and the inclusion of previously disadvantaged people in advanced education (Mzangwa & Dede, 2019). The establishment of higher institutions of learning in South Africa is traceable to the movement of non-government organisations and national protest by the historically disadvantaged citizens to transform the education system.

The foundation for higher education institutions was laid in the Cape of Colony in South Africa in the third quarter of the 19th century in conformity with state laws for the provision of secondary and post-secondary education. The first higher institution of learning was known as the South African College and was established in Cape Town in 1829 to prepare students for matriculation and higher education examinations at the University of London, which was the first public university (Schoole, 2006). This public university paved the way for more institutions of higher learning, as it was unable to serve the vast numbers of people that desired higher education. Three additional colleges were established, namely Diocesan College in Rondebosch (1848), St. Andrews College in Grahamstown (1855) and Victoria College in Stellenbosch (1866), also to prepare students for admission into European Universities (Behr, 1988). The establishment of these institutions led to the cross-border movement of students to European Universities, as these institutions prepared students for entrance into London University and other European Universities (Schoole, 2006).

It is instructive to note that the University of Cape of Good Hope that was established in 1813 was modelled on the University of London and was not allowed to teach; it was established to plan syllabuses, conduct examinations and award degrees for courses taught in the colleges (Booyesen, 2015). In 1916, an Act was formulated to put university education in the proper

perspective and this led to the transformation of the South African College into the University of Cape Town and Victoria College into the University of Stellenbosch in 1918 and 1916 respectively (Banda & Mafofo, 2016). The establishment of these higher education institutions was within the political landscape of white minority rule with prevailing racial divisions in the political terrain. In 1959, the Education Act reconfigured the higher education sector and prevented the admission of blacks into “whites only” universities and black universities were consequently established but could not compete with the white universities in terms of quality (Walker*, 2005). The Act was gazetted stipulating that no blacks would be allowed to attend the same university as whites except in special circumstances with the approval of the Education Minister (Jansen, 2004). This discriminatory principle was not supported by policy or legislation because prior to this Act, whites were given preferential treatment over blacks, restricting the latter from enrolling in white universities. The racial segregation that the national party executed from 1948 to 1984 legitimised racism. This resulted in the minimal enrolment of blacks in the white universities.

The drastic decline in the enrolment of black students in the universities was estimated at 50% after the promulgation of apartheid legislation but in 1951 the government established a medical school that would benefit the blacks (Naidoo, 2002; Cooper, 2015). Agitation for transformation, racial inclusiveness, equity and the establishment of higher education institutions led to the ban of five political opposition leaders from executing their rights by the

apartheid government. These people were later incarcerated and became citizens of a homeland known as a “Bantustan” (Kgatla, 2013; Gibson, 2006).

The Bantustans were seen as economically less productive regions of the country and the creation of these homelands was a move by the National Party to strategically discourage blacks from living close to whites (Kgatla, 2013) and this aided the promulgation of the University Act of 1959, which established white only Universities that prohibited blacks’ admission and resulted in the establishment of the Universities of Durban Westville, Western Cape, Zululand, and the North. To support these universities, so-called black universities were established in the “self-governing states” known as Transkei, Bophuthatswana, Venda, and Ciskei (The TBVC states). Ten universities historically known as black universities and fifteen technikons were established at the peak of apartheid, seven of which were later converted to universities of technology in 2003 (Farrington & Palfreyman, 2012).

The period 1990 to 1993 saw the end of the apartheid era because of a series of national protests and movements that ushered in the democratic government of the African National Congress (ANC) in 1994. This democratic government inherited a desegregated political landscape and an inefficient higher education system that had twenty-one universities and fifteen technikons with different internalisation policies (Farrington & Palfreyman, 2012n). The focus of this government was the transformation and development that was enshrined in the Education Bill of Rights for children and youth (Bunting, Sheppard, Cloete & Belding, 2010). It must be stated that the dismantling of the apartheid system was initially ignored by higher institutions of learning because of white supremacy until the National Council for Higher Education (NCHE) was introduced by the democratic government.

The discrimination of the apartheid period that prompted the establishment of black universities continued in the South African education system where the traditional white South Africans perceived themselves as more qualified than the blacks. This was evident in the side-lining of blacks when travelling to the United Kingdom for higher degree studies (DHET, 2012; Mzangwa & Dede, 2019). As a result of discrimination, the white universities were advantaged regarding high-quality teaching, adequate funding and quality assurance initiatives during apartheid whereas the black universities remained disadvantaged (Mzangwa & Dede, 2019). Hence, the invitation by the national quality assurance board to bridge the gap between the two sets of universities for national transformation during the era of democracy in the country.

The new democratic government cannot ignore the education sector where the advantaged and disadvantaged, the elites and the masses meet and develop for the nations' transformation. Students and political movements against apartheid rules considered the need for reputable higher education institutions with all-encompassing access, affordable knowledge, high curricula standards, excellence and value (Reddy, 2004; Langa, Ndelu, Edwin & Vilakazi, 2017). Considering the foregoing discussion, a vision of higher education policy known as the National Qualification Framework (NQF) was conceived to regulate, organise, arrange and recognise education qualifications from lower grades to higher institutions. This was in a bid to ensure equal rights and access to all in the era of the reconstruction and development programme (RDP) for transformation, which was the main objective of the National Council for Higher Education (NCHE) (Adams, 2006).

Universities and technikons were established to offer a lasting solution to national issues such as the inherited inequalities entrenched in massification, cultural inefficiencies and socio-economic challenges. Such HEIs will invariably produce skilled, competent, and innovative graduates that are transformative, productive citizens for African development dynamism (OECD, 2019). The establishment of HEIs was notably effective regarding students' enrolment for study in the various disciplines, the quality of students' performance with regard to research output, employee engagement and gender equality and funding. Arguably, massification has not occurred because there was a significant decline in the rate of enrolment in 1998 and 1999; the traditionally black universities' enrolment decreased by 14% from the time of establishment to 1999 (Jansen, 2001) in adherence to the White Paper 3 and the Green Paper of the Department of Higher Education and Training (DHET) guidelines of 2001 on how higher education would be regulated and the distribution formula for public funds to these institutions.

Table 2.2 indicates the headcount enrolment in public higher education by race, as reported in the 2001 national development plan.

Table 2.2: Headcount Enrolments in Public Higher Education by Race, 2000-2016.

		2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
African	Female	30685	35489	38974	41093	39567	36461	38310	45089	47357	53931	57592	64529	63163	52713	55553	54966	57043
	Male	27679	31061	34213	36507	36258	32214	32932	38451	37441	41348	43190	46369	46761	43067	45403	45117	48020
	Total	58364	66550	73187	77600	75825	68675	71242	83540	84798	95279	100782	110898	109924	95780	100956	10083	105063
Coloured	Female	3355	3826	4832	5306	5204	4705	5564	5551	5609	6422	6271	6485	5654	5870	6098	6158	6362
	Male	2837	3103	3750	4097	3932	3541	3643	3645	3624	4066	3956	3889	3627	3599	3750	3539	3826
	Total	6192	6929	8582	9403	9136	8246	9207	9196	9233	10488	10227	10374	9281	9469	9848	9697	10188
Indian	Female	3913	4187	5146	5212	5485	5462	5116	4372	4691	5090	4958	4749	3587	4123	5085	4125	3280
	Male	3153	3546	4004	4055	3949	4153	3611	3431	3596	3748	3521	3375	2496	2843	3604	2954	2612
	Total	7066	7733	9150	9267	9434	9615	8727	7803	8287	8838	8479	8124	6083	6966	8689	7079	5892
White	Female	13944	15419	17151	16770	16507	15120	16367	15842	14942	15992	15551	15177	13672	13291	13267	12907	11490
	Male	12529	13648	14875	14467	14921	13655	13924	13769	12716	13438	12848	12356	11052	10579	10264	10000	9217
	Total	26473	29067	32026	31237	31428	28775	30291	29611	27658	29430	28399	27533	24724	23870	23532	22907	20707
total	Female	51897	58921	66103	68381	66763	61748	65357	70854	72599	81435	84372	90940	86076	75997	80003	78156	78175
	Male	46198	51358	56842	59126	59060	53563	54110	59296	57377	62600	63515	65989	63936	60088	63021	61610	63675
	Total	98095	110279	122945	127507	125823	115311	119467	130150	129976	144035	147887	156929	150012	136085	143024	139766	14180

Source: DHET (2019)

Table 2.2 presents the enrolment figures and development of black universities to support the prediction of NCHE that the universities' enrolment would increase by 17% of the population to 30% by 2005. It must be noted that after this period, the enrolment figure increased continuously from 2008 to 2013 as reflected in the table. The black universities were meant to develop human capital from low skilled to become the "knowledge economy" that would transform and grow the labour economy thereby favourably influencing entrepreneurial practices. A considerable amount of money was invested in education by the South African Government (19.7% of the total budget in 2013), which is high by international standards. As reflected in the enrolment from 2008 to 2013 as shown in Table 2.4, the discriminatory education system remained and failed to produce the expected outcomes (Spaull, 2013).

Table 2.3 presents the post-school education and training numbers with regard to enrolment and graduation as of 2016. This data was released in 2018. This is perceived to constitute development based on the national development plan.

Table 2:3: Post-school education and training typology and enrolment

Categories	Number	Enrolments	Graduation	Percentages
Public Higher Education Institutions	26	975.837	203.076	50%
Registered Private Higher Education Institutions	123	167.408	39.686	7%
Technical and Vocational Education and Training	50	705.397	111.460	31%
Registered Private Colleges	279	168.911	24.032	Shared with category 2
Community Education and Training Colleges	9	273.431	28.024	12%

Source: Department of Higher Education and Training (DHET, 2018)

Table 2.3 reveals that South African students' enrolment in higher education institutions is insufficient to meet the country's needs and expectations for qualified graduates in relation to the priority set for education. According to Macha and Kadakia (2017), this is an indication that the educational system is still failing in South Africa, a country that was ranked 75th out of 76 countries in a 2015 Organisation for Economic Co-operation and Development (OECD) ranking. The country has severe skills shortages and poor basic education outcomes despite the high percentage of the budget allocated to education (OECD, 2020).

It is worth noting that the failing education system has not changed considerably because the wherewithal to implement or execute the relevant policies is still missing (Department of Education) (DoE, 2008). Decades after apartheid, little has been achieved in terms of universities embracing alternative ways of imparting knowledge, despite the new policies and framework that have been formulated to address equity, equality, transformation, and change. Badat (2010) argues that a proper restructuring of the education sector is inevitable in South Africa for the envisaged transformation to be effective. This requires additional education policies to stabilise the sector (Shay, 2017), as discussed in the ensuing section.

2.10 HIGHER EDUCATION INSTITUTION POLICY IN SOUTH AFRICA

"Policy" is a structured plan of action for an individual, group or institution within a given society that has identified a gap or an idea that the policy is intended to address to achieve a set goal or standard (Mzangwa & Dede, 2019). Hanekom & Bain (1990) define a policy as a structured plan of action to serve as a rule when assigning the necessary resources to achieve a societal target or standard. Policies are how objectives can be achieved.

The historic promulgation of higher education policy in South Africa in 1994 was informed by the "global best practices", which has become an international trend amongst policymakers across the world (Graham, 2016). This development was indispensable as far as education was concerned at the time because of inequalities in the education system and governance of South African HEIs. The transition from apartheid and colonial rule to indigenous government affected all aspects of life in South Africa and the government was required to plan for a new era (Robinson, 1997; Levin, 2017). In the last two decades, South Africa had experienced several education policy changes, particularly with regard to higher education institutions; policy and practice that has transformed the relationship between the government, the education sector and the governed. These decades experienced a period of rapid growth and change in the South African higher education system. This intensive change redefined the location and mission of HEIs by analysing methods of growth, diversification, and integration and how these factors affect individual learning (Mzangwa & Dede, 2019).

President Mandela's time in office, which began in 1994, was a time of vital and organised reconstruction and development programmes. The education sector included several commissions that were tasked with investigating and advising on the transformation of the education system. These commissions included the National Council on Higher Education

(NCHE) that was established in 1995 and the National Council on Education (NCE, 1997). The former presented a Green Paper on Higher Education in 1996 and in 1997 drafted the White Paper 3 on Education. This White Paper laid out the framework for change in HEIs' planning, management, and financing, which must be a nationally coordinated plan that will put an end to the fragmentation, inequality and inefficiency that characterised past administrations (Matshoba, 2019).

Higher education is a sector that plays a pivotal role in transforming and restructuring the governance system to address the inequality in governance and the education, economic, social, and cultural sectors. The country's post-apartheid transformation policy identified key challenges facing the higher education system that was outlined in the White Paper (Badat, 2010); "to redress past inequalities and to transform the higher education system to serve a new social order, to meet pressing national needs, and to respond to new realities and opportunities" (Cloete, 2014; Mathekga, 2012). South Africa was faced with several challenges in executing this plan successfully by means of the White Paper and the reconstruction and development program (RDP) strategies. For example, integration into the competitive arena of international production and finance brought about a rapid change through what is referred to as "globalisation", which transformed people's work life, consumption, and sensitivity to become a "knowledge society" (Aslam, Jaumotte, Eugster, Ho, Osorio-Buitron & Piazza, 2018). Based on the transformation framework, the government's vision for higher education is one where all South Africans will enjoy equitable access and opportunity for success in developing their skills and knowledge through higher education.

With this plan, potential students in South African higher education institutions will be provided with opportunities to develop their creativity and innovation pertaining to entrepreneurship to build the economy through people empowerment for future jobs. The plan also aims to remove all forms of discrimination and restructure teaching, learning and research to cater to national growth and employment to meet the challenges of globalisation. The plan was also aimed at promoting human rights by sensitisation of the practice of effective critical discourse and creative thinking and improving all forms of knowledge and scholarship acquisition to ensure sound and standardised academic success. This made it imperative for universities to align with the project of transformation and enrichment of people and society, hence the promulgation of the HEI policy that necessitated the development of established and new universities (Bawa, 2012). It is also because of the centralised and

authoritarian style of the public policymaking process and the importance and role of higher education in national economic efficiency in the global knowledge-driven economy that the 1997 White Paper on Education was released (CHE, 2004).

The White Paper on Higher Education was formulated for a variety of social purposes, as described in the ensuing list.

- To educate the youth about the emerging knowledge-driven economy and provide for the labour market's needs and national development (DoE, 1997).
- To guarantee quality knowledge production and acquisition and the use of such knowledge for the benefit of society.
- To ensure that the country's needs are met and to assist other African countries.
- To ensure that human rights are upheld and to build an intellectual and cultural life of emerging and changing economies.

The main aim of this was to conform to establish higher institutions of learning, which was to develop the critical skills and knowledge needed for the development of the nation through research and development for transformation (DoE, 1997). It must be stressed at this juncture that considerable efficiency has been identified in the South African production of knowledge and the dissemination thereof in higher education for the development and transformation of the economy; in the region and the continent (Badat, 2010).

2.11 CONCEPT OF ENTREPRENEURIAL EDUCATION

The Oxford Dictionary (2019) defines education as the theory and practice of teaching or information about training in a subject. Entrepreneurship education is the teaching provided through directives and experience in the creativity and management of a small business (Kruger, Millard & Pretorious, 2005). Kirsten (2018) views entrepreneurship education as motivational, entrepreneurial, and business skill training while the Consortium of Entrepreneurship Education (Chimucheka, 2014) views it as five distinct stages of development, namely competence; awareness; creative application; start-up and growth.

Entrepreneurship education can be traced back to 1938 when Shingeru Fijii taught in the field at Kobe University in Japan. The effect of Shingeru's teaching of entrepreneurship was that it introduced the art at Kobe University (Gautam & Singh, 2015). At Harvard Business School in the United States of America, Myles Mace championed the introduction of entrepreneurship

as a taught course and this resulted in the universal recognition of entrepreneurship education within four decades (Gautam & Singh, 2015). It must be emphasised that Africa as a continent is lagging in the acceptance and introduction of entrepreneurship as a taught course in education institutions. This challenge drives many countries to direct their education departments to put in place policies that will establish and promote entrepreneurship as a discipline and effect adjustments of curricula to accommodate the subject despite it being a relatively new discipline and resources being limited.

Entrepreneurship is a trend that has gained momentum in the last two decades in sub-Saharan Africa and globally (Alves, Fischer, Schaeffer & Queiroz, 2019) but the failure of the youth and graduates to assume the risk of entrepreneurship can be attributed to the lack of entrepreneurship capacity building on the part of higher institutions of learning. Entrepreneurship has generated much debate among scholars and authors about whether or not entrepreneurs are born or made (Kerr, Kerr & Xu, 2018; Aderibigbe, Mpondo, Gcaza & Chimucheka, 2020). This study took the stance that entrepreneurship can be taught, and that entrepreneurial behavioural attributes and skills are enhanced through learning, which is known as entrepreneurial education (Vuorio, Puumalainen & Fellnhofner, 2018). Supporting these assertions were various scholars in the field of entrepreneurship education who argued that it can be imparted in the same way as can any art. Drucker (2014) initially posited that “Entrepreneurship is not magic, it is not mysterious, and it has nothing to do with one’s gene”. This opinion supported the earlier assertions of scholars such as Freeman (2000), Massey (2004) and Timons and Spenelli (2007), who argued that, as with other fields of endeavour, entrepreneurship can be taught and learnt and was thus entrenched in South Africa’s HEI policy for the re-orientation of youth and economic development. Scharmer (2009) posits in his theory that we need to allow our old selves to accept an emerging future.

The foregoing discussion calls for a paradigm shift from traditional ways of thinking to a more systemic way that will encompass the entire system (classroom learning to action learning) using a nondualism approach that allows for an all-encompassing system. This is expected to result in entrepreneurship action and development that may lead to economic growth. Entrepreneurship education is known to empower potential entrepreneurs and influence their IEO and intention to assume risk, learn from outcomes and manage feedback (Ndedi, 2015). The reason for experts in the field and researchers promoting entrepreneurship education (EE) is because it is perceived to promote economic growth and employment creation (Kritikos,

2014). It is also seen as a request for the industrial sector to be increasingly aligned with current entrepreneurial competencies (Gibb, 2002). The effects of entrepreneurship activities on students that are perceived to be relevant in the world of work inform the paradigm shift and motivation to promote EE in relation to systemic training (Valdmann, Rannikmae & Holbrook, 2016). The result builds the confidence and efficacy, attitude, perception and competitiveness of entrepreneurs (Farashah, 2013). This could also be explored by means of a nondualism approach that combines traditional learning and entrepreneurship action learning facilitated and developed by stakeholders.

2.12 SUMMARY

The review of government and departmental policy pertaining to education and entrepreneurship reveals that higher education and entrepreneurship development have received much attention in the last two decades in South Africa (WES, 2017). The reason for this is the important role played by entrepreneurship education and training as a driver for the knowledge and skills required for venture creation and employment generation as an alternative to depending on the government to provide jobs. The review assisted in designing this research instrument by focusing on individual entrepreneurial orientation, risk taking and proactiveness and enabling an understanding of what the dictates of entrepreneurship policy are in practice and ESE managerial and relationship skills for the sustainability of a venture (Bolton & Lane, 2012; Van der Westhuizen, 2016). Available literature also revealed that the aims and objectives of entrepreneurship are to develop behaviour and practice by means of alternative learning pedagogies and methods appropriate for addressing the situation and supporting training projects (OECD/European Union, 2019; Tittel & Terzidis, 2020).

This focus is important in the context of rising unemployment among graduates and youth in South Africa. The democratic government in South Africa introduced the RDP as a policy framework to, among other purposes, equip students in HEIs with employable skills before graduation, as youth unemployment in every society is a significant cause of social ills that include burglary, murder, car theft, armed robbery, and gender-based violence. Instead of channelling their energies to profitable tasks and national development, the South African youth are vulnerable to engaging in criminal behaviour. Statistics reveal that unemployment and crime are high amongst high school leavers, HEI graduates and youth in the country. Therefore, this chapter established and support the facts and reasons why higher education institutions need to overhaul its learning curricula in relation to objectives six and seven of this study; to develop a conceptual framework to test the effectiveness and development of ESE

and IEO of entrepreneurship students at universities, and to create a model for entrepreneurship education, training, and development in higher institutions in developing countries.

2.13 CONCLUSION

Economic growth and development require a strong and effective policy and implementation framework. Evidence in the extant literature reveals that there is a nexus between the economy, entrepreneurship and education policies that will develop entrepreneurship theory and practice. Therefore, this study, in collaboration with a SHAPE training project, sought to develop students' ESE and IEO by examining the relationship between the two variables and their effect on students' behavioural changes during training that progressively activated their potential to act on their entrepreneurial intention. The reviewed literature also revealed that there is an overlap between economic policy, entrepreneurship development and education policy that requires overhauling and development through enabling entrepreneurship education policy.

CHAPTER THREE

CONCEPTUAL AND THEORETICAL FRAMEWORK UNDERPINNING THE STUDY

3.1 INTRODUCTION

The aim of the review of the conceptual and theoretical framework underpinning the study was to find the main themes in the entrepreneurship self-efficacy and individual entrepreneurial orientation literature. Specifically, references were made to the entrepreneurship education and training methods used to extract relevant aspects of the pedagogy training model for entrepreneurship training to be developed later in the thesis. This chapter also reviews a suitable theory to drive the systemic action learning action research training employed for this research as a social transformation and development training technology for youth development.

To promote the value system, this chapter also explores various dimensions of pedagogy that are germane to entrepreneurial training and development in universities. A value system and systemic action learning action research are essential for shaping students' entrepreneurial self-efficacy, the individual entrepreneurial orientation mind and entrepreneurial intention and action. The link between entrepreneurial pedagogy and entrepreneurial intention is also discussed. The gap noted in the literature regarding this linkage informed the proposed conceptual framework to drive students' entrepreneurship training and development applying Theory U as a theoretical framework to determine the relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation. A conceptual model is proposed as an entrepreneurial self-efficacy predictor of individual entrepreneurial intention and development; this is discussed in more detail in the subsequent section of this chapter.

The competency needed to become a successful entrepreneur remains difficult to define because some in the chosen field are knowledgeable while others have limited knowledge of their area of enterprise, hence the need to engage in different entrepreneurship learning (Mind Tools, 2020). This is one of the causes of the inferior quality of knowledge and skills of the entrepreneurship graduates from South African universities. Inadequate curricula, technology and academics and innovative and creative skills that are not suitable to the students' development hinder their acquisition of relevant knowledge (Mutanda et al., 2018). It must also be stressed that there are no agreed-upon theories, constructs or methodologies upon which

entrepreneurship learning can be built (Harrison & Leitch, 2008), hence the need to design suitable training methods that will drive or predict entrepreneurial action and development (Gerba, 2012; Van der Westhuizen, 2016; Mutanda et al., 2018; Nyamuda, 2019). The focus of entrepreneurship scholars and practitioners has been geared towards developing entrepreneurial self-efficacy, individual entrepreneurship orientation and value-added development initiatives that meet society's needs through entrepreneurial education and training (Gerba, 2012).

Scholars posit that there should be a shift from entrepreneurial education, i.e. transmission models of teaching to experiential or action learning to offer students opportunities to apply their learnt skills in the real world of entrepreneurship for value creation (Linton & Klinton, 2019). It is not enough to shift to systemic action learning action research or utilising design thinking without identifying what changes the attitude, behaviour and psychology to promote a career in the discipline. This is essential, hence the different constructs of entrepreneurship pedagogy that were examined for the accomplishment of developing entrepreneurial self-efficacy and individual (student) entrepreneurial orientation.

3.2 CONCEPTUAL FRAMEWORK

3.2.1 Self-efficacy

Self-efficacy (SE) refers to the ability to enhance motivation, material and cognitive resources and take the action needed to decide over an event (Bandura, 2010). It is the main characteristic in numerous psychology theories, some of which pertain to motivation, thought patterns, cognitive process, future orientation and everyday behaviour (Tian, Zhang & Atinc, 2016). The confidence in self-efficacy enables a level of aspiration, consistency and achievement of goals and objectives (Brown & Lent, 2016).

Self-efficacy can be built by means of receiving information and processing it for the successful performance of a profitable task. According to Weinberg (2020), this refers to a neurological process that supports consciousness and emotion working within the human brain. Although the process is complex, there is relative functionality that integrates and relates to self-efficacy through the fundamental functions of memory and recall, emotion and motivation. The process relies on the primary sensory areas that receive information, such as vision, hearing, touching and smelling, as well as their association areas that are related to building self-efficacy and

learning, as related to this research. Arnsten (2009) refers to this function as motivation and working memory; an abstract sensory memory association that integrates information at an elevated level as a driver of conscious action in a part of the brain known as the thalamus. The thalamus serves as a relay station connecting all the systems throughout the entire body (Parcheron, 2003). The thalamus is more than a relay station if considered in the field of learning and entrepreneurship, as this is where the subjective consciousness resides and is connected to the hippocampus that supports the valuable short-term memory function. This is related to an element of entrepreneurship self-efficacy where individuals search for opportunity and creative information and filter these through higher-order neurons in which individuals synthesise the perceived information (Felleman & Van Essen, 1991).

The subjective world view in turn influences the receptivity of information at the first-order cells and its subsequent integration that assists in creativity and innovation by identifying the bottom-up process of establishing neuronal representation of the environment (Weinberg, 2020). The process gives rise to an adequate integration, supportive of human consciousness; an independent function that encourages acting on individual intention to reflect a future-based, abstract integration. Studies have revealed that the conceptual integration of cortically stored information occurs exclusively in the hippocampus in adult humans (Bergmann, Spalding & Frisen, 2015) and this assists in envisioning a future that is to emerge. The projection of the future to emerge needs to become operative from the time of conception and thereafter throughout the embryogenesis process until maturation. This refers to the reactive neurological activity, a stage in which sensory structures process information in the appropriate brain part and integrate and develop this information within sensory association areas. The human brain that emerges from a review of the self-efficacy concept is the one that integrates neurological processes that are supportive of and unify the full spectrum of neuropsychology and neuroendocrinology. This has contributed to the development of entrepreneurship training and development through self-efficacy that ultimately enhances the intervention of the training for entrepreneurship development. The process of developing intra- and inter-personal self-efficacy is seen as a drive towards entrepreneurship self-efficacy (ESE) and individual entrepreneurial orientation (IEO) development, which is discussed in the ensuing section. It enhances our understanding of how an individual's mind works to integrate the system as a whole in relation to all systemic levels.

3.3 ENTREPRENEURIAL SELF-EFFICACY

Numerous scholars in the field of entrepreneurship opine that entrepreneurship can be taught (Oliveira, Fazion & Alfonso, 2013; Azim & Al-Khatani, 2014). The debate about how best to impart the necessary skills to the potential entrepreneurship students is ongoing, as the best way to do it is yet to be identified. Extant literature emphasises that entrepreneurship education requires learning systems other than the traditional system on the premise that self-confidence can be developed through teaching and learning the ability to tackle the rigors of venturing into a new start-up. Hence the importance of introducing the development of entrepreneurial self-efficacy in the entrepreneurship curricula (Bandura, 2010). Through this development, appropriate curricula will be designed and conceptualised that will provide the theoretical foundation for entrepreneurship studies. This could enhance the success of teaching and learning by influencing individuals' self-capability along different dimensions of entrepreneurial self-efficacy (Ndinguri, Philips & Prieto, 2014).

In this study, ESE was simply defined as entrepreneurial features in oneself that are inspired by one's ability to decide on a goal and complete a task with a degree of creativity that informs economic action. ESE is the way one perceives one's ability and tendencies to identify, innovate and develop the intention to create and manage a business, which affects one's belief regarding whether or not the set goals will be met (Newman, Obschonka, Schwarz, Cohen & Nielsen, 2019). Bandura (2012; 1997) defines entrepreneurial self-efficacy as a social learning theory; one's ability to perform a given assignment. People with high entrepreneurial self-efficacy are groomed for venture creation and the intention to initiate a business (Dmoysek, Wincent & Cardon, 2010). Dmoysek, Wincent and Cardon define ESE as two dimensional; one's belief to achieve goals and desired outcomes and the ability to control dysfunctional thoughts during periods of failure, as these factors enhance the cognitive control belief. Slavec and Prodan (2012) posit that students' entrepreneurship self-efficacy to perform entrepreneurial roles and tasks can be developed by action learning, attending entrepreneurial workshops, training, seminars and simulation workshops. ESE development assists one to identify opportunities, acquire skills and knowledge, make decisions, learn from mistakes and establish and sustain a business. More importantly, it avails students the privilege of exploiting resources for entrepreneurial action by searching, planning, marshalling and implementing human and other resources (Karlsson & Moberg, 2013). Entrepreneurship action can be likened to going into battle in terms of risk involvement; student entrepreneurs need to be exposed to

various pedagogical methods to obtain the required skills to thrive in an unstructured environment and successfully address any challenges they encounter (Ker & Ker, 2018).

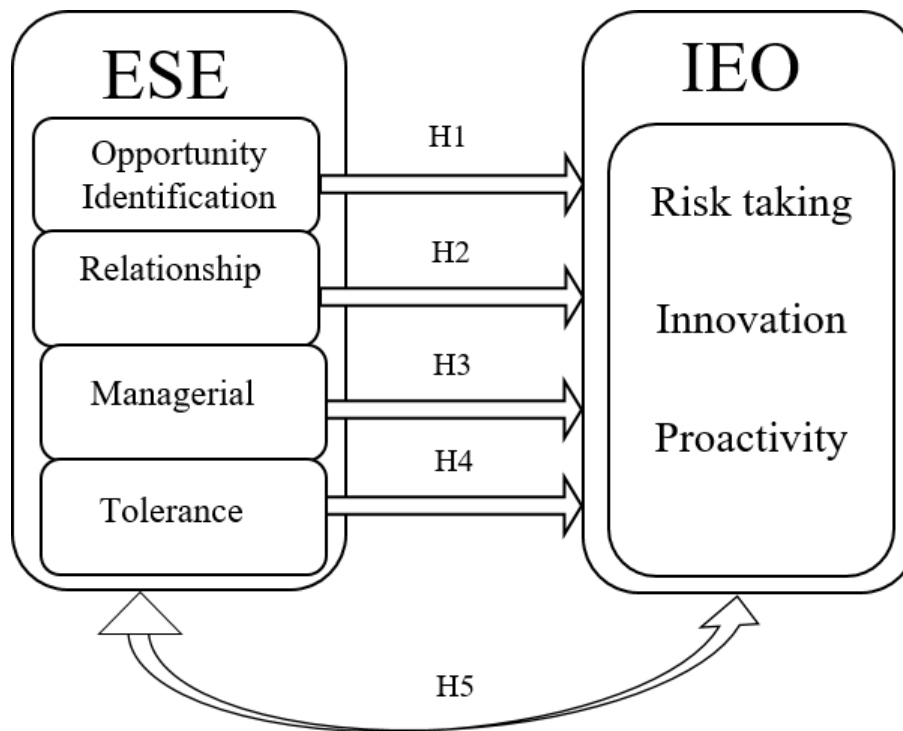
This study explored the facets of entrepreneurial self-efficacy and how student entrepreneurs can be equipped to develop and activate their individual entrepreneurial orientation to undertake entrepreneurial action pertaining to business start-up and growth. Rideout and Gray (2013) allude to the importance of understanding ESE as the development of psychometric measurement in EE. According to these authors:

“..... we need a larger pool of methodologically adequate EE research. In this regard, well designed case studies would also be useful to help identify important mediators. We need more quantitative research that simultaneously examines the role of promising mediators like entrepreneurial self-efficacy, cognitive skills and knowledge, values and attitudes, social networks, and other contextual variables on policy relevant outcomes... There is also the need for the development of psychometrically sound measures to support these efforts.” (Rideout & Gray, 2013:348).

In agreement with these authors’ position on entrepreneurial education, this study alludes to action learning to stimulate students’ behaviour and entrepreneurial self-efficacy by utilising the reactive and generative stages of Theory U and developing a training model to examine the development of ESE to enhance students’ and youth’s chances of initiating a business venture during and after their studies. The motivation for such a stance is the observation that entrepreneurship self-efficacy has emerged as an important entrepreneurship construct and a substantive body of evidence exists to support and influence the business start-up and growth process (Miao, Qian & Ma, 2016).

The definition of entrepreneurship self-efficacy advanced by Barbosa, Gerhardt and Kickul (2007) draws upon the work of DeNoble et al. (1999) and Chen et al. (1998) and was adopted for this study because it is built on the four elements of ESE identified and explained as task-specific constructs. These are opportunity identification self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy. Figure 3:1 presents the conceptual framework that guided the research. A discussion of the constructs follows for a more in-depth understanding of the concepts.

Figure 3:1: Conceptual framework guiding the study



Source: Author's compilation

Figure 3:1 depicts the conceptual framework that was developed to guide the study, as discussed in Chapter one. The interrelatedness of the ESE and IEO is discussed in the ensuing section in relation to the study, entrepreneurship training and development of the participants in the SHAPE project that applied Theory U.

3.4 ENTREPRENEURSHIP SELF-EFFICACY DIMENSIONS

Entrepreneurial self-efficacy is defined by Barbosa according to the underlying constructs that examine the relationships between cognitive styles and four task-specific types of ESE, namely opportunity self-efficacy, relationship self-efficacy, managerial self-efficacy, and tolerance self-efficacy (Barbosa et al., 2007). Entrepreneurial self-efficacy has individual and unequal relationships with multiple dependent variables, particularly entrepreneurial intention and nascent entrepreneurial behaviour. The multi-dimensional nature of the ESE constructs was researched by Muller and Goic (2003) who confirmed that individuals' levels of ESE differ according to the phases of the venture creation process, namely searching, planning,

marshalling and implementing. The four task-specific dimensions of ESE advanced by Barbosa (2007) were adopted for this research and are discussed hereunder.

3.4.1 Opportunity Identification

This is a crucial component of the entrepreneurial process (Gumel, 2018; Karlesky, 2015) and is perceived to be an intentional process (Karimi, Biemans, Lans, Chizari & Mulder, 2016). It is described as the personal attributes of searching, perceiving and exploiting the system or economy for a gap or opportunity to innovate and develop to satisfy market or societal demands. The ability to identify an opportunity may assist in developing a new venture (Kirkley, 2016). Based on this definition, it can be deduced that for the accomplishment of new venture creation, various interrelated tasks need to be performed, such as scanning the economy or market for a gap, sourcing information, and reflecting on it for action (Qin, Wright & Gao, 2017). It is important to state that opportunities in entrepreneurship are made through cognitive thought and the ability to engage acquired skills and passion for venture creation in line with market demand. Opportunity identification is about knowing “why, when and how some people, and not others, discover and exploit opportunities” (Shane & Venkataraman, 2000), as reflected in the SHAPE training project and the research instrument used to examine participants’ ability to identify opportunities. Charles, Abaho and Olomi (2015) posit that entrepreneurship education is a central topic that could and should be taught to enhance students’ entrepreneurial self-efficacy in any education project structured to train future entrepreneurs. Costa, Ehrenhard, Caetano and Santos (2017) argue that traditional learning methods are appropriate for skill development and the enhancement of opportunity identification competency.

Martin, McNally and Kay (2013) posit that EE will result in the identification of innovative opportunities and student entrepreneurial knowledge can be enhanced through EE. This implies that knowledge is a precursor to opportunity identification. With EE, opportunity identification problems can easily be solved if the individual learner is passionate and persistent about a venture start-up. It is not enough to identify a gap; one must also add value by collaborating with other self-efficacy dimensions that transform the intention into action and reality. Most potential entrepreneurs get stuck at this level without any success because they do not have insight into what comes next for action, that is, to factor in the relationships of the stakeholders in the sector. It is imperative to ensure that EE is improved, especially opportunity identification so that the focus and the objectives of EE will not be

deflected and the universities will not produce graduates who lack the ability and knowledge needed for entrepreneurship action. This may indicate a failure in the first step of the entrepreneurship process (Karimi et al., 2016).

3.4.2 Relationship self-efficacy

This concerns ones' ability to build relationships. It is important to build business relationships with all relevant stakeholders, for example, potential investors and those who are linked with the required resources for the wellbeing, acceptability and sustainability of the identified or emerging venture. Relationship self-efficacy refers to the stage of relating with the stakeholders that will assist with the dream becoming a reality by gathering the required resources such as capital, labour, customers, and suppliers without which the goals cannot be achieved (Ndofirepi, Rambe & Dzansi, 2018). It is the first step to be considered in the creation of a venture in an economy. It has to do with the relationships among the stakeholders that direct efforts towards organisational growth and development, especially becoming a market leader and sustaining the enterprise.

It is equally important to consider the push and pull factors that motivate individuals to create a business. The push factor refers to the venturing propensity of every individual to activate intention through a willingness to share knowledge with the community (investors). It also has to do with collaborating with potential partners to activate intention and to strengthen ties when initiating a start-up. This tends to increase the scope and depth of association among collaborators who may wish to share knowledge and attract rewards or compensation. Relationship self-efficacy can encourage those with similar interests or needs to pool their resources for venture creation (Kirkley, 2016). The pull factor refers to the steps taken to attain a level of accomplishment, autonomy, leadership and innovation to proffer solutions to address identified gaps and in so doing satisfy oneself and the community. It serves as a push to a level where one becomes a decision maker rather than a subordinate. It could also be an avenue to emerge from an attitude of confinement. Such movement allows one to become an innovative thinker, creator, or founder of a business with the charisma to assume the leadership role where one can enjoy people as employees and create a good work-life balance (Ganiyu, 2018).

The enterprise's relationship with the community and the economy determines the venture's acceptability among community members based on the norms, customs, and traditions. It also determines how the goods and services are accepted and marketed and if it will attract investors

and customers. When considering new venture creation, it is essential to take into consideration the prevailing regulatory environment, the economic outlook and how these factors will affect the enterprise's viability and success (Kirkley, 2016). Turbulent periods that include times of overwhelming risk, economic recession or a natural disaster, can be overcome with the assistance of well-maintained business relationships. A good entrepreneur needs to consider all the relationships while planning a new start-up and should be able to place all situations and roles in the hands of a certified manager who will take on the affairs of the venture for growth and development.

3.4.3 Managerial Self-Efficacy

Based on the understanding that entrepreneurship self-efficacy is task-specific, managerial self-efficacy can be described as the perceived strength and ability to manage all the enterprise's resources to start, grow and develop that business (Newman, Obschonka, Schwarz, Cohen & Nielsen, 2019). Managerial self-efficacy therefore entails the way information that is germane to the organisation is managed. It has to do with how human resources, finance, production or services and the regulatory policy of the organisation aid the accomplishment of the organisation's mission and vision. All the dimensions of self-efficacy are salient and relevant to the success of the new venture at all phases of the entrepreneurial process. Potential entrepreneurs should ensure that they have the qualities required for a growth-oriented venture (recruiting skilled workers) as well as the ability to develop and sustain that venture (Cooney, 2012). A vision, dream or identifying an opportunity is not enough; an entrepreneur must also have the charisma to manage it to success and have the courage to face all the obstacles that may arise along the way. Managing a successful business also entails managing the market, economy, community, and competitors, that is, employing effective public relations strategies with all stakeholders.

3.4.4 Tolerance Self-Efficacy

Tolerance self-efficacy relates to the ability to persevere and deal with criticism when initiating a venture or doing business (Chen & Jackson, 2019). This is to ensure the sustainability of the venture with limited supervision, being cognisant of the regulatory policy while facing challenges from stakeholders, partners, or internal pressures. This means that the ability to embrace failure is essential to grow and develop a new venture and this also relates to entrepreneurial self-efficacy. Scholars have defined ESE through different dimensions that

include searching, planning, marshalling, and implementing (Newman, Obschonka, Schwarz, Cohen & Nielsen, 2019); specific skills (Shaheen & Shafiq, 2018) and risk taking, innovation, financial control, management, and marketing (Kurfist, 2019). Thus, the multi-dimensionality of self-efficacy is a strong explanatory construct in determining the ability of entrepreneurial intentions and the likelihood that the intentions will translate to entrepreneurial action. The dimensions were employed to establish the procedure for developing an idea to harvest by encouraging nascent entrepreneurship amongst university students. Risk taking, challenges, failure, employees, economy, and market are expected to be tolerated by the entrepreneur for the smooth running and sustainability of the venture.

Considering the work of Cox et al. (2002) who formulated a model to test personal ESE with a focus on the venture creation process that informs the relationship between ESE and other entrepreneurship constructs, the assumption was that entrepreneurship action will be enhanced through learning. Pihie and Bagheri (2013) posit that ESE development can be enhanced through the intrapersonal development process. Scharmer and Kaufer (2013) postulate that individuals can enhance their ESE through stages of learning (reactive and generative stages) by applying Theory U, which is discussed in detail later in this chapter.

3.5 ENTREPRENEURIAL ORIENTATION (EO)

EO has been widely researched for several decades. At the organisation level, it is a construct that determines performance levels (Engelen, Gupta, Strenger & Brettel, 2015). Miller (2011; 1983) was the first to come up with the concept of entrepreneurial orientation (EO) as comprising innovativeness, pro-activeness, and risk-taking facets. The concept was later expanded and popularised by Covin and Slevin (1989) in what they described as the concept of “entrepreneurial strategic posture” (ESP). Several years later, Lumpkin and Dess (1996) refined and developed EO by advancing the five dimensions of the model, which include autonomy, innovativeness, risk-taking, pro-activeness, and competitive aggressiveness. Lumpkin et al. (2013) are of the view that EO is widely discussed within the context of the firm rather than at the individual level, which indicates the processes, practices and individual decision-making prowess that drives individual entrepreneurial action (Lumpkin et al., 2013).

Koe (2013) developed a five-dimension model of EO and argues that these dimensions can influence the performance of government-linked companies (GLC) positively. Dada and Watson (2013) view EO as an all-encompassing construct and submitted that it is positively

related to the performance of a franchise system financially and non-financially. It is worthy to note that other studies do not perceive any significant or statistical relationship between company performance and EO due to differences in organisational orientation (Putnins, Sauka, 2020). Contrary to this assertion, Yang, Dess and Robins (2019) observed that entrepreneurial decision making can be influenced by the internal and external domains. The internal is the dimensions of the EO while the external is the factors of economy, culture, technology, politics and competition (Bolton & Lane, 2012; Ramkissor & Cassim, 2013).

For this study, the three internal dimensions of EO, namely risk taking, innovation and proactiveness were adopted and discussed in relation to the objectives of the study for the clarification of new venture intention. Table 3.1 presents Lumpkin and Dess's (2013) five EO dimensions with various authors' clarification and submissions.

Table 3.1: The constructs of EO

NO.	Basic Dimensions	Composite Qualities
		Three-dimensional Construct of EO
1	Proactiveness	<ul style="list-style-type: none"> - predicting future market changes (Rauch <i>et al.</i>, 2009) - opportunity creation vs. opportunity identification (Sundqvist, Kylaheiko & Kuivalainen, 2012; Covin & Slevin, 1989)
2	Innovativeness	<ul style="list-style-type: none"> - openness to new ideas (Frishammar & Horte, 2007) - process and product creativity (Dess & Lumpkin, 2005) - pursuit of creative or novel solutions (Knight, 2001)
3	Risk taking	<ul style="list-style-type: none"> - decisions in uncertainty (Dess & Lumpkin, 2005) - implementation of projects entailing significant chances of costly failure (Davis <i>et al.</i>, 1991; Khandwalla, 1977; Miller & Friesen, 1984)
		Multi-dimensional construct of EO
4	Competitive aggressiveness	<ul style="list-style-type: none"> - competitive advantage over competitors (Dess & Lumpkin, 2005) - aggressive posturing relative to competitors (Knight, 2001)
5	Autonomy	<ul style="list-style-type: none"> - independent human activities (Dess & Lumpkin, 2005) - self-acting (Lumpkin & Dess, 1996)

Source: Van der Westhuizen (2016)

Table 3.1 shows Lumpkin et al.'s (2013) multi-dimensions of EO as a whole and the development of the dimensions at the firm level. The table is separated into two, indicating the five dimensions and the three dimensions employed for this study at the individual level of IEO

and various scholars' composite qualities pertaining to each dimension. This was necessary for insight and an understanding of the epistemology and development of the variable and its construct from the firm level to the individual level.

3.6 INDIVIDUAL ENTREPRENEURIAL ORIENTATION

There is general agreement among scholars that entrepreneurs contribute positively to the growth of the nation through small businesses and empowering the youth through job creation (Gxubane, 2019). Governments globally have implemented a variety of measures, according to cultural backgrounds, to empower their youth to embrace entrepreneurial activities, noting that entrepreneurship is not only a drive for national development, but it also serves to curb unemployment. Hence the need for governments and higher institutions of learning to encourage the youth and students in colleges to choose entrepreneurship as a career (Koe, 2016).

3.6.1 IEO Development

Few studies' findings that were available in the extant literature had examined EO at the individual level (Goktan & Gupta, 2015). However, some scholars have argued that EO can also be regarded as an individual level construct (Robinson & Stubberud, 2014). The reason may be that numerous businesses globally are small and medium-sized and operated mainly by one decision maker and all activities at the pre-start-up stage are ascribed to that individual entrepreneur. This has provided researchers with opportunities to investigate the construct from a new perspective.

Bolton and Lane (2012) explained that of the several factors that should be considered at the individual level of EO, the three most important are: an individual environment; personality traits and attitude towards becoming an entrepreneur. The authors observed that IEO is a multi-dimensional concept that consists of similar elements to enterprise level EO. Their studies provided new insights into EO at an individual level, which is a relatively new concept. Bolton and Lane (2012) also argued that the risk taking, innovation and proactiveness dimensions are the strongest and are logically related to entrepreneurial intent. Measuring EO at the individual level might enable a deeper understanding of entrepreneurship and the individual contributions to a firm's growth and development. This implies that individuals can assess their ability to enter the market, determine their individual ability to start their own business and minimise new venture risk. Considering the foregoing discussion, this study

evaluated the operationalisation of IEO elements for entrepreneurial action through entrepreneurship education and training, which is important in developing individual entrepreneurial competencies (Koe, 2016).

Table 3.2 indicates the epistemology of individual entrepreneurial orientation as discussed by scholars about the dimensions of IEO.

Table 3.2: Epistemology of IEO

Main Studies of Individual Dimensions of IEO

Author(s)	Dimensions	Study's Conclusion
Mc Clelland (1960)	Risk taking	Entrepreneurs are high in their need for achievement and moderate in their willingness to take risks
Bronchaus (1980)	Risk taking	Provides empirical support that entrepreneurs are moderate risk takers
Begley and Boyd (1987)	Risk taking	Risk taking has a curvilinear relationship with firm performance (highest at moderate levels of risk taking)
Palich and Bagley	Risk taking	Entrepreneurs categorise business situations as having less risk than do non-entrepreneurs
Schumpeter	Innovation	The creation and development of new products and processes are the fundamental undertaking of entrepreneurial organisations
Jennings and Young (1990)	Innovation	Entrepreneurial firms are more willing to engage in product innovation than are non-entrepreneurial firms
Zahra (1993b)	Innovation	External environment and competitive strategy are important determinants of new product innovation
Zahra and Covin (1993)	Innovation	Organisation strategy moderates the relationship between innovation and firm performance
Covin and Miles (1999)	Innovation	Innovation is the common theme underlying corporate entrepreneurship; the other dimensions of IEO are antecedents, consequences, or are correlated with innovation
Lieberman and Montgomery (1988)	Proactiveness	Proactive firms can utilise first-mover strategies to gain competitive advantages over rival firms
Stevenson and Jarillo (1990)	Proactiveness	Entrepreneurship is the organisational pursuit of favourable business opportunities
Lumpkin and Dess (2001)	Proactiveness	Proactiveness is an opportunity-seeking perspective where organisations aggressively interact with their environment

Source: Van der Westhuizen (2016)

Table 3.2 presents the epistemology of the three dimensions of IEO employed for this research. Studies that have explored the three dimensions indicate the significance of the individual level of entrepreneurship development. The individual factors that are germane in influencing entrepreneurial orientation cognitively as the paradigm shifts towards individual entrepreneurial action (Koe, 2016) are: training and learning, skills, education, practical intelligence and optimism, lack of which adversely affects entrepreneurial behaviour (Ho, Uy, Kang & Chan, 2018).

Entrepreneurship teaching and learning methods should not be limited to traditional classroom teaching in a formal setting but should include action research and action learning, experiential learning, and hands-on learning, some of which are referred to as transformational learning. Scharmer and Kauffer (2013) describe transformational learning as the ability to collectively learn and initiate ideas, which is known as co-initiating, co-sensing and co-inspiring. As earlier advanced by Simon and Shrader (2012), transformative learning builds the cognitive will to stride ahead. Transformative learning promotes opportunity identification and maintains optimism while taking risks to constantly evolve the venture model to fit the market, which boosts the efficacy to survive in the practice or profession (Cardon et al., 2009). The absence of skills, practical intelligence, education and learning and training gained through transformative learning methods influences students' entrepreneurial behaviour, succinctly relating this to traditional learning in the university. Thus, one can deduce that when students lack exposure to technological transformational learning, this can influence their entrepreneurial behaviour.

3.7 INTERNAL DETERMINANTS OF IEO

The internal factors that determine individual entrepreneurial orientation are individual risk taking, innovativeness and proactiveness, all of which affect the individual level dimensions of EO for entrepreneurship development.

3.7.1 Individual Risk Taking

Zinn (2019) defines risk taking as a decision made in the hope that the expected rewards associated with success will be forthcoming. It can be described as a decision required of a person before subjecting him/herself to the consequences of failure (Genever, 2017). Risk taking is a quality that is used to define and explain entrepreneurial constructs with various meanings, depending on the context of its usage. In the strategic context, Kapepa and van

Vuuren (2019), Imran, Ahmed, Sterimikiene, Soomro, Parmar and Vveinhardt (2019) identify three types of strategic risk, which include: (a) venturing into the unknown; (b) committing large assets and (c) taking out large loans. These definitions exhibit a level of uncertainty that can apply to some types of risk often discussed in the entrepreneurship literature. It also reveals that all forms of business engagement are accompanied by a degree of risk. Entrepreneurs are aware that doing business is never “absolutely without risk”.

Making decisions about venture creation and risk-taking reveals ones’ determination to embrace failure to get the business back on track (Oliver & Parret, 2018). These scholars argue that such behaviour indicates the ability to take the necessary risks for the continuity of the business and to be able to forecast and strategise for an uncertain future. Individual risk aversion makes the new venture less achievable because every individual would prefer to avoid risk (Hambock, Hopp, Keles & Vetschera, 2017). Entrepreneurial education will encourage individuals to make the necessary decisions because of the added benefits and value. Hence the choice of university students as participants in the project (SHAPE) to provide career paths for them in entrepreneurship. Although extant findings support the fact that risk taking will lead to high performance (collective decision), there are some variations, as some projects may fail while others succeed (Costello, 2019). Kraus et al. (2012) opined that risk can be minimised through innovation and action.

3.7.2 Innovativeness

Innovativeness is the ability to engage in and embrace new ideas, novel experiences, experimentation and creativity and focus that may bring one to the process of production of goods and services (Kljako & Olsson, 2019; Linton & Klinton, 2019). In the same vein, Covin and Slevin (1991; Larsson, 2017) earlier defined innovativeness as a firm propensity to engage with new ideas thus activating a process that results in new products, services, or technological advancement (Rubin & Challaghan, 2019).

The afore-mentioned definitions buttress each other and inform the pedagogical method of learning by the youth in higher education institutions. This is also the focus of Theory U advanced by Schammer that proposes a transformative social technology that informs research and development through forms of learning (Scharmer, 2009). Transformative learning employs reactive and generative stages to develop new processes, fostering the spirit that will enhance youth entrepreneurial action. Ask and Hof (2015) posit that innovativeness has an

important role to perform in research, imparting knowledge, product development and technical expertise for competitive aggressiveness for future development. A combination of technological and cognitive ability pertaining to innovative will reflects individuals' pursuit of new business opportunities (Chen et al., 2012). A combination of will, heart and mind thus cognitively inform varieties of invention that will creatively bring innovative services or goods to the economy. Innovativeness has been identified as an internal factor of IEO and is considered as a strategic orientation that can enhance results in the development of new start-ups with a focus on long-term value (Khalili et al., 2013).

3.7.3 Proactiveness

McDonald, Hobday, Thompson et al. (2019) define proactiveness as a reactivity to form a decision or a reactive behaviour towards action. It is an opportunity-seeking behavioural trait in an individual with a forward-looking perspective that is important for innovation, creativity and entrepreneurial action (Lumpkin & Dess, 1996). Proactivity is an essential tool for new entrants to the practice of entrepreneurship and a driver that inspires individuals or groups to seek new opportunities to engage in opportunistic expansion to launch new products into the market (Hitt, Li & Xu, 2015). Tajeddini and Mueller (2012) assert that proactiveness is an anticipatory perspective for entrepreneurial innovation and activities. It is also an essential tool for a new entrant to the practice of entrepreneurship, employed as a vehicle to seek new opportunities. It engages in opportunistic expansion, taking advantage of opportunities in the process of new market entry (Lumpkin & Dess, 1996). For the expansion to be acceptable, various factors may be considered: finance; human capital development strategies and partnership in relation to ESE management skills (Van Wetten, Gerards & Andreies de Grip, 2020). It must be emphasised that an exhibition of individual quality and ability proactively (decision making, leadership and creativity) may not necessarily determine market leadership and sustainability (Callaghan, 2009). Thus, individual quality and ability are linked to career success (Mohd, Garavan & Ismail, 2011) and are perceived as employability assets (Bell, 2016; Batistic & Tymon, 2016).

In some respects, IEO is related to ESE opportunity identification, as discussed earlier, and as such, a substantial level of entrepreneurial orientation can ignite an individual to strive for gap recognition or opportunity identification as a dimension of self-efficacy (Randerson, Bettineli, Fayolle & Anderson, 2015). This may not necessarily make proactiveness more effective but may enhance individual performance levels in various ways (Den Hartog & Belschak, 2012).

In the opinion of these scholars, if individual efficiency remains stagnant, it means proactiveness will fail to enhance performance or the expected accomplishment of set goals and individual aspirations. This indicates that not all proactive behaviour will translate to individual efficiency and growth. One can thus deduce that IEO dimensions are related to ESE dimensions and build on it for individual entrepreneurial intention to be enhanced. Thus, identification of gap match with IEO innovation where one innovates creatively managing the preconceived ideas and tolerate it for risk taking proactively shows that there is a strong correlation between the two variables which leads to entrepreneurial action.

3.8 ENTREPRENEURIAL INTENTION

Ridha and Wahyu (2017) define entrepreneurship intention as the “self-acknowledged conviction” of any individual that is ready to launch a new business venture with the aim of accomplishing such a feat in the future. Entrepreneurial intention can also be described as a process of exhibiting characteristics of a need for achievement, risk taking and locus of control with confidence and task orientation (Farrukh, Alzubi, Shahzad, Waheed & Kanwal, 2018). The implication is that it stimulates entrepreneurship through personality traits subject to mediating variables such as perception and motivational factors (Karabulut, 2016). According to Xavier, Kelley, Kew, Herrington and Vorderwulbecke (2013), there is a need to understand the factors that can foster entrepreneurial development intent and action in learners.

Scholars have argued that the entrepreneurship process occurs because of people’s motivation to pursue and explore perceived opportunities (Osiyevskyy & Dewald, 2015). This implies that entrepreneurial action is an intentional action resulting from motivation and cognition. Ajzen and Fishbein (2004) opine that there are cognitive stages that follow the decision to act in relation to the dimensions of the theories of planned behaviour and reasoned action. Thus, entrepreneurial intention is a determinant factor of entrepreneurial action, as stated earlier in this chapter, which affects individual behaviour by changing their entrepreneurial mindset and outcome.

Studies have revealed that there is a significantly positive relationship between entrepreneurial intention and the scope of start-up activities engaged in by learners and this is either reinforced or weakened by factors such as entrepreneurial family background, age, gender, institutional entrepreneurial environment (reinforcing) and general uncertainty avoidance (weakening) (Shirokova, Osiyevskyy & Bogatyreva, 2016). Pruett (2012) reveals how individual

participation in a workshop project will affect the behavioural level of the participants in changing their initial attitude towards venture creation. According to this author, individual commitment to education changes the intention and participation in a project or workshop is therefore seen as a determinant factor that brings about changes in learners' cognition (Pruett, 2012). It is worthy to note that entrepreneurial foundation lies at the process and perception implies that not all intentions will become actions because intention and action can be attributed mainly to the locus of control to act but individuals may fail to realise their intentions (Shirokova et al., 2016).

3.8.1 Entrepreneurial Action

Entrepreneurial action can be described as the outcome of the entrepreneurial development activities brought together for the purpose of venturing or the possibility of action that is entrepreneurial (Galbraith, 2014; Kirkley, 2016). This is collapsing together the sources that individuals act upon that generate or eventuate in individual mindset outcome. It may involve participation in the process of learning in an action research or systemic learning that instils different hands-on skills in potential individual entrepreneurs. Entrepreneurial action is a process that presents ESE, IEO and EI as forerunners of its success and as a model that can emanate from within an individual being (Scharmer & Kauffer, 2013).

Figure 3.2 indicates the effectiveness of nondualism in entrepreneurship development and the relationship that exists between the variables utilised from classroom teaching (entrepreneurship pedagogy) to affect the development of ESE and IEO, such as systemic action learning action research. This was to inform the entrepreneurial outcome in terms of intention and action, which is reflected in the subsequent chapters while developing students' entrepreneurial orientation utilising a theoretical framework (Theory U).

Figure 3.2 Entrepreneurial mindset outcomes



Source: Adapted from Van der Westhuizen (2016)

Figure 3.2 depicts the relationship between the entrepreneurship variables that may lead to entrepreneurial action. It is worth noting that developing ESE may serve as a predictor of IEO for entrepreneurship action through the incorporation of a nondualism process of the systemic action learning action research training that integrates the entire system for development. Only a limited number of empirical studies in the extant literature have investigated the systemic disconnect and barriers to students' engaging in entrepreneurial action. Such barriers certainly exist, as graduates and youths remain challenged by several issues that limit their entrepreneurship action. These include those in the ensuing list.

- i. Unfriendly government policies that limit the influence of pedagogy on students' entrepreneurship.
- ii. Ineffective teaching and learning curricula.
- iii. Difficulties in accessing support funds.
- iv. Lack of an anchor investor in their enterprises.
- v. Lack of total support from the government in terms of inspiration and motivation.
- vi. Barriers such as regulation, registration and logistics.

Entrepreneurship remains a process that requires potential entrepreneurs to take calculated risks. Extant literature has established that for transformation (a process or strategy for change in operating model, organisation, people or process to improve performance and altering a future trajectory) to be improved, it must alter actions and ways of being in the world (Transformative Learning Centre, 2016). Nyamuda (2018) posits that participants' beliefs cannot effectively be evaluated to ascertain if they undergo a change or a transformation. The author emphasises the need to pay attention to developing a training programme or model that focuses on transformation and proposed a transformative entrepreneurial self-efficacy model for such training (Nyamuda, 2018). The afore-mentioned study was within the context of transformative learning theory while this study incorporated various systems to examine their relationship with students' entrepreneurship development.

3.8.2 External factors

This term refers to a set of environmental factors that can affect the creation of a new venture in a society. These factors could be legal, economic, socio-cultural, political, and technological or competition, which can make or break a young entrepreneur (Bolton & Lane, 2012; Ramkissor & Cassim, 2013). For instance, the environment may attract new businesses to cities as a factor that links entrepreneurship with wealth and job creation in a particular country (Sheth, Karami & Murphy, 2019).

South Africa is currently unattractive to potential entrepreneurs due to uncertainty in the business and political environment caused by the economic recession and unsympathetic state policies (Kashala, 2015). Another reason is that children were not exposed in the early stages of their education to the possibility of entrepreneurship as a career choice. Botha and Bignotti (2016) observe that this is a challenge faced by South African higher institutions of learning and therefore submit that if students are not aware of entrepreneurship as an alternative career option, they will fail to develop a positive attitude towards entrepreneurship. Related to this is

having an enabling policy; sound regulatory and control policy that will positively impact the development of SMEs in the economy. This would change students' orientation to choose entrepreneurship as a career option to study and practice. It must be emphasised that these factors are interwoven and can determine the future propensity for an individual youth to venture into small scale business. It can therefore be deduced that the financial, legal, economic and political environment are critical factors affecting the establishment and growth of a new venture either positively or negatively in most developing countries and especially in South Africa. To build a formidable economy, the ecosystem needs to be developed by applying various education and development theories.

3.9 THEORETICAL FRAMEWORK GUIDING THE STUDY

This section presents the theoretical framework that was utilised as a guide for the study. A researcher must choose appropriate theories to attain the objectives of the study and in so doing must take into consideration the interconnectedness of the entrepreneurship education and training domain and its spill-over effects on the concept's domain (Chan et al., 2018). This will address the difficulties of relying on one theoretical framework, which may imply that there is only one approach to solving a problem, which does not assist with the generation of knowledge and skill development for the practice. Martin, McNally, and Kay (2013) posit that there is a need to improve the existing grounded theories in entrepreneurship education and training. Therefore, an attempt was made in this study to situate this work within the context of self-leadership theory and Theory U.

3.10 SELF-LEADERSHIP THEORY

Self-leadership theory was built on various theories that included social cognitive theory (social learning theory), intrinsic motivation theory, cognitive evaluation theory, motivation theory and leadership theory (Neck, Manz, Van Belle, Mash, Coogan, Brettler & Sparks, 2010) and forms the basis of the scholarly works in the field of self-leadership dating back to the 1980s (Manz & Sims, 1980; Manz, 1983). Self-leadership is a process in which behaviour is controlled individually, influencing, and leading oneself with the aid of specific sets of behaviour and cognitive strategies (Neck, Manz & Houghton, 2019). Godwin, Neck and D'Intino (2016) identify self-leadership as a tool for developing the entrepreneurship process and success by means of cognitive resources that can moderate demand and resource effects of entrepreneurship.

Pavlovic (2019) identified three main cognitive strategies that are designed to positively affect individual differences. These strategies include a) a focus on behaviour, b) natural reward and c) constructive thought patterns. These three cognitive strategies can aid the transformation of individuals by means of self-observation and by raising awareness regarding the importance of engaging in a specific task. This can assist participants in any entrepreneurship training programme to harness their potential by altering their initial goals of learning.

The first strategy identified by Pavlovic (2019) was to focus on behaviour. Scharmer and Kauffer (2013) observed that a strategy of focusing on behaviour avails learners the opportunity of leaving their old self and allowing their new self to emerge through the learning process that instils leadership prowess in them. This results in a significant improvement in individual performance (Klimoski & Amos, 2012) because the set goals and the self-set rewards combine to enhance the learners cognitively, thus enabling them to pay attention and accomplish the goals (Darling-Hammond, Flook, Cook-Harvey, Barron & Osher, 2019).

The second cognitive strategy that can be applied to self-leadership theory is natural reward. This is described as a situation whereby the learning environment, handlers and the learning equipment (technology) aid learning and the assimilation of knowledge because of the methods applied and the expected reward (Neck & Manz, 2010; Eady & Lockyer, 2013). The reward strategy of leadership theory aids learner's competence and self-determination, which can result in redirection of the initial focus to learning creatively and innovatively, thereby changing their behaviour and venture creation towards becoming self-reliant.

The third strategy is the significance of mental imagery or a self-thought of negative internal dialogue that needs to be changed with positive thought that will affect individual performance (Driskell et al., 1994). Neck and Manz (2010) assert that envisioning a positive performance in advance of the main performance or activity is likely to be successful when engaged with the actual task. Such a task develops self-leadership and self-managing teams significantly and empowers leadership. This is in relation to the focus of this research on developing the student for future challenges by means of teamwork (business partner) and focusing on leading the twenty-first century economic and entrepreneurship leaders for the emerging future. The constructive thought pattern strategies are in line with the thought self-leadership, which suggests that whosoever engages in training is likely to increase their mental performance and satisfaction at completing the exercise that has both positive and negative effects (enthusiasm

and nervousness) respectively compared to those who do not partake in the training (Palmer, 2020).

Manz and other scholars' work pertaining to self-leadership explains that this was a normative theory that was used consistently in applied fields to explain how things should be done (experiential learning) and operates within the ambit of social cognitive theory (Buenaventura-Vera, 2017) and much like self-regulatory theory, reveals that the basic structure of its system entails the processes involving self-mentoring, judgement and reactions, whereas self-regulation deals primarily with the concept of discrepancy reduction. Self-efficacy, a construct in social cognitive theory, is defined as individual self-assessment of the capabilities useful for the execution of certain activities (Bandura, 2011). The self-efficacy concept is important for self-leadership and the salient objectives of self-leadership strategies, namely the enhancement of its perceptions in advance of maximum output levels (Manz & Neck, 2004). This is an indication that there is a positive relationship between self-leadership strategies, self-efficacy perception and task performance. The implication is that self-efficacy can function as the mechanism by which self-leadership strategies affect performance. This indicates the alignment of the theory to the attainment of this research variable's construct of ESE and the development of the student in line with the nations' "entrevolution" concept; that is, learning different entrepreneurship skills that are more relevant in the fourth industrial revolution era of technology advancement.

Self-leadership theory therefore serves as a basis for several leadership theories that are designed to serve as general pedagogical templates that managers, leaders and educators can apply in teaching and learning at individual and team levels. In a bid to accomplish a given task and attain long term results related to economic change, growth and sustainability where future leadership development is of paramount importance, the focus must be on such self- action leadership and self-leadership theories that are in alignment with entrepreneurial self- efficacy, which was the main objective of this study. Self-leadership is a significant cognitive resource that should be acquired by potential and nascent entrepreneurs for its proven record of developing human capital in established firms and future usefulness in the potentially stressful world of entrepreneurship.

3.10.1 Self-leadership implication

For entrepreneurship education, self-leadership is amenable to augmentation through intervention (Goldsby, Goldsby & Neck, 2020). The introduction of the theory to entrepreneurial development projects such as “SHAPE” may assist students to understand how to perform entrepreneurial activities or manage task demands, reduce the risk of failure and sustain the business. The collaborative effort of this research with SHAPE in the academic environment enables the learner or participant to be more proactive and build their risk-taking ability to foster an improved response to demands of a career as an entrepreneur. There is no doubt that the application of self-leadership theory and development intervention programmes in higher education institutions will assist entrepreneurs and the government to cope with economic challenges and demands and as a result, improve the creation and sustainability of new and nascent entrepreneurial ventures.

3.11 THEORY ‘U’ UNDERPINNING TEACHING AND DEVELOPMENT TRAINING

Theory U can be referred to as a social paradigm with practical solutions to typical developmental problems, social change method with different tools, a new language, a global movement of network and journey from ego to eco (Keith, 2020). The concept of Theory U was developed in 1968 by Dr. Friedrich Glasl and Dirk Lemson and was later improved on by Scharmer in the early 1980s before being systematically presented in the 2000s. As a build-up to technological innovations and socio-economic development, it is an indication that education systems, teaching and learning, curricula and instructors require restructuring in terms of operations. Theory U, the underpinning theory, was based on the work of various scholars who built their assertions on the experiential learning and action learning work of Revans, Kolbs, Dewy, Piaget, Zuber-Skerritt and other acknowledged founders (Van der Westhuizen, 2016). The focus of Theory U’s application was on revealing the learner’s ability to see the future as it emerges in the present, unlike the earlier scholars that built on experience and action. The purpose of the theory is to establish new ways of thinking to proffer new solutions to world challenges, link theory to practice, identify the blind spots and generate practical solutions and trust among the ecosystem stakeholders (Keith, 2020).

Christen, Sangra & Gonzalez-Sanmamed (2016) posit that technological evolution has influenced methods of teaching and learning by representing the abstract knowledge, interactive hardware, interactive board, learning technology, systemic learning, and action

research. The restructuring and paradigm shift will inform a new model for better instruction, which is an invitation for the learners not just for change but for the transformation of entrepreneurial behaviour to deal with the challenges of the 21st century to access the highest potential future (Guttenstein, Lindsay & Baron, 2014). Theory U can be viewed from two perspectives, namely theoretical and practical social technology. It suggests how situations emerge that strongly influence individuals' interpretation and understanding skills and a set of principles and practices arranged around the U shape respectively (Schweikert, Meissner & Wolf, 2014).

The application of Theory U in social developmental learning intends to align and develop learners with systemic action learning action research and the best way to address this, as suggested by Scharmer and Kauffer (2013), is to view education as the system that is ready to satisfy the industrial society. It is a process of bringing new models of learning into the generic U-shape with various levels of perception through reactive, presensing and prototyping processes (Scharmer, 2018) that create new solutions and conditions for the generative process (Schweikert et al., 2014). This is important for entrepreneurship students because learning may require a framework in which flexible and adaptable models of learning involve theories, tools, action, hard- and software and interaction between lecturers, practitioners, students, and the community (Fry, Ketteridge & Marshall, 2008).

Transformational theorists assert that the best practice is to borrow extensively from what is practicable, where and how as an alternative approach to development (Westhead & Wright, 2011). The youth and students do not see the future in the immediate environment, which was the collective failure and negligence of leadership, learning and transformational change. To salvage the situation strategically and intentionally, a sound leadership approach must be employed to allow people to create a future of greater opportunity for themselves (Scharmer, 2001).

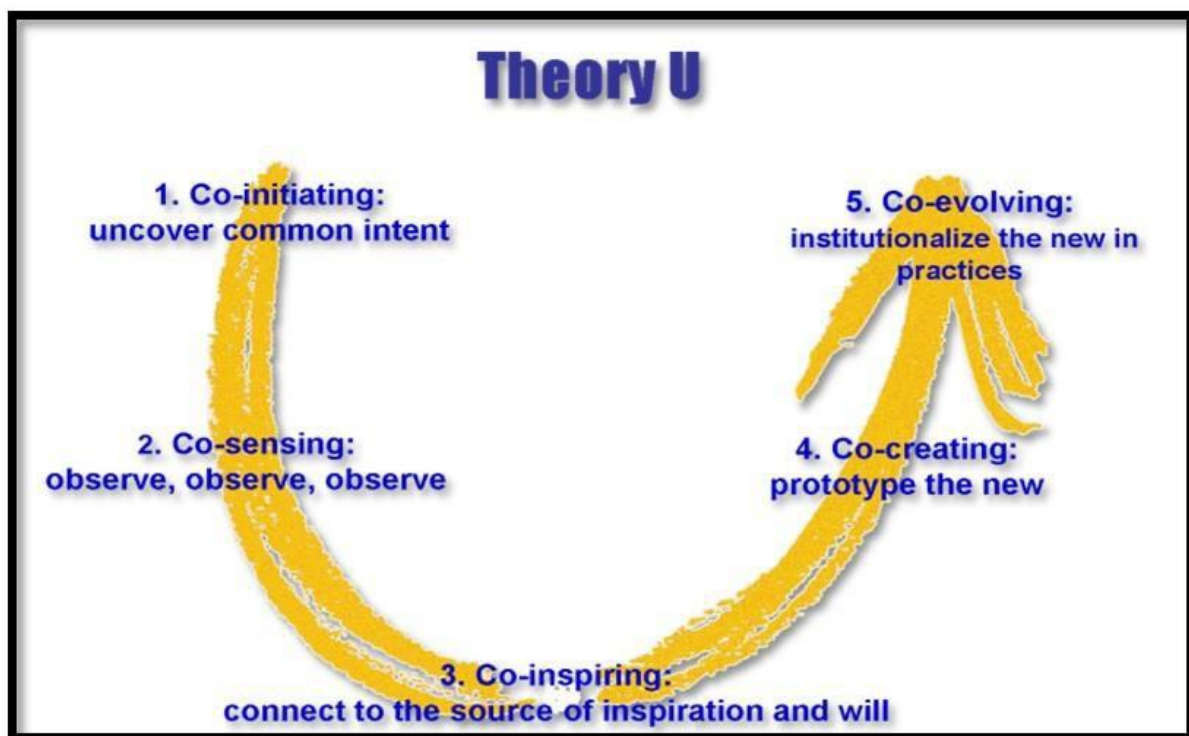
To align with the emergence of the fourth industrial revolution, this research employed systemic action learning action research that recognises creativity, innovativeness and entrepreneurial thought based on the traditional learning methods to project the future using the reactive and generative stages of Theory U. This encompasses all the factors and frameworks that will enhance the development of entrepreneurship locally to affect growth and development (National Planning Commission, 2013). This is regarded as a system of nondualism and can be applied to institutions and global society from the macro to mundo level

(van der Westhuizen, 2016). The incorporation of all the systems and Theory U is as a result of Revans' action learning failure to incorporate all the concerned systems and human learning procedures, which was not enough to transform the learners to act on their entrepreneurship intention.

The synergy between the project coordinator, facilitator and participant students resulted in the incorporation of cognitive and non-cognitive activities and achievement where the coordinator of the project planned and facilitated learning and research by utilising relevant technological tools. Interactive action indicated knowledge construction and collaboration and was also an indication of the level of entrepreneurship pedagogy employed by the expert facilitators and practitioners. Theory U employed collaborative learning where two, more or teamwork was promoted; learning together from the expert to activate potential (Lai, Shum & Tian, 2016).

Figure 3.3 presents the Theory U model employed in the SALAR development process in which student participants learn and lead from the future as it emerges according to Scharmer's five stages of transformative learning to build tomorrow's entrepreneurship leaders.

Figure 3:: Theory U model



Source: Scharmer and Kauffer (2013)

Figure 3.3 presents the five stages of Theory U and its application as a possible driver for student entrepreneurship development in the systemic action learning action research project SHAPE. The theory moves from reactive response to generative response where a new project is introduced, systemic action learning action research is applied, and holistic core competencies are established for the development of ESE and IEO in stages (during and after) on the higher education institution students. Theory U's five stages advanced by Scharmer and Kaufer (2013) were applied to present an understanding of information pertaining to physical space, social atmosphere and pedagogical principles and practices.

3.11.1 Application of Theory U's Reactive Stages (During)

The beginning of the U movement is traceable to the connection between individual learners or participants, the trainers and the researcher when establishing training objectives aimed at promoting transformative learning for self-development (Van der Westhuizen, 2016). This study explored how the reactive stages promote a shift from the gap identified in the study through the left side of the U-shape, around the bottom and up the right side of Theory U in a spiral dynamic progressive development. This describes training with a nondualism approach (systemic action learning action research) that enhances the shift and links it to entrepreneurial development. For the development to take place, cognition, emotion and motivation are key behavioural factors to be considered, as “an open mind, open heart and open will” are important, (Scharmer, 2007). The behaviour is strongly influenced by psychological needs, such as autonomy, competence, and relatedness and these are perceived as somewhat different dimensions to those of feelings and emotions (Martela & Riekk, 2018). The two main reactive stages of Theory U are co-initiating and co-sensing.

3.11.2 Co-initiating

This is the first stage of the reactive stages of Theory U that reveals how to learn in the face of disruption. This is achieved by reflecting on the professional experience in which a group of learners unites with a common goal to address a given situation (Hartley, 2014). It is an introduction to enhance learning and development by offering a method for relinking the parts and the whole (nondualism), allowing learners to sense, see self and decide (rethink) where to be at the nearest future. This implies learners uniting for the common purpose of development, shifting from ego-system awareness to eco-system awareness (Scharmer, 2018). It has to do with uncovering a common intent, stopping to listen to others and to what life calls you to do,

convening people from different fields for brainstorming, not to agree to an answer but to argue and arrive at a stage of initial group development (Scharmer, 2013).

The co-initiating stage can be applied to change learners' behaviour to learn how to search or identify entrepreneurship opportunities in the society and change ways of doing, thinking and learning by initiating collaboration within the potential student entrepreneurship training participants ('aha' moment). This means taking them through their blind spots, learning individually and collectively to grow and develop a business idea and plan together by establishing relationships with one and others, the system and themselves (Van der Westhuizen, 2016).

3.11.3 Co-sensing

This is a process of submitting self to learning and development at the place of most potential; suspending judgement to open self for new innovation and creativity that allows the new behaviour to emerge with mind and heart open (Scharmer & Kauffer, 2013). It connects diverse people and places of different cultural backgrounds in a collective reasoning on how to develop self as future entrepreneurship leader as espoused in the study's demography to sense the ecosystem in a non-duality form. This explains how the collective potential of the training participants could be enhanced by being able to share this in-depth clarity, the ability to "sense" individually and collectively, thus exhibiting their self-efficacy (Scharmer, 2010). The participants in this study were able to gain awareness of their collective potential at this level and act proactively by submitting self for learning to develop their potential spiral dynamically, focusing on shifting from old ways of assimilation and listening with the mind and the heart (Hartley, 2014). The practitioner mentor evaluates the potential entrepreneurs through the practical assessment of creativity and innovation, where learners are taken through their blind spots, learning individually and collectively and establishing relationships with one another, the systems and themselves thus building self-efficacy. This stage took the learners to the stillness level where they submitted to the emerging future, allowing the old self to die and the new self to emerge.

Application of Theory U's generative stages (during and after SHAPE)

Theory U's generative side is also applicable to this study. The stages involved in this side include co-inspiring, co-creating and co-involving.

3.11.4 Co-inspiring

This is described as a source of inspiration; connecting with the will, going to the place of silence and allowing the inner knowing to emerge. It is the stillness stage or melting point of allowing one's old self to go and opening completely to something one has sensed but has not been revealed and a changed attitude to allow the behaviour to emanate (Scharmer & Kauffer, 2013). This stage is referred to as decision making, seeing oneself from another perspective, becoming a leader and having intention to exhibit acquired skills (Weinberg, 2020). According to scholars, this reflects the subjectivity of the individual through receptivity and engagement. Scharmer (2007) posits that this occurs when human perception begins to connect to the source of the emerging future (the stakeholders and the entrepreneurship enablers in the sector) and begins to resonate and one begins to experience a profound shift and change from the initial stage where we operate. Theory U's co-inspiring also teaches about connecting with the source of inner knowing where a deep threshold needs to be crossed to connect to one's real source of presence, creativity, and power (Van der Westhuizen, 2016). It is related to IEO development in that proactivity is essential for a calculated risk-taking decision, deep thinking to see the future from a different perspective from what was and what is and to become an emerging future. It is a self-transcending experience where we open who we are and our work as part of our whole; it is letting go of mental habits, pre-conceptions and the analytical ways of understanding reality that are embedded in one's personal experience (Guttenstein et al., 2014). Undertaking this collectively allows the learners to co-create a more positive future, crossing a threshold to an expanded level of consciousness for the future to emerge.

3.11.5 Co-creating

This is a prototype that explores the future by doing and brainstorming collectively, engaging in innovation, and putting creativity into practice (Scharmer, 2010). The future emerges by institutionalising and abandoning procrastination for proactive risk taking. This is a moment of change, where the learners choose to work in groups for a collective purpose, to develop one another while connecting with something far deeper and allowing hands to co-create with power, feeling love and care for the world as perception widens. Relating this to learning, it

encourages “feedback from the universe,” to improve on one’s emerging idea and concept through teamwork or collectivism (Scharmer, 2013). This research through training refers to this stage as a business model canvas, where learners learn how to be creative in line with IEO’s innovation to establish that learning took place in action learning and action research as a predictor of entrepreneurial action. According to Hartley (2014), the process supports the learners by providing nourishment to one another in creating social changes around the world. Although the learners may come from diverse settings, they converge through the collective learning process as a constellation of global citizens.

3.11.6 Co-evolving

Co-evolving occurs by moving through the micro, macro and meso levels to the mundo level. It simply means paying attention by listening through emphatic dialogue and networking for the satisfaction of society and the global village. It is a level of satisfying the world or the economic society and the individual self, partner or collective group with the new evolving products or services, which is referred to in this research as entrepreneurial action or outcome.

It is interesting to note that the engagement of students in participatory workshops, practical and action learning programmes boosts post-training for the labour market and output entrepreneurially. The United Nations Economic Commission for Europe (UNECE, 2013) affirms that participation in both theory and practical learning changes students’ orientation, adds value and positively enhances output. Similarly, Ronnqvist and Rigley (2010) assert that practical experience gained in the entrepreneurial action learning workshop empowers learners to take entrepreneurial action rather than search for unavailable jobs. Other authors posit that action-oriented learning approaches with real-life orientation are suitable for developing entrepreneurship and intrapreneurship, as both are built on similar entrepreneurial behaviours (Ward & Baruah, 2014). This formation and impartation of knowledge as a transformation mechanism are in line with Scharmer’s Theory U, which was illustrated earlier in the transformation that involves taking cognisance of events currently occurring in society (Scharmer & Kauffer, 2013). According to these authors, it refers to observation of the phenomena and later takes decision about ones’ desire future as it emerge in the present.

Theory U is a purposeful design that facilitates transformation from individual and organisational behaviour, moving from traditional ways of learning to creative thinking. It is a proactive, innovative, and sustainable approach to achieving greater heights in entrepreneurship

training, development, and growth (Hardman & Hardman, 2014). The U process encourages individual learners to forego their old self (thinking and downloading) and move towards collaborating (co-creating) with one another (Scharmer, 2007).

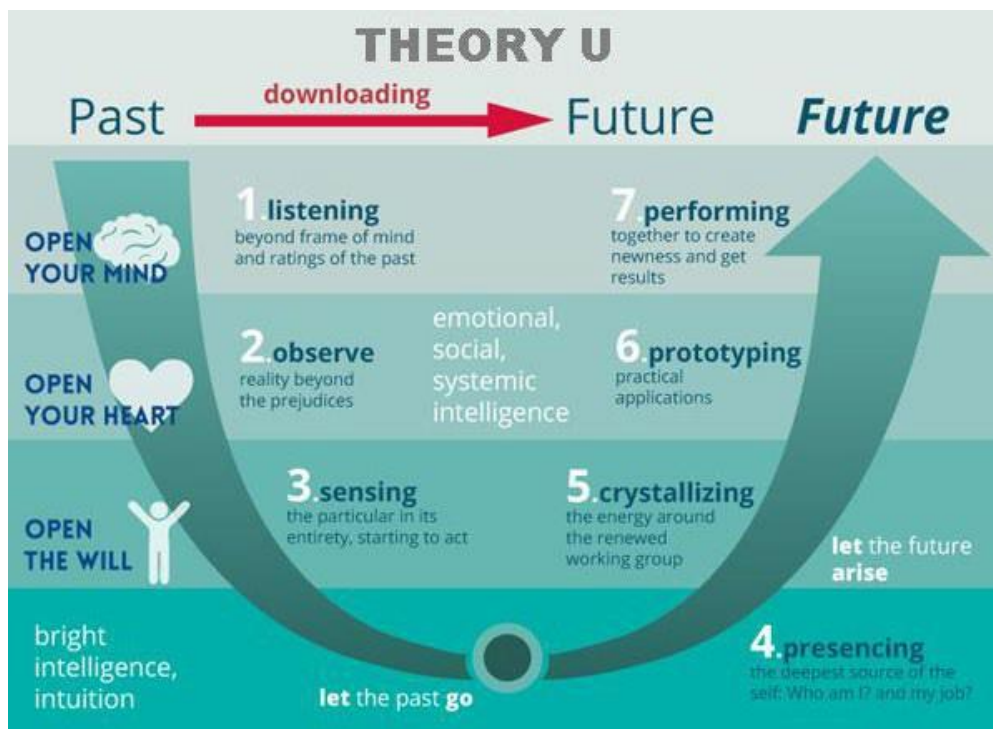
For the effective use and application of the U process, Scharmer (2009) identifies the enabling factors that must be considered for entrepreneurial self-efficacy and individual entrepreneurial orientation development. These are described in the ensuing paragraphs.

- **Listening.** This can be described as a point of inspiration and an inner move where life reveals itself with regard to what one is and what one is called to do, having the original thought of whom a person is through experience. It is a stage of effectively listening to one's mind, heart and will to create an open space where others can contribute. One's inspiration calls for action that requires proactiveness or readiness to take a calculated risk where others are unwilling to for entrepreneurial action.
- **Observing.** This refers to the level of seeing things differently through the voice of judgement. It is a situation where one sees things with new ideas, creativity, innovation, and fresh eyes. Observing allows one to make discoveries that did not previously seem pertinent. Thus, seeing means connotes open mind to the emerging future through searching the ecosystem which the participant submitted themselves to in the learning process to acquire skills that will solve emerging future challenge.
- **Sensing.** According to Weinberg (2018), the sensing process is underpinned by the neurophysiological factors that recognise associations (integration) and break down the redundant old self. This is the level of interconnectivity with the system (micro, macro, meso and mundo), various stakeholders and agencies. It can assist to remove hindrances and obstacles that one encounters when venturing into a business. Sensing is important because it engenders a feeling of being united as a group with an open mind that projects new ideas and perceives reality in a new way. An open-heart enable's one to see things in their entirety and can propel one to act. It is a stage when the participants can establish relationships with their colleagues and stakeholders, particularly the relevant practitioners, for entrepreneurship action.

- **Pre-sensing.** This is a revelation of the actual self, identifying qualities and characteristics embedded in oneself. It is a process of dropping the old self and allowing the new self to emerge and embrace the inspiration that collaboration with like-minded people can bring. Pre-sensing also allows one to pull oneself out of the depth of experience by submitting oneself to learning and the acquisition of skills and knowledge.
- **Crystallising.** This refers to the ability to see the future in the present as it unfolds or emerges. It is a level of projection to the emerging future that is meant to attract like-minded people to become vehicles for the emerging future for all other groups. It is the stage at which the learners' shared and combined insights regarding a common scenario employ different designs such as dialogical techniques and practices (Peschl & Fundneider, 2014). It is the stage at which the participants learn how to present saleable business ideas to entrepreneurship enablers for sponsorship in an abstract form to be acted upon soon.
- **Prototyping.** This ensures the application of what has been learnt by integrating thoughts, feelings and will to learning by doing and allowing the existing processes and frameworks of the learning to be assimilated (Peschl & Fundneider, 2014).
- **Performing.** This is a process in which it is possible to individually and collectively co-create or perform for society's satisfaction. It is an evolving stage at which the business is launched to the market for acceptance by activating intention and renewal of entrepreneurship activities for the growth and integration of the economy.

Figure 3:3 depicts the U process of learning and the transformative enabling factors without which Theory U cannot achieve its goals (Scharmer & Kauffer, 2013).

Figure 3:3: Theory U Transformative Factors



Source: Scharmer (2007)

Figure 3.3 reveals how learners' potential can be transformed using the afore-mentioned processes and practices. Hardman and Hardman (2014) support Theory U social technology as a transformative process that changes learners' behaviour to learn from the future as it emerges. The theory aids the learners to identify the efficacy and potential in self through the relationships established during co-creation and co-evolving. Van der Westhuizen (2017) posits that learning should not be solely be an abstract transfer of knowledge but should incorporate the transformative learning process with personality change and development. Theory U model depicts the learning process that can influence student entrepreneurs. It is the key coverage area of this research, from co-initiating and traditional teaching methods (classroom teaching and learning) to the modification provided by the systemic action learning action research that promotes creativity and innovation. The synergy of 'co' in the model introduced new idea creation, teamwork or collaboration through different personalities with a focus on achieving a strategic fit entrepreneurially.

3.12 SYSTEMIC ACTION LEARNING ACTION RESEARCH

This study is underpinned by the action learning advanced by Revans, which was the proven method since 1950 to proffer solutions to people, teams, and organisational problems, thereby gaining new knowledge through penetrating learning ability (Revans, 1982; Yeo & Gold, 2011). It was this approach that Van der Westhuizen (2016) described as systemic action learning action research (SALAR). It is a learning method that teaches the whole from the part in a systemic interaction between the educators and participants. It means to co-initiate and co-evolve by proffering possible solutions to a problem.

For the purpose of this research, it refers to activities and interaction between the stakeholders in the learning process. It develops students' entrepreneurship self-efficacy and activating individual entrepreneurial orientation towards acting on their intention. This is in relation to nondualism philosophy that was introduced to overcome the concerns of the subject-object dualism, which proffered that the subject and the world are fundamentally separated and inhabit different spheres (Kopf, 2004). Therefore, nondualism is "many in one, one in many", which indicates a paradigm shift from the primacy of universal to one that balances the dimension of oneness or identity with multiplicity or difference. It indicates the interrelatedness of the system where "many is one" and "oneness of the many", which implies a relationship between the universe and individuals the world and its constituents. This study embraced the nondualism philosophy through the incorporation of various systems such as action learning, action research, government, practitioners, academics, training, spiral dynamic development model theory U and the participants to interrelate to develop participants' entrepreneurship orientation for action. The training considered the participants' classroom learning as the foundational pedagogy for the training and built on it for systemic action learning action research with all-encompassing systems. It ensures all the systems are active for achieving the same goals together as a whole, while each retains its individuality.

According to Nielsen (2019), systemic learning is nondualism, which simply means that all things are interconnected and interrelated and cannot be separated although all things equally retain their individuality. This implies that the operating unit of learning in entrepreneurship cannot operate in isolation but needs others to thrive, particularly when learning involves giving instructions either by programming with technology or in a passive form (European Union, 2020).

Studdard, Dawson and Jackson (2013) posit that in the search for an appropriate method to achieve a better result in developing entrepreneurial self-efficacy and individual entrepreneur orientation, no method should be left out. Systemic action learning action research, as the name implies, indicates that there should be interconnectivity with other systems and as such it is the traditional method that serves as the basis for other entrepreneurship pedagogies. Systemic action learning action research is a complex exercise that revolutionised education by involving the whole rather than only the parts (Capra & Luisi, 2014). According to these authors, it refers to the interconnectivity of the systems. Scharmer and Kauffer (2013) opine that learning at this level requires the involvement and collaboration of all stakeholders in the development of entrepreneurship, individuals, learning centres as organisations, the government as an institution and the world as it applies to this research in a multi-level system workshop.

In the context of this research, the academic environment produces personnel that will manage activities relevant to entrepreneurship. This is to create value in the economy and in return assist in building capacity to meet economic demand to sustain business activities. This will also assist to equip and develop graduates with the necessary financial skills to meet local and global demand as well as entrepreneurial mindsets to enable diverse solutions and innovation for self and the country at large (Pittaway, Huxtable-Thomas & Hannon, 2015; Stromquist & Monkman, 2014).

Numerous scholars have argued that there should be a paradigm shift in the entrepreneurship education transmission method (learning ‘about’) to action learning (learning ‘for’) to offer students the skills that suit the real-world practice of entrepreneurship (Hermann & Bossle, 2018). Action learning is seen as a social transformative technology through which learners collaborate with other participants and reflect on the subject matter, which leads to individual development and transformation (Sakinofsky, Amigo & Janks, 2018). For Zuber-Skerritt (2015), action learning has its fit in invaluable experience and reflective practice through involvement, engagement, research and leverage to encourage collaboration to allow for new insight. This is consistent with the views of Lackeus (2013) and Fullan and Langworthy (2014), who hold that students also become teachers, educating their peers about what they have learnt in the process. Such actions and resulting insights facilitate a deep learning process. Scott (2015) describes action learning as a medium of engagement, collaboration, inquiry and research into real life challenges that requires feedback from previous experience to produce acceptable results. For Schwerdtet al. (2011), it is seen as a set of guiding rules rather than

recommendations on ways to develop teaching and learning procedures. Marquardt (2004) posits that it is an involvement learning system in which collaboration among stakeholders' proffers solutions to societies' challenges.

Pillay (2014b) asserts that action learning is a collaborative effort to generate business synergy for teamwork and identifies leadership ability in students that can be developed so that these people can address societies' economic problems. Action learning engages in hands-on learning that instils in individual learners the ability to act on their entrepreneurship intention. It also encourages starting a business during training, which can become an avenue to build and engage students more actively and make entrepreneurship training more effective (Edelman, Manolova & Brush, 2008; Neck & Greene, 2011).

In action learning method, the principle of teaching ensures that students do not learn abstract or theoretical knowledge alone but how to simply deal with tasks of entrepreneurship to create value to the society since entrepreneurial self-efficacy is task specific (Lackeus, 2013). It is worth noting that the action learning principle is based on scientific knowledge and not derived only from individual experience. It also contributes to the success of entrepreneurship and its management. Its principle is referred to as the rule of thumb learning method where learners do not mandatorily need to understand the theoretical rationale but must ensure that there are ways to accomplish the task. This indicates the effectiveness of the simple rules because the application is simple (Drexler, Fischer & Schoar, 2014). The principle also ensures learning by doing; learners are not necessarily passive recipients of theoretical content but actively perform the target behaviour through engagement. Action learning can also build learners into groups, where the teams are required to propose a real business within the course of their study in the college with support from the school (Van der Westhuizen, 2016).

The attributes that are germane to action learning are those that can influence the success of teaching and learning from three different perspectives: the student, the educator and the society (nondualism) (Mughal, 2012). Action learning ensures that learning takes place and the learner gains insight as well as experience during the programme. Activities at the learning stage inform the restructuring of the programme and the curriculum, collaboration for task accomplishment in which problem solving, assignments, question and answer time allows for insightful sessions. Action learning is usually voluntary, which makes learning more experiential for student participants.

The tripartite nature of the programme encourages feedback in the triangular form i.e. building the student's career, broadening the educator's knowledge of the technological equipment through participation in the programme and from the government in terms of policy making, regulation and providing a support system. Through learning experience in the hub, learners are encouraged to make bold decisions to take entrepreneurship risk and embrace the possibility of failure. The government identifies the venue where the action learning will take place and the programme's objectives, as these are the main attributes of action learning. Action learning also encourages openness of oneself to others (open mind, heart and will) with trust and respect for teammates and other participants and tolerance and perseverance (Scharmer & Kauffer, 2013). These are values that determine the successful accomplishment of the action learning programme (Zuber-Skerritt, 2015).

Hannon, Gillinson and Shanks (2013) posit that it is expected that learners enhance their technical expertise and their interactive skills, because to be innovative and able to proffer solutions requires flexibility, a creative mind and team spirit. It is about seeing the future in the present. '**Presensing**': seeing the future from different perspectives of collaboration with the use of social technology, identifying where new opportunities lie and evolving (Davey, Scharmer, 2009). All attributes of action learning discussed require the support of government agencies and parastatals; also, individual responsibility, more so than with traditional learning methods, as this can build and activate youth entrepreneurially to shape a new world (Hannon & Penaluna, 2016). Considering the invaluable role that entrepreneurship plays in local and international economic development, it is imperative that the government prioritise regulations, policy and support that will enhance start-up ventures in developed and developing countries. Naude (2013) asserts that the propensity for innovative entrepreneurship in South Africa is higher than what is covered by policy, media, and literature.

The conceptual framework for this study mediates between Theory U - entrepreneurship pedagogy training and individual entrepreneurial orientation and mindset outcomes. Attention was therefore focused on how the action learning can enhance students' entrepreneurial self-efficacy to act on their intentions. Van der Westhuizen (2017) argues that there is a positive relationship between action learning and entrepreneurship self-efficacy that promotes entrepreneurship activities. As the aim of this study was to develop students' entrepreneurial self-efficacy and individual entrepreneurial orientation focusing on entrepreneurship intention and action, a group of volunteer student participants were engaged in the project SHAPE 2017

at the University of KwaZulu-Natal to ascertain how the reactive and generative stages of Theory U develop their ESE and IEO.

3.13 THE RELATIONSHIP BETWEEN THEORY U AND IEO

As discussed earlier, the Theory U framework is a profound changed way of being that utilises various methods. It can be used as a conceptual or theoretical framework or as a learning model. This should be on the systemic level where individual or groups of entrepreneurs interact. It is a learning theory that was applied to this study for entrepreneurship development in a systemic action learning action research (Van der Westhuizen, 2016) that can activate individual entrepreneurial orientation from reactive responses to a generative response field. Individual entrepreneurial orientation entails procedures, practices and activities of decision making that usually result in entrepreneurial action (Van der Westhuizen, 2019).

IEO can be influenced by the decision-making process through its internal domain, such as risk taking, proactivity and innovation. The relationship between the concept of IEO and Theory U serves as a determinant of the interrelatedness and integrativeness of the two based on the principle of nondualism that both can be used as social transformative technologies to enhance entrepreneurship (Van der Westhuizen, 2018). It implies that the two concepts in the system share a common trend and move towards one direction of harnessing the development of entrepreneurship.

Van der Westhuizen (2018) notes that the stages of Theory U are interrelated with the IEO propensities as factors of entrepreneurship development and growth. The author argued further that there is a significant correlation between IEO factors and Theory U's reactive and the generative stages. Van der Westhuizen (2018) observes that the risk-taking factor of IEO is part of the reactive stages of Theory U and is significantly related to innovation as co-inspiring, thus confirming its interrelatedness with Theory U.

Scharmer and Kauffer (2013) posit that the risk-taking factor of IEO is related to Theory U and linked to openness of mind, heart and will to suspend thought patterns previously downloaded and projected into the future through co-sensing by established habits and ad hoc solutions. It relates to the source of inspiration that propels one to view as idea objectively and the willingness to engage in new innovative activities. It also, with the proactivity factor, opens

the mind, heart and will to crystallise a vision and intention, thereby co-creating the acceptable “new”.

Ramkissor and Cassim (2013) submit that IEO’s risk taking, and Theory U’s co-initiating are related to each other in the process of entrepreneurship, as risk taking is a behavioural dimension of IEO that encourages the identification of gaps or opportunities. According to these authors, IEO focuses largely on individual innovative actions, while reactivity is associated with individuals’ responses to external stimuli (Ramkissor & Cassim, 2013). Dunn (2013) posits that co-initiation in IEO takes place on the interpersonal and intrapersonal levels as it is an inner thought of new things to emerge. Individuals always find resources within themselves that inspire them to initiate and engage in the entrepreneurship process and explore the entrepreneurship space for possibilities in the ecosystem.

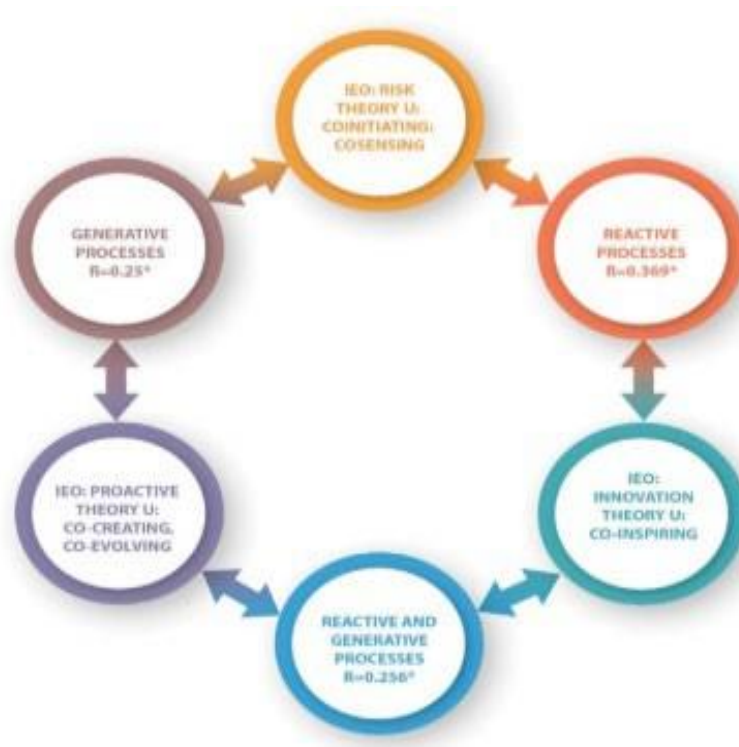
Pillay (2015) opines that IEO and Theory U’s co-sensing phase build and shape relationships with the relevant stakeholders to understand the environmental perspective as an undivided reality where uneven realities are deconstructed, and collective development and growth is encouraged. This is essential for entrepreneurs to break through old patterns by engaging in various relevant and fruitful experiences (Van der Westhuizen, 2016).

Lumpkin and Dess (2001) explained IEO propensities, innovation and proactivity in relation to co-inspiring in Theory U. According to Scharmer and Kauffer (2013), this inspires learners to see emerging the future through the reactive stage and the co-create products. Zellweger and Sieger (2012) also relates IEO and co-inspiring to initiative as a first-mover advantage in pursuing new opportunities and acting in anticipation of the emerging future. Linton (2019) holds that proactivity is a forward-looking perspective that is crucial for innovation and entrepreneurship. It can also be described as a behavioural trait embedded in an individual as a forward-looking perspective that constantly seeks opportunity (Van der Westhuizen, 2019).

IEO proactivity and Theory U’s co-evolving can be described as a movement and result of prototyping development to engage in entrepreneurship activity by oneself or in partnership. It has also been described as an outflow of intensity in the U process. This may be on an intrapersonal level where an individual move to activate entrepreneurial behaviour to a more formal entrepreneurship (Scharmer & Kauffer, 2013). In the Theory U phases, co-inspiring and pre-sensing are synonymous in that they reveal the conceptualisation of a creative and novel idea that may lead to innovation (Scharmer & Kauffer, 2013).

Van der Westhuizen (2018) represented this in a formula as $(CI^1) + (CS) + (CI^2) + (CC) = CE$ (co-evolving) where (CI^1) means coinitation, + (CS) cosensing, + (CI^2) co-inspiring + (CC) co-creating, which is equal to (CE) co-evolving. It is equivalent to entrepreneurship action. Figure 3.4 depicts the interrelatedness of Theory U's transformative social technology with individual entrepreneurial orientation.

Figure 3.4: Interconnectivity between Theory U and IEO propensities.



Source: Van der Westhuizen (2018)

Figure 3:4 explains the interrelatedness of the concepts in developing entrepreneurship. It shows that Theory U has a relationship with IEO and can positively enhance entrepreneurial development because it links IEO factors to the mind, heart and will of an entrepreneur.

According to Scharmer and Kauffer (2013), actions are observed and influenced in different ways through individual interactions at various levels of systems that influence IEO. These levels are individual, environmental, and local economic development levels. The individual level is synonymous with one's mind and outset, the environmental level is where co-sensing is exhibited for the entrepreneurial process and the local economic development level is where individual practice and support for entrepreneurship development and growth occurs nationally and globally (micro, meso, and macro and mundo systems). The actions on all levels influence

IEO through projection involving what is known as the thalamus, which is deep in the human brain (Weinberg, 2020).

3.14 ENTREPRENEURIAL PEDAGOGY

Entrepreneurial pedagogy is an extension of entrepreneurial education that challenges educators to design an acceptable opportunity for students to study entrepreneurship in higher institutions of learning (Lackeus, 2015). Scholars are of the opinion that the emphasis should be on individual entrepreneurship learning rather than on group activities that will be relatively unstructured (Bell, 2015; Alves, Fischer, Schaeffer & Sergio, 2019). Entrepreneurship pedagogy identifies challenges and presents acceptable solutions under conditions of ambiguity and risk, an environment that is unstructured in which students are expected to thrive (Linan & Fayolle, 2015; Graevenitz, Harhoff & Weber, 2010). Most of the universities that run entrepreneurship programmes are challenged to focus on three significant areas for the development of entrepreneurship based on the global trend and as enshrined in the development strategies of the EDHE in South Africa. Globally, entrepreneurial pedagogy includes a) entrepreneurship education, b) outreach activities and c) entrepreneurship research (Matlay, Maritz, Jones & Shwetter, 2015) while in South Africa, it includes: a) student development, b) staff development and c) programme or curriculum development.

Scholars have argued that a suitable pedagogy depends on the scope of what entrepreneurship teaching and learning is understood to ‘mean’, what it ‘is’ or what it is attempting to ‘achieve’ (Fox, Pittaway & Uzuegbunam, 2018; Neck & Greene, 2011). Thus, one can deduce that there is no generally accepted definition of the concept of ‘entrepreneurial pedagogy’; various strategies can be employed as there is no universal approach that could be used in all situations (Gerba, 2012; Coyne, Pisha, Dalton, Zeph & Smith, 2012). Entrepreneurial pedagogy is a method of educating, training, teaching, and learning that was originally referred to as children’s education, especially boys. This conceptual meaning has since changed and has been used in two broad ways generally referred to as the scientific theory of education and the assumption of education practice (Zogla, 2018). Later the concept was identified as the basic assumption for teaching and its practices (Neck & Corbett, 2018). From an Anglo-American perspective, the pedagogy concept covers the terms pedagogy and didactic while from a European perspective, it is conventionally regarded as a separate concept that considers the mission of education in society, while the latter considers a practical learning process in the classroom (Rose, Rouhani & Fischer, 2013).

There is a need for the interface between entrepreneurship and pedagogy to be broadened so that entrepreneurial learning is based mainly on creativity and innovation approaches rather than traditional teaching methods (Istance & Paniagua, 2019). It has been revealed that learning entrepreneurship is dependent on the applied pedagogy, but educators are still applying conventional teaching methods that provide an understanding of entrepreneurship education's purpose, entrepreneurial learning, and its process. Its clarification will help practitioners to reflect on and renew their teaching methods bearing in mind the fact that pedagogy is the best way that knowledge can be imparted during teaching and learning. Thus, for any educator to embrace the 21st century's technological advancements in teaching and learning, there must be competency in the use of various technologies for the expansion of pedagogies so as to instil creativity and innovativeness in the learners of entrepreneurship (Istance & Paniagua, 2019).

Bringing new “live” streaming learning programmes (Webinar) through cyberspace has eradicated the challenges of time and distance in the implementation of the entrepreneurship theory and practice. This will also help the learners' technical-know-how and their ability to engage in venture (Istance & Paniagua, 2019) with the covid-19 experience that changed the world of work and services. An attempt is made here to examine the different dimensions of entrepreneurship pedagogy in relation to how its application could be a basis for students' entrepreneurial self-efficacy and individual entrepreneurial orientation development applying Theory U.

3.14.1 Traditional Teaching

This is a method of entrepreneurship pedagogy that teaches and attempts to stimulate orientation through formal education that aids cognitive learning, critical thinking and reflection among individuals that may later have a profound impact on motivation and skill to develop their entrepreneurial proclivity (Gerba, 2012). In the opinion of Bendassolli, Borges-Andrade, Gondim and Makhamed (2016), a teaching method is a way of acquiring psychological entrepreneurship competency to increase the knowledge of would-be entrepreneurship practitioners and develop them academically. This opinion is contrary to the views of some scholars who believe that entrepreneurship should not be taught. However, to emphasise the importance of traditional teaching in entrepreneurship, Wei, Liu and Sha (2019), Ndou et al. (2018) and Gautam (2015) argued that if entrepreneurship should not be taught, why then do organisations sometimes strategically engage employees (intrapreneurs) in training and development to outsmart their competitors or how do they

identify a gap to render a service or manufacture a new product? The essence of entrepreneurship education is to foster entrepreneurial mindsets, skills and attitudes in students and enable them to identify gaps, be innovative, initiate start-ups and grow and sustain them. Wei et al. (2019) posits that traditional teaching employs question and answer, case study, assignment, tutorials and writing skills pertaining to business ideas, proposals or plans that develop the psychological skills to recognise business opportunities or identify gaps. This position is consistent with a study conducted by Libombo, Dinis and Franco (2015), who posit that teaching entrepreneurship in higher education institutions is predominantly achieved by means of case studies and lectures with a focus on content rather than learning. This quality of learning avails learners of the management skills to practice at all levels of entrepreneurship as intrapreneurs.

In the pedagogical method, educators also have the responsibility to develop the students' discovery, reasoning, and implementation skills for excellent performance in their world. It also ensures the teaching of foundation principles such as strategy, finance, law, human resources, marketing, accounting, operations, and leadership so that when the intention is acted upon, the rudiments of being a perfect entrepreneur are known and the entrepreneur can practice as an expert (Neck & Greene, 2011). The combination of these principles in learning adds value and capture entrepreneurship as an essential tool to create economic, social, and personal value (Neck & Greene, 2011). The development and transformation of the teaching content in the face of information communication technology was a challenge to educators that pushed them to learn about the application of different technologies for the dissemination of knowledge and skill in the classroom. However, there is a call for more teaching content for entrepreneurship in various pedagogies such as modules, case studies and mentoring, which are essential for development. Using technology to disseminate knowledge allows the learner to understand that entrepreneurship goes beyond traditional teaching, writing business ideas, identifying gaps or opportunities to having the ability to put what is being taught into practice and this can only be achieved by mastering and applying the skills that have been acquired to add value to society.

The development and transformation encourage the intending entrepreneur to take risks, embrace failure if necessary and go back to the drawing board for additional learning. Although traditional learning is not practical in its orientation, it teaches one how to utilise the tools and introduces other pedagogical teaching and learning, knowledge is the key to successful practice. It is generally accepted that the traditional learning method does not effectively

encourage entrepreneurship attributes and as such encourages the learners to remain dormant and prepare to work for someone or become an intrapreneur rather than an entrepreneur (Li & Zahra, 2012; Genoveva & Kartawaria, 2020). Entrepreneurship education has recently begun getting the attention it deserves in most South African universities. It is generally believed that educators are also acquiring more skills on how to better teach the course and how to apply different entrepreneurial pedagogies to develop innovative and creative ways of teaching entrepreneurship. This is promoted by various government initiatives, grants, funding and support from the Department of Higher Education and Entrepreneurship Development in Higher Education (Lekgotla, 2019).

For the purpose of this study, traditional teaching was regarded as an old method of learning and as a tool for the practice of entrepreneurship. Systemic action learning action research is a non-duality approach preferred to the traditional method, which believes that entrepreneurship needs not be taught. Although traditional teaching is essential, scholars have argued that it is inadequate for potential university youth entrepreneur start-up and commercialisation (Nelson & Monsen, 2014). Similarly, the fact that someone has the required capital to start a venture or has knowledge through a family business is not enough for a start-up but acquisition of the required skills in an institution can make a successful entrepreneur (Sousa, Cruz & Wilks, 2018).

Educators should take the concept, content, settings and learners into consideration when choosing the type of approach (curriculum) that is suitable for teaching entrepreneurship (Lekgotla, 2019). This study therefore suggests that measuring traditional teaching with the same teaching dimensions used in entrepreneurship pedagogy to assess learning culture in universities without any modification or transformation to suit the objective of entrepreneurship development has limitations. This study was therefore aligned with the arguments made by Courtney (2018) and Thomas (2006), which suggested that the method of knowledge and skill impartation should be shifted from traditional learning (learning about) to systemic action learning action research and experiential learning methods (learning for) for students to acquire the technical know-how to practice in the real word.

Table 3.3 presents a comparison of traditional entrepreneurship teaching and entrepreneurship training incorporating elements of nondualism.

Table 3.3: Traditional entrepreneurship teaching and entrepreneurship training (non-dualism elements).

s/n	Traditional Teaching	Entrepreneurship Training
1	Long term	Short term
2	Theoretical and abstract learning	Experiential and hands-on learning
3	One-way teaching	Interactive, collaboration, teamwork and co-initiating
4	Learning about	Learning ‘for’ and ‘to’
5	Classroom teaching	Training at the hub and workshops
6	Teaching for knowledge	Learning for skill acquisition
7	Teaching for certification	Learning for innovation and creativity
8	Develop as an intrapreneur	Develop as an entrepreneur and creator
9	For self-development	For self, micro, macro and global development
10	Self-reasoning	Collective idea generation and reasoning (co-initiation and co-creation)
11	Self-finance	Government support
12	Learning to be subordinate	Learning to be a leader
13	Learning through academics	Learning through academics, facilitators, professional practitioners

Source: Authors’ compilation

Table 3.3 presents the disparity between traditional entrepreneurship teaching and entrepreneurship training as a nondualism concept. Evidence from the extant literature indicates that traditional entrepreneurship teaching is long-term learning structured for grades and degrees, basically taught in abstract or theoretically in a classroom. Its focus is on producing graduates for wage employment as intrapreneurs and self-actualisation, whereas entrepreneurship training is a short-term, hands-on or action learning process in a systemic way for skill acquisition taught by skilled and experienced academics, professionals, practicing entrepreneurs and mentors in an interactive manner. Entrepreneurship training (SALAR) in the context of this study is referred to as nondualism elements because it combines a number of systems to address the disconnection in the sector. It often takes place at a learning hub for sector development and adds value to the economy by creating businesses and job opportunities. to the ensuing section presents a discussion of the traditional teaching method and its various typologies.

3.14.2 Traditional teaching methods (TTM)

The traditional teaching method, otherwise known as the traditional or passive process of learning, is commonly used to teach in business schools and entails the use of various methods such as lectures, case studies, group discussions and classics (Khan, Ahmad, Naseem & Moinuddin, 2018). According to Aratsi et al. (2012), TTM require students to create business plans as a basis for learning entrepreneurship and small business management (Solomon, 2007). This may not adequately develop the expected entrepreneurship leaders required in the twenty-first century. This is so because its means of communication is one way from teacher to learners, thus eliciting inadequate feedback and interaction. Lahm jr. and Heriot (2013) posit that entrepreneurship education modules were traditionally taught by academics utilising business plans, case studies and supervised reading programmes that could not transform learners' behaviour. According to Fellnhofner (2017), producing a business plan could be detrimental to a student's perception of entrepreneurship as a career because of the complexity associated with it. He argued that a business plan may offer interesting learning benefits and should therefore not be discarded but should rather be upgraded because of its importance in entrepreneurship development and self-reliance. Aratsi et al. (2012) also observed that the methods of teaching must be carefully chosen in relation to the learning objectives in mind to ensure positive impartation of knowledge. Table 3.4 presents various teaching methods and their elements.

Table 3.4: Teaching methods and their elements

Teaching-learning methods	Elements
Direct teaching-learning methods	Inviting guest entrepreneurs, mentoring, official speeches, seminars, watching and recording videos, training in extracurricular activities, training in specialised lessons, small business mentoring and entrepreneurship tutoring.
Interactive teaching-learning methods	Process-oriented learning, learning from mistakes, interviewing entrepreneurs, bilateral learning, group discussions, networking, discussions, problem-oriented learning and active learning.
Practical-operational teaching-learning methods	Role-playing, training workshops, site visits, class practice, research projects, internships, business planning, starting a business, studying nature, investment projects and practical experience.

Source: Esmi, Marzoughi & Torkzadeh (2015)

Table 3.4 categorises TTM into direct teaching and practical learning approaches with relevant elements related to their implementation. The figure further classifies teaching-learning methods into three broad categories, namely the direct teaching-learning approach, the interactive teaching-learning approach and the practical-operational approach (Esmi et al., 2015). It also reveals that the method of teaching chosen for learning dictates the elements (content, context, and educator) that will be applicable to the teaching and this will determine the expected result. Schwerdt and Wuppermann (2011) agreed with Esmi's view that knowledge imparted through the direct teaching approach could inform a meaningful practical teaching approach, as presented in the Figure 3.4

3.14.3 Teaching by means of classics

Reading classic literature pertaining to world heroes' philosophies, novels and essays was adjudged stimulating and motivational to learners and would assist them to assimilate entrepreneurship concepts to make them aware of their potential and the demands of a career as an entrepreneur (Benson, 2013). Benson posits that such literature serves as a source of inspiration to entrepreneurship learners. According to him, reading literature increases students' comprehension of the notions that are more difficult to transmit with traditional pedagogy, inspiring them to really understand intuition and instinct and to recognise it within themselves and act accordingly (Benson, 2013).

3.14.4 Teaching by means of videos

Teaching by means of videos generates enthusiasm that can transform a student's life forever and instil an entrepreneurial mindset to recognise opportunities for venture creation (Van der Westhuizen, 2016). Videos can produce energising creativity and an environment suitable for entrepreneurship education (Damasio & Bicacro, 2017). From an education perspective, it has been observed that showing videos and films to learners could be a powerful approach to illustrate theory or explain a given scenario. It can also provide the learner with insight into how to observe real-life management and expert's positions in various sectors and contexts (Damasio & Bicacro, 2017).

3.14.5 Teaching by means of life stories

The life story approach was initiated by Rae and Carswell (2000). It was initially used with a focus on identifying situations and processes by means of which students had created and sustained a venture with the goal of advancing the practice and its importance in entrepreneurship education development. This approach is a laudable tool for students to learn entrepreneurship and to develop their individual beliefs, reflect on the use of entrepreneurial behaviour and develop their personal theory or model (Rae & Carswell, 2000).

3.14.6 Learning by means of emotion and failure

Learners are trained to manage their emotions and embrace failure during turbulent business periods. Emotions, if well managed, can open doors for opportunities, which is the essence of entrepreneurship. To support the approach, Shepherd and Patzelt (2018) suggested emotional displays that teach learners how to effectively manage negative emotions caused by failure. Emotional display introduced role playing, which was used less frequently by educators than other approaches such as simulations, case studies and readings. In psychological contexts, the role play approach can create situations in which the learner needs to ascertain behaviours and attitudes (Harmon-Jones, Harmon-Jones, Amodio & Gable, 2011).

The main aim of introducing entrepreneurship to the curriculum initially was to teach about entrepreneurship, which defeated its objectives of venture creation and maximisation of human capital through employment creation. The question now is to what extent can teaching methods be continually used to achieve these two distinctive objectives? There is no doubt that these methods are all useful, but they cannot provide the desired entrepreneurial action. There is thus a need to incorporate various teaching methods into action learning action research to fulfil the nondualism objective that views growth and development as a whole and not in part and everything can maintain its individuality. This paradigm shift is the reason behind the researcher considering entrepreneurial pedagogy dimensions in line with the theoretical framework to measure the interplay between entrepreneurship training and self-efficacy for student entrepreneurship development in South African universities. The question that needs to be answered is: How does entrepreneurship education and training affect entrepreneurship development in the South African context? The ensuing section discusses this question.

3.15 ENTREPRENEURSHIP TRAINING

Entrepreneurship training can be described as a process of knowledge and skill impartation through systemic action learning action research applying social transformative technology (Theory U). This definition is consistent with the view of Lackeus (2013), who explained that entrepreneurship learning can be perceived as a pragmatic view of how the concept 'entrepreneurship' can be employed to challenge pedagogical and didactical ideas (Lackeus, 2013). The process of learning in entrepreneurship is considered as an important aspect than the concept of subject and skill. It entails learning by doing with more time, commitment, and attention than discussions about entrepreneurship focusing on what it stands to accomplished (Lackeus, 2013; Otterborg, 2011).

To Otterborg, entrepreneurship learning in an education context can be described thus:

“...it is a learning form in which the learner, in cooperation between school and industry, work with reality-based tasks. The aim of which is to enhanced students' entrepreneurship knowledge regarding skills, abilities, and attitudes. Students in this context are expected to develop self-awareness and self-efficacy, pattern breaking abilities and resist collective action, take responsibility, manage and solve problems, take initiatives and be creative, flexible and both see and grasp opportunities, and be able to interact with others” (Otterborg, 2011:147-148).

Based on the foregoing assertion, Komulainen, Nakali and Korhonen (2011) posit that entrepreneurship training focuses on enterprising capacity development in learners and this is otherwise known as internal entrepreneurship. Odegard (2007) and Otterborg (2011) initially referred to this as an adaptation to entrepreneurship in a learning environment that teaches learners skills for a post-modern era where they will not only be trained as obedient servants at work but trained for venture and employment creation in an undefined new circumstance.

Haddad (2013) and Linan et al. (2011) also segmented the key approaches in entrepreneurship training into four broad fields.

- Learning for entrepreneurship dynamism.
- Entrepreneurship awareness education.
- Continuing education for entrepreneurship.
- Entrepreneurship for venture start-up.

Entrepreneurship training now focuses on the learners at the learning hub and not on the educators teaching the art, organising learning around the students instead of institutions which gives rise to questions regarding both the substance and design of the skills to be imparted (Dahlstedt & Hertzberg, 2011; Komulainen et al., 2011; Olssen & Peters, 2005). It could also be said that entrepreneurship training encourages knowledge stemming from reflection in action and reflection on action, compared to traditionally acquired knowledge (Schons, 1983).

This study explored how entrepreneurship training can influence the development of student entrepreneurs towards venture creation and the sustainability thereof during training and after graduation. Existing literature on the subject alludes to the fact that the academic field of entrepreneurship still lacks a conceptual framework (Arasti, Falavarjani & Imanipour, 2012; Tsordia & Papadimituion, 2015). This implies that the art is dynamic and as such, is consistent with the question of why, how, and when the advantage for venture creation begins. It asks questions such as how and why some people understand the rudiments of entrepreneurship and why others do not. Consistent with this analogy was the position of some scholars that support the questions and diffused delivery strategies from the threshold for employing school entrepreneurship training project (Lekang, Nain, Singh & Sharma, 2016).

3.15.1 Importance of entrepreneurship learning

The National Council of Education Research and Training (NCERT) (Thakur & NCERT, 2014) asserts that the education process is a continuous exercise that entails the development of individual reasoning power and judgement. Entrepreneurs were viewed by the behaviorists as individuals with notable features and peculiar entrepreneurial behaviour and modes of learning (Wei, Liu & Sha, 2019). Behaviourists believe that through formal and informal education and structured training in higher education institutions, entrepreneurship behaviour can be shaped with the substance needed to accomplish the desired goals. The formal education is structured in a school setting in which attitude, knowledge, skills, behaviour, and orientation are focused on moulding and refining (Margutti & Drew, 2014). Informal education relates to training that engages individual learners in activity and hands-on experience (Thakur & Ncert, 2014). This has been gradually incorporated into the entrepreneurship education and training curricula in schools (learning or incubation hubs). Learning initially takes place in the workplace setting where employees become learners rather than lecturers and this enhances collaboration and collegial interaction. The two settings have the potential to transform individual learners in terms of intrapreneurship and entrepreneurship development.

Entrepreneurship training is a process that changes orientation and develops knowledge and skills through action learning, hands-on learning and experiential activities for entrepreneurial outcomes (Bell, 2015). Scholars have suggested ways through which the paradigm shift can be affected to move from a highly formal education structure to incorporate competencies and creativity into the curriculum (Fayomi & Fields, 2016). With this quality and skills, graduate will be produced and the student intrapreneurs who are interested in working with organisations will also imbibe intrapreneurial culture for self-development, since job opportunities will always be available for skilled graduates who are employable (Adebisi, Liman & Longpoe, 2015). The implication is that graduates who possess employability skills and orientation may stand a better chance of gaining employment in both sectors of the economy than those that do not have these skills, a value this study sought to add to the participants' degree or qualification through the systemic action learning action research training project.

3.16 SUMMARY

This chapter discussed issues that were relevant to the conceptual framework of the study, such as entrepreneurial self-efficacy, individual entrepreneurial orientation, and practice in higher institutions of learning in South Africa. This chapter presented a review of documentary information and evidence from the available literature that was relevant to entrepreneurial orientation and training in a profession-based context. The chapter also explored the objectives of the action-oriented approach to develop an understanding of the necessary pattern that may be employed while designing innovative curricula and to encourage the teaching and learning of entrepreneurship in all disciplines in the university. It also established the role and importance of the systemic action learning action research for potential entrepreneurs in higher institutions of learning as well as the interconnectivity with stakeholders in the country and globally to enhance the growth and development of entrepreneurship and intrapreneurship. The chapter was able to establish the interrelatedness of IEO and Theory U concepts as a framework that shares common trends meant to develop entrepreneurship in the long run (van der Westhuizen, 2018). The study employed ESE and IEO constructs in the formulation of the measurement of the concepts that can build confidence in the youth and the ability to accomplish entrepreneurial action.

3.17 CONCLUSION

It was established that systemic action learning action research addressed most of the arguments advanced by scholars regarding entrepreneurship pedagogy and the application of Theory U. It was also explained how the potential entrepreneurship learner can learn systematically at different times. The Theory U model and process indicated that teamwork and problem solving, and an action learning approach and student-centred framework is essential for teaching entrepreneurship in the 21st century. Having discussed and reviewed the positive and negative impacts of different pedagogical methods from the literature, the next chapter presents a report on the SHAPE project that the researcher utilised as the population and context for the study. This will assist in providing improved understanding of the implication of the systemic action learning action research training that was employed and how it develops participants' behaviour and entrepreneurial intention into entrepreneurial action.

CHAPTER FOUR

APPLICATION OF DEVELOPMENT MODEL AND THEORY U TO SYSTEMIC ACTION LEARNING ACTION RESEARCH (SHAPE)

4.1 INTRODUCTION

This chapter presents the systemic action learning action research training project known as ‘SHAPE’ 2017 (Shifting Hope Activating Potential Entrepreneurs) that was employed as a drive to develop students’ entrepreneurial self-efficacy and individual entrepreneurial orientation. According to Van der Westhuizen (2020), SHAPE can be described as a “social technology which can be seen both as systemic-action-learning-action-research’ methodology (SALAR), and as a framework which refers to processes on the journey to developing entrepreneurial spirit of an individual through moving from reactive thought processes to generative processes, where ideation of entrepreneurial opportunities can be brought into action”. The project was a systemic learning project that brought together like-minded people (students) to learn, share business passions and become inspired by different activities of learning to build their ESE and change their IEO for entrepreneurial intention and action. It explained the application of Theory U as it underpins this study and to have proper understanding of the application of the theory through different methods. The intention of this intervention was to examine the implication of traditional classroom teaching and action learning and suggest a paradigm shift from theoretical and abstract learning to action learning that will activate potential entrepreneurship momentum. The process allows for networking with colleagues, academics, the entrepreneurship enablers that were ready to put the students on the path of leadership in entrepreneurship and maximum potential (professionals or practitioners), and the stakeholders for entrepreneurship transformation. The facilitators were experts with skills and experience having passed through the learning curve in learning and practice. They were carefully selected from academia and practitioners who are professionals in entrepreneurship. The training employed the developed training model, theoretical framework and systemic action learning action research to establish the philosophical implication of the nondualism approach underpinning this research.

Thus, the aim of this chapter is to introduce an acceptable model and intervention project that can develop youth entrepreneurship to establish a strategic foundation for entrepreneurship action whereby a transformative leader will be developed. It focuses on entrepreneurship self-

efficacy with the use of multiple-intelligence training to facilitate youth entrepreneurial engagement through business incubation and ensure that entrepreneurial intention is activated by the youth (<https://shapetechnology.wordpress.com>). This according to Keith (2020); is in relation to “the development of five capacities i.e. forging a) strategic alliance, b) system’s thinking, c) creativity and innovation, d) connecting theory with action through social prototypes, and d) evolution schemes through quantum leaps from the ego to the eco paradigm and vision”.

It is worthy to note that this research work was carried out in collaboration with the project SHAPE and reported on the second phase, which focused on the re-establishment of systemic action learning action research. This is seen as a suitable drive for developing student entrepreneurship self-efficacy to and individual entrepreneurial orientation towards recognising and acting on entrepreneurship intention and action as a rewarding career option. It was carried out in three stages that develop students’ ESE and IEO with the reactive and generative stages of Theory U working in collaboration with the spirit of “Ubuntu” to inspire, add value and bridge the systemic disconnect in the ecosystem.

4.2 NEEDS ANALYSIS OF SHAPE TRAINING PROJECT

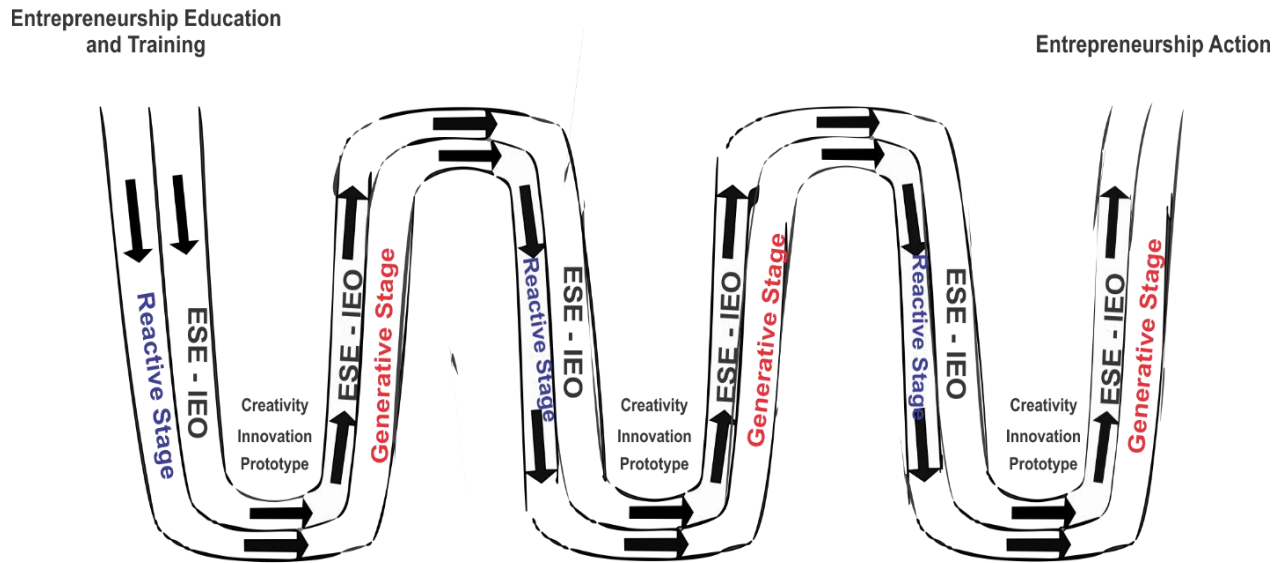
Entrepreneurship scholars and the Global Entrepreneurship Monitoring Report posit that the limited entrepreneurial action among the youth has a detrimental effect on the South African economy (GEM Report, 2020). It suggested solutions which is not limited to strengthening, aligning, mentorship and support for entrepreneurship. The suggestions will be rooted in the provision of entrepreneurship education for fourth industrial revolution (4IR) and the digital economy (Bowmaker-Faconer & Herrington, (2020). This research is anchored based on the previous and current suggestion from the GEM report and collaborate with the SHAPE youth entrepreneurship development training project. The SHAPE 2017 project began at the same time the researcher commenced his PhD research after all the groundwork for the project had been laid by the project coordinator, who coincidentally is the researcher’s supervisor. The sponsors of the project provided funding specifically for systemic action learning action research (training of the potential youth entrepreneurs) based on the success of the first phase of the project. Approval for the project was also granted based on the coordinator’s integrity and the university’s goodwill. Thus, in line with Larty, Friesl and Jack’s (2012) position on the role of intermediaries’ network building between practitioners and student entrepreneurs to develop student participants’ ESE and IEO for venture creation, the researcher collaborated

with the SHAPE project to enhance the network (as illustrated herein). The intermediaries were contacted as entrepreneurship enablers from eThekweni Municipality's Business Unit, UKZN, the Durban Chamber of Commerce, entrepreneurs and innovators in the private sector for their collaboration and support based on previous business friendship established with the coordinator. A series of meetings were scheduled with these organisations and personalities to re-emphasise the objective of the project as stated earlier and to explain changes and suggestions that emanated from the previous phase of the project. The innovators and practitioners were expected to support the project in kind, time, learning materials and technology. Heller (2019) explained the roles that the five stages of Theory U could play in such a project, particularly in linking the student entrepreneurs with the outside world (meso and mundo-systemic level). The request to support the project was met favourably by the sponsors because it focuses on the area of their policy framework, hence their agreement to sponsor and participate in the second phase of the project. As a change agent that the sponsors and the intermediaries were known for, the sponsors accepted with open mind, open heart and open will to co-initiate and co-sense with volunteer student entrepreneurs. The encounter with the intermediaries was anticipated to continuously activate potential in the student entrepreneurs to act upon their ESE and individual entrepreneurial orientation if fully harnessed.

4.3 SHAPE ENTREPRENEURSHIP TRAINING MODEL

Figure 4:1 presents the entrepreneurship training model developed by the researcher to drive the systemic action learning action research according to the SHAPE training project's theme. The concept was in line with the theoretical framework (Theory U) that aligned with the learners' progressive development and transformation with technology to inform a paradigm shift from a traditional teaching method to an action learning pedagogy. This is explained in the subsequent section "During SHAPE" phase of the training.

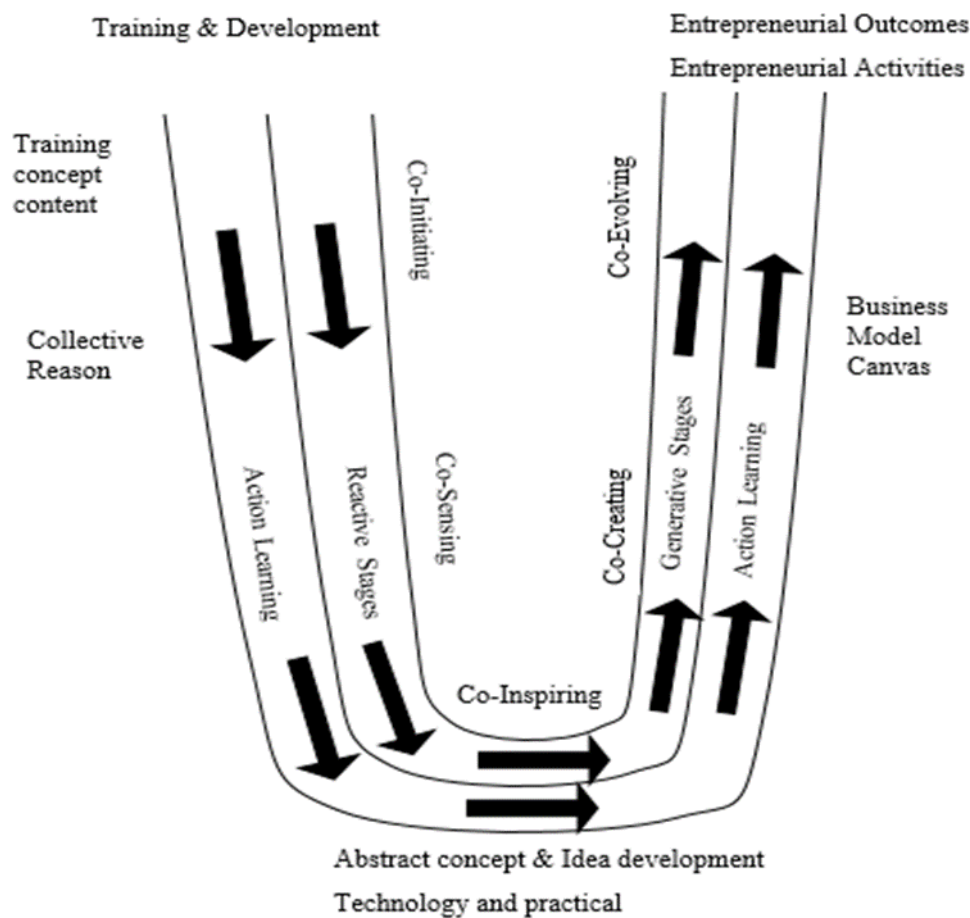
Figure 4:1: SHAPE development training model.



Source: Authors' compilation

The essence of the model is to introduce a new pedagogical method of training for entrepreneurship development as an alternative to the traditional learning method. The model employed the research variables as the content of the development incorporating Theory U's reactive and generative stages to learn, innovate, create and evolve. The spiral dynamic movement of the model shows that the development process absorbs all the constructs of the variables as reflected in the study's objectives applying the stages of Theory U stages. All the loops and the contents justified that development takes place continuously at every stage, revealing that all learning stages are important in entrepreneurship development. It shows innovation, creativity, and application of technology for the business model canvas to evolve in presentation or create products or services in the sector.

Figure 4.2: The SHAPE Ideation Model



Source: Authors' compilation

Figure 4:2 presents the SHAPE ideation model to advance the developed action-training model for the project with theory U pedagogical movement in order to drive participants' development to fruition. It buttresses the application of theory U "framework" by introducing the content of understudy topic in "holding space for learning" and builds a common intention. Also, through the co-sensing, it allows system to see itself by welcoming the blind spots, including all the stakeholders as part of the system to see from all angles through borders of the system. Co-inspiring/Presensing; process of bringing the mind to a stillness and creative silence in order to explore new angles using technology to move away from abstract and theoretical learning. Application of technology in action learning spur the movement into praxis sphere from theory to finding relationships with practice as the reality of the social field collective creation. The action/outcomes moment revealed the value added to the society through harvest and reflection on how transformation has taken place and impacted in the ecosystem.

4.4 PRE-SHAPE STAGE OF THE TRAINING PROJECT

The pre-SHAPE stage is a build up to the project and was designed to identify volunteer student participants for the project. This is designed to choose the change agents and potential participants that create the “core team” to establish or carry “the desirable change” forward. The volunteers engaged in a dual role of representing the student entrepreneurs and served as participants for the programme based on the complexity of the systemic action learning action research training employed for the study. The volunteers became the sample population for the study; the terms students and participants were used interchangeably in this study. The project designed posters that were pasted at strategic places in all the campuses of the University of KwaZulu-Natal to invite students who were interested in becoming participants. The poster was used to introduce students to the second phase of SHAPE and to provide details pertaining to the project and extend an invitation to them to attend an information session. These posters were also posted on the SHAPE and School of Management, Information Technology and Governance university websites. Further awareness was created through handbills that were distributed indicating the eligibility criteria, unlike the first edition where the information was passed to the students during lectures. It was at this stage of the project that potential student entrepreneurs volunteered to join the project to acquire skills to become ‘young entrepreneurs’ in the emerging future. The students that volunteered exhibited their efficacy by identifying an opportunity to acquire skills, took a risk at the expense of their modular lectures and proactively attended the SHAPE session for re-orientation to activate their entrepreneurial potential.

4.5 DURING SHAPE

During SHAPE is the stage for the application of the training model and social transformative technology (Theory U) for the systemic action learning action research training session, as discussed under the theoretical framework underpinning the study in Chapters one and three. The SHAPE training was a thirteen weeks’ project that began on the 18th of July 2017. It is worthy to note that the extant literature and empirical studies reviewed earlier indicated that the conceptual and theoretical frameworks underpinning this study would enhance understanding of the study and make the results acceptable. Hence the choice to apply Theory U and the training model for the study. A basic programme outlines for SHAPE 2017 and how it affects and develops the ESE and IEO of student entrepreneurs is also discussed in this section. This is a process of inviting the system to see itself, identifying the difference between

symptoms and causes, identifying blind spots to allow touching of the frontiers of the system. It is a stage and process of deep knowledge management that unite mind, heart and will. The training was mostly facilitated by entrepreneurship intermediaries, the entrepreneurship enablers (experts or practitioners), from relevant entrepreneurship firms. This is unique because in the first phase the practitioner-researcher facilitated most of the training programmes. The weekly activities timetable is presented in Table 4.1 to indicate the research objectives focusing on studentpreneurs as the leaders of tomorrow.

Table 4.1: SHAPE project timetable or program

Theory U Relationship	Session or Weeks	Date	Topic	Video footage demonstrating aspects of Theory U developing ESE and IEO
Weeks one to four = reactive stages of Theory U; Co-initiation, Co-sensing, and Co-inspiring	1	18 July 2017	SHAPE OPENING/ INTRODUCTION First Round: Questionnaire completion	Footage = https://youtu.be/78B8khFvILA Full length = https://youtu.be/ZXRG9dIBtZI
	2	25 July 2017	Topic: The WHY of doing business: An inward journey regarding business passion/purpose. Approximately 100 minutes including activities. Facilitators: Bianca Rohan and Sarah Shuttleworth	Footage = https://youtu.be/1C-gBmWfSgU Full length = https://youtu.be/GkpWtv-Mg5k
	3	1 Aug 2017	Topic: Creativity, Innovation & Entrepreneurship. Summary: Be creative, do things others refuse to do. No compromise between dreams and capabilities. Facilitator: Dene Botha	Footage = https://youtu.be/DmT18iPwZeE Full length = https://youtu.be/o0i60nI1J50

Theory U Relationship	Session or Weeks	Date	Topic	Video footage demonstrating aspects of Theory U developing ESE and IEO
	4	8 Aug 2017	<p>Topic: My Fit in South Africa's Economic Development Sectors.</p> <p>Summary: A look at the different economic sectors in our country and a discussion of which would be attractive to do business in.</p> <p>Facilitators: Mr Russel Curtis, HOD at Durban Investment Promotion, eThekweni Municipality Mr. Ross</p>	<p>Footage = https://youtu.be/7YfGrmataQI</p> <p>Full length = https://youtu.be/CTlStUoj7lo</p>
<p>From week five to week thirteen: Generative stages of Theory U; Co-Inspiring, co-creating and co-evolving</p>	5	15 Aug 2017	<p>Topic: Personal and Products Innovation.</p> <p>Summary: Exploration of possible new business teams and business ideas.</p> <p>Facilitator: Dr Shamim Bodhanya</p>	<p>Footage = https://youtu.be/ZSu_5dXxK4c</p> <p>Full length = https://youtu.be/SIZtui8v8So</p>
	6	22 Aug 2017	<p>Topic: Forming Like-Minded, Like-Hearted and Like-Willed Business Friends.</p> <p>Summary: Exploration of possible new business teams and business ideas.</p> <p>Facilitator: Dr Thea van der Westhuizen, Lecturer at UKZN</p>	<p>Footage = https://youtu.be/xltdJj0sRIg</p> <p>Full length = https://youtu.be/totS4HOkPIY</p>

Theory U Relationship	Session or Weeks	Date	Topic	Video footage demonstrating aspects of Theory U developing ESE and IEO
	7	29 Aug2017	<p>Topic: Business Model Canvas: Central Business Concept.</p> <p>Summary: (a) How to develop your brand, b) what makes your business stand out and c) what distinguishes successful businesses.</p> <p>Facilitator: Ms Mbali Bhengu, Managing Director of Mindswitch</p> <p>Second Round: Questionnaire completion.</p>	<p>Footage = https://youtu.be/QEBr2aK4dbI</p> <p>Full length = https://youtu.be/QEBr2aK4dbI</p>
	8	5 Sept 2017	<p>Topic: Business Model Canvas: Value chain and Markers.</p> <p>Summary: Exploration of how to build a business model canvas.</p> <p>Facilitator: Ms Mbali Bhengu, Managing Director of Mindswitch</p>	<p>Footage = https://youtu.be/tV81N3GGOMc</p> <p>Full length = https://youtu.be/HUTdI25wnX0</p>
	9	12 Sept 2017	<p>Independent Group Work (work in your teams outside classroom).</p> <p>Participants were asked to discuss their business concepts in their groups.</p>	<p>Footage = https://youtu.be/gIrsuHY2PfE</p>
	10	26 Sept 2017	<p>Topic: Business Model Canvas: Financials.</p> <p>Facilitator: Mr. David Gould, Managing Director of Vulindlela Underwriting Manager</p>	<p>Footage = https://youtu.be/ppDjwboNE0E</p> <p>Full length = https://youtu.be/BS8mxTAut2U</p>
	11	3 Oct 2017	<p>Topic: Business Model Canvas: Business Resources.</p> <p>Facilitator: Bradley Porter, owner of Flexible Workspace</p>	<p>Footage = https://youtu.be/4uNcCvFhuoU</p>

Theory U Relationship	Session or Weeks	Date	Topic	Video footage demonstrating aspects of Theory U developing ESE and IEO
	12	10 Oct 2017	Topic: Prototype/preparing for business exhibition. Facilitator: Mr Chris Du Toit	
	13	24 Oct 2017	<ul style="list-style-type: none"> Exhibition of participants' businesses. Final questionnaire completion. CERTIFICATE PRESENTATION 	Footage = https://youtu.be/9KeEv8thGmw Full length = https://youtu.be/9KeEv8thGmw

Source: SHAPE (2017)

4.5.1 Week 1: Introduction to the Project

The training began with an introduction of the content and concept in the form of general information and the venue was brightened up with music. At this stage, the students were able to begin co-initiation with one another to harness their ESE and interact with open mind to explore the interconnectivity between individual soul and the collective social field. The coordinator presented a general overview of the project, described the content from week one to the week thirteen and the benefits of participation in all the sessions such as certification, opportunities to partner with like-minded business people from the private and public sectors. The coordinator also disclosed that there would be an opportunity for consistent participants to be handed over to the university incubator directorate (entrepreneurship enabler) for proper monitoring to open up the entrepreneurship ecosystem. The participants were informed that could volunteer to participate in the two PhD students' instrument (questionnaire) to be administered to them during the training in partial fulfilment of the requirement for the award of PhD degrees. This meant that the participants would assume dual roles in the SALAR, firstly as participants in the research sample population and secondly, because of the nature of the training programme, as "studentpreneurs".

This was followed by a panel discussion that included experts from academia, professionals, business personalities and a lawyer-social entrepreneur, master of ceremony, a motivational speaker and radio personality. Hearing about their experiences going through venture creation and sustaining a business was meant to inspire the participants. The discussion was also meant to assist the participants to move through the U process by gaining inspiration, information, and insight from the experts' wealth of experience. The panellists' success stories serve as morale boosters for the participants who pledged their full participation and requested mentoring from the panellists. This implies that systemic action learning action research serves as a connection point for the like minds to identify themselves, co-initiate, plan, develop ideas and manage their innovation to action, as enshrined in the project's mission. At this stage the training project construct basis for what is referred to as "trust container" which shifts the type of relationships from an "ordinary student" to "collaboration" dynamic.

Questions were posed to the panellists by the coordinator and the participants on how to act entrepreneurially. Some of these questions related to what they do, how they do it right and their success story, for example: *Is entrepreneurship the real solution to unemployment, poverty and resulting crimes in South Africa? Where is entrepreneurship going these days and what is the future of entrepreneurship? What leadership role can I play today to change my tomorrow (leading from emerging future)? What can we do to stay motivated or inspired? What can I do to position myself for tomorrow? What are the available entrepreneurship enablers in the ecosystem?* (<https://youtu.be/ZXRG9dIBtZI>).

All these questions were in relation to the research objectives; to impart knowledge and skill that will develop participants' ESE and change their IEO to take calculated risk and be innovative and proactive in making entrepreneurship decisions. Questions to examine the participants behavioural change, develop and inspire them to identify and co-initiate with friends in proffering solutions to the entrepreneurship challenges in society were also asked. The information session was important for the participants to understand the focus of SALAR and to be courageous enough to continue their participation for skills acquisition. Their participation would enable them about future positioning, appreciating and developing the self in the entrepreneurship path and seeing possibilities in the ecosystem preferable to working for a wage for an employer. The participants were inspired by the panellists' success stories and quotes about entrepreneurship were written on the board by the participants. This

serves as a source of individual inspiration, having understood the importance of the difference between classroom learning and SALAR.

The first week's session indicated that traditional learning alone cannot effectively transform learners into entrepreneurs, therefore, the spirit of nondualism comes into play to address the systemic disconnect of having a single learning method. SALAR allows for co-initiation and action learning. The panel discussion was a change driver to facilitate the transformation from the previous phase of the SHAPE project where there was no panel discussion to inspire the participants or prepare them for co-initiation, co-sensing, and insight for real entrepreneurship development. At this stage, the first round of the researcher's questionnaire was administered, and the completed questionnaires collected with the assistance of the coordinating team; the response was impressive. Participants were encouraged to be punctual and to create more awareness for other potential participants for the next training session. One of the unique features of this training phase was that new participants were allowed to join as the programme progressed, contrary to the previous phase where only those who met the application criteria could join. The programme was thus thrown open to more prospective participants, having realised that SALAR could be a solution to youth unemployment in South Africa and that higher education institutions should be a starting point for youth entrepreneurship development (Lekgotla, 2019) (<https://youtu.be/ZXRG9dIBtZI>).

4.5.2 Week 2: The way of Doing Business

The project venue was amped up with music and fun activities, with students hugging one another to inspire and learn how to be friendly in the sector to usher in the second week in continuation of co-initiation. Studentpreneurs were stimulated through co-initiation with the project stakeholders (facilitators) by employing the concept of systemic action learning action research. The session began by taking the participants through the content and context of entrepreneurship self-efficacy and its development in the ecosystem by two female tutors to ensure gender sensitivity. This session was unique in the sense that in the previous phase of the training programme held in 2014 the practitioner-researcher was the only facilitator that took the participants through the second session due to the unavailability of other suitable people.

This session was therefore built on the weakness of the previous training programme by ensuring that participants benefited from the wealth of experience of seasoned professionals. The focus of the week was on the WHY of doing business; an inward journey of a passion and

purpose for doing business (beginning of co-sensing). This is what Scharmer (2007) describes as the need to empower and proactively open up ones' deeper level to overcome the barriers associated with the voice of judgement (VOJ), reverse the voice of cynicism (VOC) and overcome the voice of fear (VOF), the fear of letting the old self go (becoming empowered to take risks) for the new self to be born or take shape (Scharmer, 2007). The three voices level can be faced through resistance from within to allow transformation of thought, heart and will. This level, according to Scharmer and Kauffer (2013), is a personal trait and a perception of having the skills but lacking the capacity to shut down or suspend the voice of judgement that hinders progress towards accessing creativity. This is consistent with Hartley (2013), who argued that mediation entails mind settling and paying attention to thought processes for sensitive information, which is an indication of how learning takes place through inter or intrapersonal relationships and communication.

The participants were asked to reflect on their previous thoughts of what they had in mind then that were not allowed to manifest because of fear and what they want to be now or in the future. Participants were encouraged to share such thoughts among themselves, which implies co-sensing in a collective reasoning space on how to enter the entrepreneurship space and search for opportunities; otherwise known as the reactive stage in the Theory U framework. The principle is that individuals are entitled to be the person they choose to be, meaning that there is inherent pressure to change or develop through this learning method. It implies that there is no method that is worse or better than the other, they are inseparable, and each holds its fit (nondualism). The objective of bringing the youth together for action learning in a hub for common purpose and shared values of entrepreneurship action is to enhance socio-economic development in the society. It avails the youth an opportunity of seeing the future in their immediate environment (Huxtable-Thomas & Hannon, 2018) and is also a process of identifying entrepreneurship opportunity as one of the focus points of development in ESE.

Thus, to further inspire the participants, a video of Dr Terera Trent (a Zimbabwean woman) who has a passion for education with a focus on achieving the greater fit in education and paying back or adding value to society, was shown. The video's content influenced the participants to change their behaviour along the reactive side of Theory U, as they sensed the future and refused to allow the three voices to work against their self-development. It also encouraged them to believe in their ability to become business leaders in the future. The video was anticipated to ignite in them the passion and determination to achieve their goals by living

the dream. The importance of the video's content was to unlock potential, change their individual entrepreneurial orientation while maintaining gender sensitivity. It was also to ignite potential and activate participants' ESE to understand why and who they are i.e. their purpose, passion and goals. This would enable the participants to change their orientation and know the reason for gap identification, entrepreneurial action, and venture management. It also served as a stimulant for anyone that had a dream and was passionate about how to achieve that dream.

One of the facilitators posed some questions to harness the potential in the learners and to prepare them as emerging future leaders. These questions were meant to develop their goals and prepare them for the future. The questions were: *Thinking back of your life, what was your happiest moment and why? What will you describe as your greatest strength, gift, talent or ability? When are you most fulfilled? When do you feel most purposeful? What values are most important to you? What is your mission in life? What do you want and where do you want to be in ten years' time? What do you plan to achieve in the next five years to accomplish your ten years' vision and what do you need to achieve in these areas in the next year to make significant progress towards that five years target?* (<https://youtu.be/GkpWtv-Mg5k>). This is what Scharmer (2007) referred to as downloading in the Theory U framework, which refers to the participants' reflections about how they plan for the emerging future.

Scharmer (2007) further describes this as knowing WHY and seeing the future as it emerges now, individually co-sensing and reflecting on that future. It has to do with the plan of how to move on by collectively reasoning with colleagues as the intended business partners of the future, taking the risk together, meeting business like-minded and like-hearted people (Scharmer, 2007). This reveals the process of relationship self-efficacy, where the like-minded co-initiate and network for venture creation, as enshrined in both variables under investigation. The loop in the development training model (spiral dynamic) indicates the progressive development as talking nice, talking tough, reflective inquiry and generative flow i.e. speaking from what is moving through (four fields of conversation). According to Aristotle, "knowing yourself is the beginning of all wisdom". This connotes the ability to know your identity, what you are made of, discovering your purpose and letting go of the old self and allowing the new self to emerge from the skills acquired from the training programme.

This session was similar to the previous phase's week two that had the same theme; to initially open up the thinking and cognitive ability of the participants to entrepreneurship and see reality differently as it emerges (<https://youtu.be/GkpWtv-Mg5k>).

4.5.3 Week 3: Creativity, Innovation and Entrepreneurship

The activities for the third week focused on the theme: ‘The bigger picture and innovation’. During the weeklong training programme, an attempt was made to provide answers to the following questions: *Can one be innovative and creative to become an entrepreneur? What is different, new and how can one harness the opportunities?* It should be noted that the efficacy of an entrepreneur is dependent on his/her readiness to do what others refuse or failed to do without compromising between dreams and capabilities. It was discovered that one of the best approaches to achieving this is the adoption of Hannon et al.’s (2013) action learning approach in which a number of elements were identified for transformative learning. These include a) fundamentals (skills updating), b) the bigger picture (profound solutions) and c) the new frontiers (creating possibilities). Participants were taken through how to see the future (bigger picture), reflect and open their minds, hearts and wills while considering the socio-economic challenges in South Africa. For proper understanding, a systemic action learning actionresearch pedagogical method of learning was adopted, and different videos were played to inspire the participants. It was also meant to familiarise them with the fact that innovation means adaptation, constant change, and the evolution of ideas to improve the self (Botha, 2017), as enshrined in Theory U’s development stages (Scharmer & Kuaffer, 2013) to develop their managerial self-efficacy.

One of the videos watched by the participants concerned system thinking (The Lightie), which was meant to motivate the participants to see the future as it emerges and be ready for innovation with focus and passion to invent things where others are not ready (<https://youtu.be/o0i60nI1J50>). It was also designed to encourage them to develop a basic system thinking for the self and later develop skills for integration into the socio-economic system. This is consistent with the study conducted by Turko (2016) in a related research of students’ entrepreneurship in which supporting videos were played and power point presentations were employed for inclusive learning.

For the participants’ reorientation and proactivity and to enhance their can-do ability and self-efficacy, another video titled “Doing the Impossible” was shown (<https://youtu.be/o0i60nI1J50>). The video was important to activate individual participants’ orientation for transformative learning by focusing their minds and hearts on the emerging future, their feelings and emotions. This is what Scharmer referred to as pre-sensing (Scharmer, 2010).

To showcase their learning capability, the participants were challenged to answer a question about *what the greatest innovation and invention of all time is?* Tips were given on how to become a great innovator or inventor as emerging entrepreneurs in South Africa focused on the action learning content and the technology employed. This was necessary to make them practice what Gardner (2011) referred to as multiple intelligence and to prepare participants how to position and establish their fit in the South African entrepreneurship ecosystem (<https://youtu.be/o0i60nI1J50>).

4.5.4 WEEK 4: My Fit in South Africa's Economic Development Sector

The theme for the fourth week's activities was: "My fit in South Africa's economic development sectors". This session promoted, developed, and harnessed the potential in studentpreneurs through systemic action learning action research by establishing some of the variables for this research and how to implement the skills acquired in the training practically in a real business. This development session focused on orientating and activating the students' ESE and IEO to identify, activate and take calculated risks and venture their skills into any economic activity. This was in line with Schumpeter's idea about creative disruption and Theory U's concept of "letting go" of the old self and thoughts that must die and dealing with resistance that would not allow the participants to pursue new ideas. A deeper understanding of Theory U revealed that there is a need to empower people to suspend the voice of judgement, reverse the voice of cynicism and overcome the voice of fear, the fear of letting go of the old self (becoming empowered to take risk) for the new self to take shape.

The momentum and efficacy of developing the participants is building relationship self-efficacy with business like mind by searching different economic sectors in the country and identify where opportunities abound to innovate and act upon it. Van der Westhuizen (2016) identified this as the force that triggers a transformational field to shift from one space to another by prompting the opening of instruments and deeper sources of emergency. SHAPE enabled participants to activate their ESE constructs of opportunity identification, relationships (establishing relationships with private and government entities through one of the discussion panellists who is a small business promoter in KwaZulu-Natal); managerial (sourcing finance, marketing, procurement and business ethics); IEO proactivity (taking over the entrepreneurship space with passion) and innovation (creative disruption) propensities by allowing them to apply multiple intelligences (Gardner, 2011). The panellist informed the participants that engaging in business activities now or in the future does not require only self-empowerment but also

solving societal challenges by creating jobs, adding value to the economy, and improving the standard of living in society (McDonald, 2010). During this session the participants were encouraged to identify a proposed business of their choice and their proposal would be sent to the SHAPE website. The exercise was meant to group them according to their business interest into teams of for business model canvas and action learning during the next session of the training programme. The aim was to ascertain if the participants were able to identify an opportunity or gap in their immediate environment upon which they could act where others failed or refused to act. Scharmer (2007) refers to this as co-inspiring or pre-sensing, where new creativity begins to crystalise in the mind for the emerging future. This is the beginning of the generative stages of Theory U (<https://youtu.be/CTlStUoj7lo>).

4.5.5 Week 5: Forming Like-Minded, Like-Hearted and Like-Willed Business Friends

During the previous session, the facilitator requested the participants to post their business idea and team activity to the SHAPE website and Facebook account. This was to ascertain if the participants were learning while developing their relationship self-efficacy and innovative ability individually and collectively (collective reasoning). It was expected that by this stage the participants, having attended sessions pertaining to development, would have developed skills and knowledge to identify gaps and utilise those ideas to develop a plan. This exercise was to establish that learning and transformation was occurring and to identify other areas in which the participants were interested.

The coordinator took the participants on a journey of innovation and creativity; they learnt how to relate to business partners in their area of research interest. The principle concerns choosing an individual practice that will assist with connecting to one's future resonance. This is referred to as forming like-minded business friendships at the bottom of the U, dwelling on abstract concepts and idea development (pre-sensing/co-inspiring) where the old self is dead (letting go) and the new self is coming alive for co-creating, thus allowing the new future to emerge (consciousness). Scharmer (2007) refers to this stage as the eco-system of innovation, where technology is harnessed for creativity, as indicated in the development training model, a field of emerging possibilities. During this session, the participants learnt how to individually innovate or create a venture, partner with others or with established firms and understand the pros and cons of becoming an employee in the public and private sectors. This was done in relation with IEO proactivity propensity in taking a calculated risk proactively

which allows new innovation and creativity to emerge. At the close of the session, the participants were asked questions about what they had learnt, and their responses revealed that they could identify gaps, create business ideas and intention to start a business, which was the aim of the training. It was expected that this session would reflect in their responses to the research questions that would be posed in the subsequent session. The participants were also informed about the focus of the next session of the project, which would be to form a business with like-minded, like-hearted, and like-willed business friends. They were encouraged to identify the area in which they wished to pitch their business idea and fill in the form on the SHAPE website to be formed into groups for skill acquisition from professionals in that area as an emerging team of young entrepreneurs preparing to enter the entrepreneurship space (<https://youtu.be/SlZtui8v8So>).

4.5.6 Week 6: Getting Practical (Innovating My New Business Concept)

As stated in week five, the focus of this session was on “**pre-sensing**”, which is the beginning of the emerging future. This is a stage in which like-minded, like-willed and like-hearted business friends explore the possibility (generative stages) of new business ideas, develop team spirit and learn what it takes to be a partner. It is a development stage of co-creating and crystalising the future that is emerging in relation to IEO proactivity and innovation propensities. Participants were grouped according to their business choice and were provided with materials with which to work. This enabled them to learn how to explore the technological era of industry 4.0. They were then asked to exhibit their creativity, allow their inner being to guide them, deliberate on what to create and to learn as a team (learning how to partner and assuming a role to achieve a common goal).

Figure 4:3 illustrates a group of business like-minded friends deliberating on how to create, emerge and take over the entrepreneurship space.

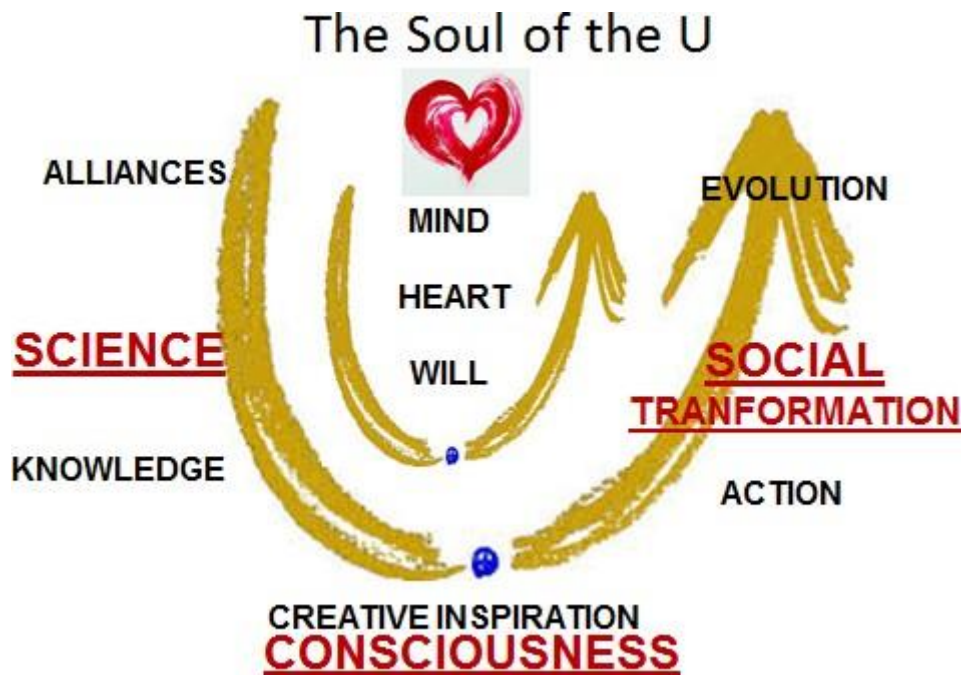
Figure 4.3: Developing practical innovation and a business concept



Source: (<https://youtu.be/totS4HOkPly>)

Figure 4:3 shows a group of studentreneurs engaging in open mind discussion on how to develop a business idea and plan. It shows an innovative and creative mind among the various groups observed in relation to the development training model's abstract and idea development stage. This confirms that there was development through the systemic action learning action research sessions. It is also consistent with the views of Kolb (2014) and Revans (2011) regarding experiential and action learning respectively emphasising the roles of reflection on acquired skills by the learner as a tool to open the mind and will to the emerging future. The action learning exposed the participants to the process of identifying like mind, heart and will in alliance to acquire knowledge and skill that will build their consciousness for entrepreneurship action and evolution. It also helps to attract people of the same vision together to add values to the economic sector by creating consciousness for social transformation. This is depicted in figure 4.4.

Figure 4.4: The alliance of Mind, Heart and Will.



Source: Keith (2020)

Figure 4.4 presents the five U movements that integrate mind, heart and will in conversation with the stakeholders of the social field to encourage, conviction and consistency of closing the theory-praxis gap (Keith, 2020). This implies that individual-collective connection allows going deeper which has a profound effect at the collective field. “The individual mind projected to the collective becomes “science”; the individual heart projected to all, becomes social “consciousness”; and individual will be connected to the collective will becomes social “transformation”. The stages were categorised into three a) sciences, b) consciousness, and c) social transformation as depicted in figure 4.4.

In the same vein, an audio music was played to inspire participants on having a new business feeling as a source of inspiration for networking and to start something through the feelings and move forward. It should be noted that systemic action learning action research, in this regard, activated the participants’ potential in relation to IEO proactivity that prepared them to decide about starting a business venture immediately with like-minded friends. Van der Westhuizen (2016; 2017) that creative inspiration in Theory U is related to actively projecting and taking calculated risks by proactively taking entrepreneurship action (IEO

propensities) to lead the emerging future. The session revealed that entrepreneurship must be taught by skilled professionals rather than academics without the appropriate knowledge and skills (Turko, 2016; Mutanda et al., 2018). (<https://youtu.be/totS4HOkPIY>).

4.5.7 Week 7: Brand Development

The focus for this week was on branding, which is essential to business policy and principle in the field of entrepreneurship and economy. It is a concept that gives recognition, promotes products or services and sustains the business in its market. The session provided answers to questions regarding relationship self-efficacy: *How do people know or identify my product or services (business and products name, what makes my product/business stands out amongst the competitors (uniqueness-branding, registration, and labelling)?* The participants were enthusiastic about learning and benefitting from the wealth of experience of a brand specialist with a track record in the industry. Participants were also opportune to ask germane questions on their blind spot: transformational ecosystem learning, weeks' theme and essential of what can make or mar a business. They were required to design a business model canvas (BMC) and product logo concept individually to experience what it entails to get a business registered and approved by the appropriate agencies. At the generative stage, the participants observed that practical learning enhanced and activated their urge for entrepreneurship action. After learning how to write a business plan and BMC, they were asked to state which of the systems they prefer. The answers provided by the majority of the participants aligned with Turko's (2016) view that business model canvas training may produce hybrid models or modifications to entrepreneurship training and practice. The intention of this as earlier discussed was to migrate from the traditional classroom learning to action learning that will produce transformational leader and entrepreneurs. This was made possible through the application of training model, SALAR and practitioners who applied theory of self-leadership, theory of change, and took the training to its maximum potential. Keith (2020) posits that "a project manager honours the limits of a project; a leader goes beyond borders", which implies that impactful leaders or trainers will go extra miles to instil skills and knowledge. Figure 4.5 shows the matrix of systems learning and leadership and how it can be visualised.

Figure 4.5: Matrix of system learning and leadership (Broadening and Deepening)



Source: Scharmer (2019).

Figure 4.5 presents “institutional inversion” turning the inside out and outside in. According to Scharmer, “Inside out” simply means a process whereby potential learners move out of their classroom learning environment and engage with salient hotspots of societal innovation in their local, national and ecosystem which is referred to the classroom; while the “Outside in” means the world problems and challenges that were brought learning ecosystem (campus) where scientific inquiry and study can be carried out on the matter, these challenges of the world and societal transformation is referred to as the curriculum (Scharmer, 2019). The dynamics of this is coming together of the action learners and action researchers moving out to engage in the frontlines of societal change (“Breathing out”) engaging different systems in order to share, reflect, co-sense, co-create new ways of doing things (“breathing in”). The breathing process revealed the capacity to shift one’s consciousness from a level to another, from ego to eco.

Figure 4.5 highlights the changes that is reshaping innovative learning systems: deepening the learning cycle (from head-centric to whole person) and broadening it (from individual to eco-system). This implies that learning needs to move from bottom left to the matrix in general, and top-right area of the matrix which is the blind spot of the learning systems (Scharmer, 2019).

The second round of the PhD students’ research questionnaire was administered to the participants and completed with enthusiasm because of the action learning experienced in this session and changes in their orientation in relation to the art of doing business or creating a

venture. The business model canvas continued in the next session to develop the participants about the important facets that will add value to a business or product in the market (<https://youtu.be/QEBr2aK4dbI>).

4.5.8 Week 8: Value Chain

The theme for week 8 was: Business model canvas, value chain markers and an exploration of how to build a formidable business in preparation to launch a product or enter a market. This session established the spiral dynamic importance of the development training model that value a chain should be considered from the conception of the business idea through every aspect of the business plan; no aspect can be ignored during development. The training developed the participants to identify opportunities and taught them how to create a brand name for their business or for self, as this will affect the successful launch of a product in the market in line with ethical standards and practice on plan how to recognise a product. As discussed earlier in the literature review chapter, this session was facilitated by video of product advertisements to demonstrate the value of branding and the message relayed by the brand name or logo on a product. Branding helps a product or service to stand out, provides a competitive advantage and positions the product strategically.

The value chain created by means of these process needs to be learnt for a proper understanding of the various ways of branding and in a limited time making the brand synonymous in customers' minds with consistency and quality in alignment with the firm's mission statement. This can attract investors as enablers of entrepreneurship development. In this session the facilitator teaches how to develop a formidable tagline that takes into consideration seven perspectives: relationships; research; packaging; reach; habits and consistency, all of which are key elements of branding. The participants were taken through transformative learning regarding a business model canvas and how to create a brand for their potential business. The participants were charged to begin formulating individual business plans to assist them to brainstorm and post these on the SHAPE project website. In the next session the participants were asked to work with their business group to make space for creative and innovative thinking to be proactive in making business decisions.

This session differed from week eight in that the participants visited the municipality's support incubator to meet with SMMEs' initiators and listen to their experiences with regard to sustaining a business. This session dealt with important aspects of business development that add value to products or business names (<https://youtu.be/HUTdI25wnX0>)

4.5.9 Week 9: Generative Stage/Business Model Canvas

The generative stage is involving the co-inspiring, co-creating and co-evolving of Theory U. This was put into practice by the participants in different business groups working as teams of studentpreneurs (independent group work) at a venue chosen by each group. The engagement was to build team spirit, which is part of ESE development that focuses on how to engage in partnership business and harness government support offered by various agencies for entrepreneurship development. The groups discussed laudable business concepts relating to co-creating and acting on their entrepreneurship intention. Although it was a challenging experience for the students, the process allowed them to discover the value in partnering, having a business concept developed through creative thinking, garner experience from the group and crystalise their mindset for the emerging future. This stage in the development training model is related to IEO's innovation propensity for creating new products and markets. The independent group work assisted each member to identify the kind of business venture to engage in and prepare to present it in abstract at the close of project SHAPE. This was to aid their decision to choose an individual business, one with a partner or to work for an organisation, as they were inspired to do from the beginning of the development project. This implies that progressive development took place during every session and that individual entrepreneurial orientation underwent changes. This ushered in the next session of the business model canvas, namely financing business (<https://youtu.be/glrsuHY2PFE>).

4.5.10 Week 10: Finances

The theme of this session was based on the business model canvas that was utilised continuously during the project to instil in the potential student entrepreneurs the spirit of sound entrepreneurship and managerial self-efficacy. The participants were provided with entrepreneurship financial education, which is an area of significant concern in venture creation (Dzomonda & Fatoki, 2018c) and constitutes a significant challenge to entrepreneurial risk taking. This is consistent with the submission of EDHEs that entrepreneurship financial education is essential and should form part of the higher education curriculum to be taught as

modules to allay the fears of would-be young entrepreneurs (Lekgotla, 2019). The participants were taught how to access a loan, be a good leader, manage time and information, obtain collateral security, ensure the repayment of a bank loan and transfer the venture risk and liability to insurance companies (Dzomonda & Fatoki, 2018c). A financial specialist, underwriting Managing Director of Vulindlela, taught the participants how to access financial support from the Small Enterprises Development Agency and other government business support agencies with a sound business plan. The international business finance support systems that are available were also made known to the participants. A video was played to promote the participants' trust in insurance companies and believe in their support for business. They were also educated on how to incorporate the learnt skills into a business (<https://youtu.be/BS8mxTAut2U>).

4.5.11 Week 11: Business Resources

The discussion pertaining to the business model canvas continued in week eleven with the emphasis on business resources. To not neglect or underestimate traditional learning in the project, business resources and planning were incorporated and the participants' knowledge of what they had learnt in the traditional entrepreneurship class (theoretical classroom learning) was refreshed. The participants were made to understand that business resources and planning are essential facets of entrepreneurial development that are usually taught in abstract in a classroom but taught by professionals in relation to self-efficacy in this programme. Thus, the emphasis in this session was on how to acquire resources for venture creation, such as a capital base, a customer base, financial planning, human resources, and the necessary documentation required by departments and agencies and planning the execution of the venture creation. This is consistent with the view of Dzomonda and Fatoki (2018) that the government provides a support system for entrepreneurship development through various entrepreneurship bodies such as the Small Enterprise Development Agency (SEDA), the Small Enterprise Finance Agency (SEFA), the Technology and Innovation Agency (TIA) and the National Youth Development Agency (NYDA). However, contrary to the foregoing discussion, Bradley Porter, facilitator, and owner of Flexible Workspace, is a living example of an individual business owner who formulated a sound business plan and was able to gather resources from scratch without any support from the government and has been able to create job opportunities for numerous of the unemployed youth in the country. The participants were encouraged to

emulate his leadership qualities by being proactive while planning and making entrepreneurship decisions (<https://youtu.be/4uNcCvFhuoU>).

4.5.12 Week 12: Business exhibition preparation or prototype

In preparation for the business exhibition, Chris Du Toit in week eleven created an imaginary or abstract market after learning where the business owners met to identify opportunities to launch their new products. During the session, participants learnt how to launch products or services in local, national, and international markets; that is, from micro to mundo. This involves the application of entrepreneurship skills to make product acceptable as well as abiding by the rules and regulations as discussed in the literature review on ESE constructs. It is important to state that because the world is now a global village there is no problem of interconnectivity either physically or technologically since transactions and the delivery of goods and services occurs within one's comfort zone. The participants were also taught about the ethics of buying and selling, rendering services in terms of judiciously managing the resources, time, manpower and materials (managerial self-efficacy). The participants also learnt how to proactively take over space in the market through innovation, branding, products and strategies in line with the focus and goals of the entrepreneurs entering the market.

4.5.13 Week 13: Business exhibition and presentation of certificate

This session included the business exhibition, the researchers' third stage of questionnaires and awarding the certificates of attendance to the participants in conjunction with the University of KwaZulu-Natal. The exhibition constituted the co-evolving stage of the entrepreneurial activities and outcomes of the training model that investigated if SALAR had led to a behavioural change or had progressively developed the participants. It revealed the participants' readiness for entrepreneurial action and that they have acquired the requisite skills to establish or create a venture now or in the future in line with one of the goals of the study. At this stage, the participants were encouraged to explore the future by doing and experimenting with what was learnt during the training. They were also advised about taking a step forward beyond an idea to develop and stay true to intention, which opens the doors of connection with entrepreneurship enablers that can put the potential entrepreneurs on track.

The presence of the university's "incubate" directorate at the ceremony was a privilege and the participants enjoyed being identified as potential "studentpreneurs". The training had prepared the youth to operate from their highest self, which would allow them to take risks they normally

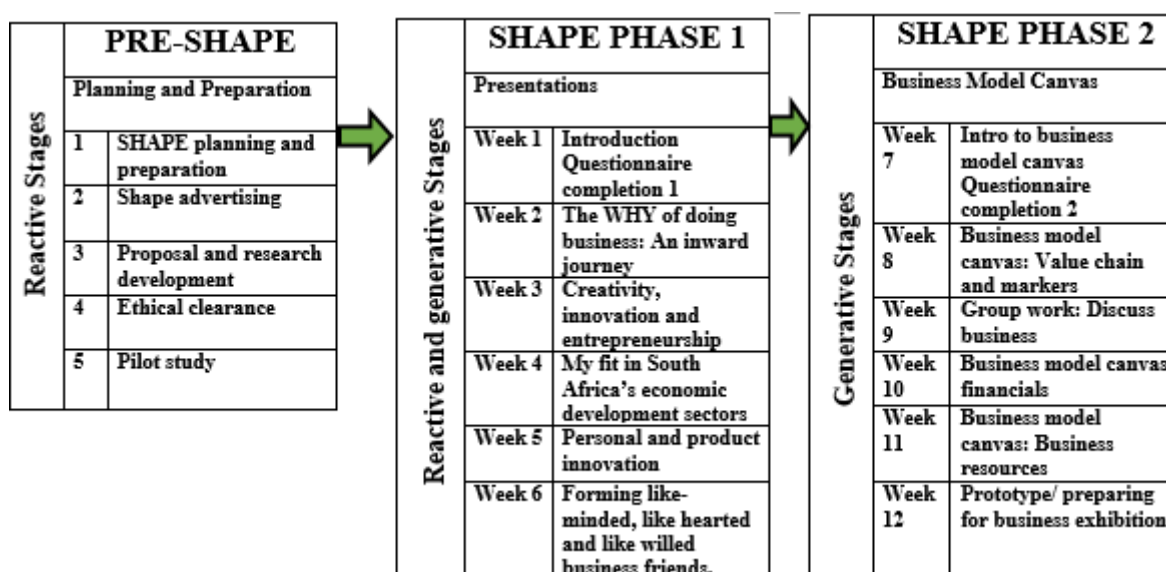
would not take (Scharmer, 2007). It gave the participants the opportunity to move from a felt sense-feeling, drawing them to doing something to cross the threshold and begin their journey of discovery and creation. The certificate presentation ceremony was colourful, and the participants were enthusiastic about receiving added value to their degree, which certified them to be qualified and skilled entrepreneurs.

The questionnaire was designed to investigate the correlation between the ESE and individual entrepreneurial orientation of the participants and was administered to them as a repeated measure to examine the variance in their behaviour before, during and after the training. The intention of the research instrument was to ascertain if the training received by the participants had transformed and developed their ESE and individual entrepreneurial orientation to harness their potential for entrepreneurship action. Also, to examine the effect of the longitudinal study on the development of entrepreneurship in the university (<https://youtu.be/9KeEv8thGmw>).

4.6 SHAPE'S PROJECT AND SYSTEMIC ACTION LEARNING ACTION RESEARCH FINDINGS

The SHAPE project can be considered as a new dimension or drive for a paradigm shift for entrepreneurship development in universities. It was categorised into three different learning phases: Pre-SHAPE, During SHAPE phase 1 and During SHAPE phase 2. The Pre-SHAPE phase of this study was the traditional learning stage, where entrepreneurship teaching was “about” abstract and theory for grades and certification (degree). Such training alone produces graduates who are not employable and cannot create a venture to become self-reliant (Mutanda et al., 2018). This is the problem that prompted the researcher to collaborate with the SHAPE training project for students' entrepreneurship development. Student entrepreneurs were encouraged to participate in the training programme as volunteers by enrolling through the project's website. This was consistent with similar research conducted by Mason and Arshed (2013) that identified multi-purpose activities such as workshops, creativity promotion, activity learning and classes as entrepreneurial intention drives. The project planning and the researcher's collaboration was finalised, as indicated in Figure 4.4. During SHAPE Phase 1, the participants co-initiated, met with like-minded, like-hearted, and like-willed business friends to de-colonised their perceptions of entrepreneurship and venture creation and their assumptions about entrepreneurship education. This co-initiation encouraged and built a ‘can do’ spirit in the participant that assisted in harnessing their potential during the SHAPE Phases 1 and 2, as reflected in Figure 4.6.

Figure 4.6: SHAPE social technology development program



Source: Adapted from Nyamuda (2018)

Figure 4.6 indicates the alignment of the action learning action research to the SHAPE project with the application of Theory U. The model supports Murray and O'Fallon's (2020) assertion that there is a significant positive relationship between ESE and IEO, as indicated in Figure 6.47 in Chapter six.

4.7 CONCLUSION

This chapter presented a discussion of the SHAPE social technology (systemic action learning action research training) development training project session by session. The various activities that took place during thirteen (13) weeks of training were discussed in relation to the research objectives, the formulated transformative model and theoretical frameworks underpinning the study. It was revealed during the sessions that learning took place, behaviour changed, entrepreneurship reasoning and the thoughts of individual participants were transformed. The training concluded with a project exhibition, which indicated that seventy-three (73) of the participants had the intention to take entrepreneurial action. The exhibition of abstract ventures served as an opportunity for the participants and the "incubate" directorate to identify potential studentpreneurs to sponsor and support to fruition. This fulfilled the objective of the SHAPE social technology project, which was to develop, harness and activate student and youth potential for entrepreneurial action and self-reliance in South Africa (Van der Westhuizen, 2016). There was a certificate presentation, question time, suggestions by the participants both orally at the time and on the project SHAPE social media page. The project coordinator thanked the participants, guests and all the project stakeholders. A debrief session was arranged where

the coordinating team took the time to reflect on the successes and failures of the project and plan for the future. Chapter six and seven of this study present the data that was gathered during the training programme, the analysis and interpretation thereof.

CHAPTER FIVE

RESEARCH METHODOLOGY

5.1 INTRODUCTION

Research methodology is referred to as a process of dealing with data collection and analysis of the obtained information, with the purpose of increasing the understanding of the research topic or issues (Creswell, 2014). It can be regarded as the approaches and process of conducting research that can be structured from the research design, method of data collection and analysis (Creswell, 2014). Issues relating to research design, population, sampling methods, data collection and data analysis techniques are discussed in this chapter. Systemic action learning action research was employed using a quantitative approach because of the nature of the research. The adopted design was suitable because it described the salient area of the phenomena under investigation from a higher education institution perspective and provided suggestions for modifying existing practice in the field of entrepreneurship, in both practice and theory (Sekaran & Bougie, 2016). The adoption of a quantitative design was to understand the learning environment that requires efficient and effective interactions of variables that could be harnessed by means of quantitative surveys (Denzin & Lincoln, 2011).

The research aims, objectives and questions that were formulated for the study are described hereunder.

5.1.1 Aims

Within the framework of systemic action learning action research, this study firstly aimed to determine how entrepreneurial self-efficacy and individual entrepreneurial orientation develops through the application of Theory U amongst South African undergraduates who participated in the SHAPE 2017 longitudinal training project. Secondly, to develop a new model to increase the effectiveness of the systemic action learning action research training offered by universities.

5.2 RESEARCH OBJECTIVES AND QUESTIONS

5.2.1 Research Objectives

1. To examine the influence of opportunity identification entrepreneurial self-efficacy on the individual entrepreneurial orientation of students over time.
2. To investigate the effect of relationship entrepreneurial self-efficacy on the individual entrepreneurial orientation of students over time.
3. To examine the influence of managerial entrepreneurial self-efficacy on the individual entrepreneurial orientation of students over time.
4. To investigate the influence of tolerance entrepreneurial self-efficacy on the individual entrepreneurial orientation of students over time.
5. To examine the relationship between entrepreneurial self-efficacy propensities and the individual entrepreneurial orientation of students over time.
6. To develop a conceptual framework to test the effectiveness and development of ESE and IEO of entrepreneurship students at universities.
7. To develop a model for entrepreneurship training and development in higher institutions.

5.2.2 Research Questions

1. To what extent does opportunity identification entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
2. To what extent does relationship entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
3. To what extent does managerial entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
4. To what extent does tolerance entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?
5. What is the relationship between students' entrepreneurial self-efficacy propensities and individual entrepreneurial orientation over time?
6. What is the effectiveness of the conceptual framework on the development of students' entrepreneurship ESE and IEO?
7. How does the developed training model affect students' entrepreneurship learning and behaviour?

5.2.3 RESEARCH HYPOTHESES

The hypotheses listed hereunder were formulated for empirical testing.

- H1:** There is a significant relationship between opportunity identification entrepreneurial self-efficacy and individual entrepreneurial orientation.
- H2:** There is a significant association between relationship entrepreneurial self-efficacy and individual entrepreneurial orientation.
- H3:** There is a significant relationship between managerial entrepreneurial self-efficacy and individual entrepreneurial orientation.
- H4:** There is a significant relationship between tolerance- entrepreneurial self-efficacy and individual entrepreneurial orientation.
- H5:** There is a significant relationship between entrepreneurial self-efficacy propensities and individual entrepreneurial orientation.

5.3 RESEARCH PHILOSOPHIES

Research philosophies are the steps necessary in systemic research and are essentially adopted for research work linked to the specific philosophy (Eriksson & Kovalainen, 2015). A research philosophy is the assumption underlying the conduct of the research. The assumptions that emanate from the individuals determine the strategy and methodology that are employed for the study (Saunders, Lewis & Thornhill, 2019). The research philosophy assists the researcher to ascertain the various perceptions, assumptions and approaches that improve data collection, analysis, and interpretation to arrive at an outstanding result (Creswell, 2014). The research philosophy employed is influenced by the researcher's interpretation of the connection between process and development (Eriksson & Kovalainen, 2015; Saunders et al., 2019). There are various types of research philosophies, which include: positivism; realism; interpretivism; pragmatism and nondualism.

Positivism is a research philosophy that is notably used by the natural scientist and is commonly referred to as an objective research strategy (Saunders et al., 2019; Sekaran & Bougie, 2016). This philosophy is used in the Natural Sciences because of its empirical nature of studying facts. Social and natural scientists are of the opinion that human behaviour can be investigated

with a quantitative approach that adopts a scientific approach to research. However, as it is difficult to study human behaviour in a controlled environment, social scientists tend to find it difficult to use this paradigm for studying human behaviour. The assumption of realism is related to scientific enquiry. The realists are of the opinion that what researchers assume as reality is the truth. As a feature of epistemology, it has the same characteristics as positivism in adopting scientific methods of knowledge development (Saunders et al., 2019). Although this position is adopted in the Natural Sciences, it is not totally acceptable in social and business research because of its objectivity.

Interpretivism is also referred to as qualitative or phenomenological research. It is a philosophy that integrates human interest into a study (Dudovskiy, 2016; Gichuru, 2017). As a research paradigm, interpretivism focuses on understanding the subjective meaning of individuals in the research domain (Goldkuhl, 2012). It is worthy to note that reliability, validity and generalisation have been identified as significant challenges to interpretivism (Kelliher, 2011). Pragmatism is referred to as an all-inclusive philosophy because it aligns research questions to suitable methods of obtaining unbiased results and emphasises mixed or multiple approaches to present enhanced outcomes (Freshwater & Cahill, 2013). Within a single study, the application of both qualitative and quantitative (mixed methods) is often a suitable approach.

It is worthy of note that one of the characteristics of a positivistic mode of enquiry is that the researcher adheres to subject-object dualism, otherwise known as nondualism. This philosophy of nondualism was considered appropriate for this study because other philosophies were overused.

5.4 NONDUALISM

Nondualism is a philosophy that was introduced to overcome the concerns of the subject-object dualism, which views the subject and the world as being fundamentally separated and inhabiting different spheres (Kopf, 2004). Nondualism can also be defined as “not two” or “non-separation”. Katz (1997) refers to nondualism as “the sense that all things are interconnected and not separate, while at the same time all things retain their individuality”. The result of dualism was not only that the self’s knowledge of itself is not possible, but it also implies the existential alienation of the self from itself and the world to which it belongs. Therefore, nondualism is “many in one, one in many”, which indicates a paradigm shift from the primacy of universal to one that balances the dimension of oneness or identity with

multiplicity or difference (Nishida, 1988). It indicates the interconnectivity of the system where “many is one” and “oneness of the many” is taken to mean a relationship between the universal and individuals, the world and its constituents in a subjective standpoint that focuses on the self’s interaction and connection with the world through the system. Nishida (1988) holds that the worlds of engagement and knowledge are not distinct but are one and constitute the principle necessary to make sense of the binary’s characteristic of human experience.

It is important to note that, in the researcher’s opinion, some of the known philosophies had already been overused and a radical upgrade was necessary that would present more accurately the reality of development (Wolter-Gustafson, 2008). According to Kolb (2014), effort to develop skills is emphatic listening which is different from educational task and requires a different teaching approach from teaching fundamentals of the subjects alone. A nondualism paradigm was applied based on the nature of the research, which incorporated the whole (micro, macro, meso and mundo) entrepreneurship ecosystem to offer solutions to the most fundamental problems (Kopf, 2004). This is from the perspective of incorporating various systems such as systemic action learning action research (a method of learning), a training project (SHAPE, 2017), Theory U (the study’s underpinning theory), the practitioners, academics, agencies, students (the study participants) and the university.

The choice of application was as a result of a paradigm shift from the old ways of thinking about teaching and learning to systemic learning; seeing the future as it emerges in order to explore profound changes in the entrepreneurship ecosystem by applying various systems, as mentioned earlier. The paradigm shift is referred to as pre-sensing: exploring profound changes in learners’ individual entrepreneurship orientation to provide a supportive and integrated ontology that does not discard or detract from the old system but contributes to the existing framework and system. The application of the nondualism paradigm was to fully understand youth entrepreneurship development when applying the SALAR method of learning. SALAR is anticipated to gradually open a new map that will maintain the relevance of the previous map (traditional classroom learning) but with a ‘bigger picture’. Freeman (2019) posits that one should not judge any single stage by comparing it to another, as no stage is better or worse than the others. According to him, it is one’s mental development state that may be thinking in that way and therefore the study employed nondualism as a suitable philosophy with an all-encompassing system. Freeman (2019) agrees further that, “There are no set of beliefs that are wrong or right, believing that something is either right or wrong is itself a belief”.

The incorporation of other systems, as proposed by nondualism, allows for more integrity in the source of data because, should one system be favoured over another, there is a possibility that a deep degree of integrity may never emerge, and accurate representation of the phenomenon may not result in wholeness (Gustafson, 1984). It is important to note that by necessity, as a result of world climatic and social changes, there is a need for reassessment of entrepreneurship education and its objective of proper learning. Hence, the incorporation of the systemic action learning action research to examine the training and the approach's influence on student entrepreneurship development. Rogers (1989) refers to this method as practice, theory, and research (person-centred approach), an actualising tendency to grow, develop and realise one's full potential for directional flow towards a more complex and complete development. This will allow the youth learners to expand their orientation, create the results they desire by nurturing new and expansive patterns of thinking in relation to "sensing", "pre-sensing" and "realising" (Branson, 2009). This author analyses the three concepts with regard to deepening collective learning, simply stated as: inner knowing, consciousness and awareness in the present moment and bringing something new to reality. In this view, it is assumed that all thinking is aided by logical-sequential processes occurring in the brain, mind, and hearth, which is mainly controlled by external information.

Clinically, according to Weinberg (2020), it refers to a neurological process that supports consciousness and emotion working within the human brain. Although the process is more complex than this statement implies, there is a relative functionality that integrates and relates to self-efficacy through the fundamental functions of memory and recall, emotion and motivation. The circumference comprises the primary sensory areas that receive information, such as vision, hearing, touching, and smelling, as well as their association areas that are related to building self-efficacy and learning, as related to research action learning. Arnsten (2009) refers to this function as motivation and working memory, an abstract sensory memory association that integrates information at a higher level as a driver of conscious action in the *thalamus*. The thalamus serves as a relay station connecting all the systems throughout the entire body with the brain (Percheron, 2003). It is more than a relay station if considered in the field of learning and entrepreneurship. The thalamus is where the subjective consciousness resides and is connected to the hippocampus that supports the valuable short-term memory function. This is related to an element in entrepreneurship self-efficacy where individuals search for opportunities and creative information and filter through higher order neurons in which individuals synthesise the perceived information (Felleman & Van Essen, 1991).

The subjective world view in turn influences the receptivity of the information at the first order cells and its subsequent integration, which assists in creativity and innovation by identifying the bottom-up process of establishing neuronal representation of the environment (Weinberg 2020). This process gives rise to an adequate integration, supportive of human consciousness and an independent function that encourages acting on one's intention to reflect a future-based, abstract integration. Studies have revealed that conceptual integration of cortically stored information occurs exclusively in the hippocampus in adult humans (Bergmann, Spalding & Frisen, 2015). This would assist in projecting into the future that is to emerge.

The projection of the future to emerge needs to become operative from the time of idea conception and throughout the embryogenesis process until maturation. This is referred to as reactive neurological activity, a stage during which sensory structures process information in the appropriate brain part and integrate and develop that information within sensory association areas. The human brain that emerges from the review of the self-efficacy concept is one that integrates neurological processes that are supportive of and unify the full spectrum of neuropsychology (Riva, Banos, Botella, Mantovani & Gaggioli, 2016) and the neuroendocrinology that contributes to the development of entrepreneurship training and development through self-efficacy, which ultimately enhances the training intervention for entrepreneurship development (Kewalramani & Ahirwar, 2018). The process of developing intra- and inter-personal self-efficacy is seen as a drive-in entrepreneurship self-efficacy and individual entrepreneurship development, which was discussed in previous chapters. It enhances understanding of how an individual's mind works to integrate the system as a whole in relation to all systemic levels.

This study applied nondualism, based on its epistemology that intends to alter the old ways of thinking and to expand academic discourse with this study that was person-centred in alignment with our ways of thinking. The implication of this is that the brain and the body are inseparably integrated by mutually targeted biochemical neural activities (Damasio, 1994)

5.5 RESEARCH DESIGN

A survey design was utilised in this study to explore the development of entrepreneurial self-efficacy and individual entrepreneurial orientation in the studentpreneurs at the University of KwaZulu-Natal. It was adopted to test the suitable application of Theory U that underpinned the study. This was done by applying the theory features of co-initiating, co-sensing, co-

inspiring, co-creating and co-evolving on the studentpreneurs to develop their entrepreneurial self-efficacy and individual entrepreneurial orientation with the use of social transformation technology (Scharmer & Kauffer, 2013). Barbosa (2007) developed four constructs of entrepreneurship self-efficacy, namely: to identify opportunity; build relationships; manage people and materials and tolerate different circumstances that can sustain the business (Bandura, 2012).

A case study was employed to drive the systemic action learning action research training project known as SHAPE 2017, which took four months to complete. The project was designed to develop and influence participants' entrepreneurial self-efficacy and orientation over time. Therefore, repeated measures were employed to examine behavioural change in the participants' progressive development at the second and third stages, which involved re-administering the same questionnaire in the 8th week of training and at the completion of the project. The participants were selected for this study because practitioners and lecturers in the field of entrepreneurship would not be able to provide salient information regarding the menace of unemployment and how this can hinder graduates' entrepreneurial development. The participants for the training project were drawn from the university's registered undergraduates and a limited number of postgraduate students who already had theoretical knowledge of the subject matter and who were willing to develop themselves entrepreneurially. This type of training is anticipated to assist to eradicate poverty and unemployment in the society and contribute positively to the nation's economy. The design was adopted because it assisted in eliciting information through the entrepreneurship development project known as SHAPE to determine the behavioural changes in the focus group at periodic intervals covering a period of four months; unlike entrepreneurship education that is theoretical in nature and spans a longer period. The project avails participants the opportunity to gain hands-on and action learning and collaborate to explore, innovate, create, and evolve by creating new ventures with the skills gained through the action learning using fourth industrial revolution technology for development.

5.5.1 Action Research

Action research is a form of research design that was introduced by social scientists in Europe in the 1940s (French, 2009). It was referred to as a generic construct (Coughlan & Coughlan, 2002; Chevalier & Buckles, 2013) that involved various types of action-oriented learning, and its results are important in practice than in the confirmation of theoretical proposition. Saunders

et al. (2019) proposed a four-stage method of action research that includes: diagnosing; planning; taking action and evaluating. It is a form of research that contributes to practice and knowledge in the Management Sciences (Coghlan & Coughlan, 2010). These authors assert that research concentrates more on knowledge in practice with recommendations pertaining to valuable production processes and output in an institution having diagnosed a challenge (Sekaran & Bougie, 2016).

The first major stage in action research is problem identification, when suitable data collection procedures and statistical analyses are employed to proffer solutions to identified problems. Re-evaluation of the implemented solution tends to reveal the impact on the organisation, and this is the main difference between basic and action research. The aim of action research is to provide immediate solutions to immediate challenges facing society or an organisation. Basic research seeks to contribute to knowledge in interest or subject of enquiry.

Basic and action research approaches employ scientific method of enquiry, this is in relation with systemic action learning action research which applied social transformative technology “Theory U” to activate student and youth entrepreneurship potential in the University of KwaZulu-Natal. Thus, a combination of action learning action research was used in the study to provide solution to the identified problem in the higher education system. This was necessary because the study aims to extend the frontiers of knowledge in the field of entrepreneurship and its development in South Africa.

5.5.2 Quantitative method

This study adopted a quantitative design rooted in positivism and employed a nondualism approach, as discussed earlier in this chapter, based on the strength of this method to measure an amount (Hagan, 2014) and present data in numerical form (Punch & Oancea, 2014). The focus of this design is to establish the relationships between variables and the strength of those relationship if there are any (Mackey & Gass, 2015). It entails relationship measuring and the establishment of its validity can be achieved by statistically computing correlations and regression (Mackey & Gass, 2015). The decision to adopt a particular method is usually informed by the research problem and objectives. The goal of this method differs from the qualitative method that attempted to gain in-depth understanding of an event. With a quantitative method, the researcher seeks to describe current situations, establish relationships between variables and sometimes explain causal relationships between the variables (Creswell,

2014). To enhance the objectivity of the study, the quantitative method has well-developed data collection strategies prior to beginning a study and these strategies do not change once the study begins, unlike the qualitative method. Quantitative research can adopt one of any number of strategies, but the sampling technique is key because of the generalisability of the results. With quantitative research, data are collected from many participants. A quantitative method of inquiry is specific and narrow, targeting only a handful of measurable variables. This design was considered appropriate for the current study and hence its adoption.

5.6 RESEARCH APPROACHES

Research approaches can be examined from two perspectives: quantitative (deductive) and qualitative (inductive) approaches. It should be noted that the inductive approach is closely related to interpretivism. The characteristics of utilising interviews and observations to acquire perfect knowledge of the phenomenon under investigation makes the qualitative approach more likely to be suitable in an inductive inquiry. This study adopted a deductive approach as the data for the study was not gathered by means of interviews or observations. Contrary to the inductive approach, the deductive approach employs complex quantitative methods of statistical analysis.

5.6.1 Deductive approach

The deductive approach is broadly scientific in nature and highly recognised in the Natural Sciences where rules are used to explain anticipated phenomena, which allows for control (Saunders et al., 2019). It is used to test existing knowledge, laws and theoretical considerations for hypothesis formulation, data collection, analysis, interpretation and accepting or rejecting the hypotheses (Zahle, 2018). A literature review and consideration of the relationships between the variables in the study's theoretical framework is the first step in the deductive approach of scientific inquiry (Saunders et al., 2019). This is important to guarantee a perfect understanding and awareness of the nature of the dynamics embedded in the subject matter. It also develops acceptable methods of measuring the hypotheses by defining in clear terms how the variables will be measured (Zahle, 2018; Saunders et al., 2019). To avert any unwanted issues or mistakes that may render the result of the analysis invalid, mental awareness of the strengths and weaknesses of the various methods of data collection and analysis is required as an important part of a scientific inquiry (Saunders et al., 2019).

As mentioned earlier, scientific inquiry rests on the quantitative approach, strong research items that demand new and reliable information from respondents. The movement from data to hypothesis in a scientific inquiry is referred to as verification and validation of the research objectives and data (Purcell, Rainie & Brenner, 2012). Other statistical methods relate to findings; interpretation of the results also emanates from the scientific inquiry. Interpreting the statistical significance of the variables can be achieved by employing inferential statistics involve steps in which decisions are made to accept or reject the hypothesis that has been tested (Zahle, 2018; Filho, Paranhos, Rocha, Batista, Da Silva jr., Santos & Marino, 2013). The last step in the deductive approach has to do with a re-examination of the theory with the intention to re-evaluate the existing knowledge based on the results of the scientific enquiry (Saunders et al., 2019). The implication is that the results either strengthen or weaken the reviewed theory.

5.7 THE APPROACH ADOPTED FOR THE STUDY

A quantitative method using a deductive approach was adopted for this study. A survey design was employed to measure behavioural changes and correlations between ESE and IEO using systemic action learning action research as established by scholars and discussed in the chapter pertaining to a review of relevant literature. This was to gain in-depth knowledge of how to identify what needs to be done to encourage participating students to make changes in curricula, teaching methods and the challenges that prevent venturing into business after graduation. This approach provided the participants the opportunity to acquire new entrepreneurial skills through their participation in the development training project (SHAPE).

5.8 TIME HORIZONS

Time horizons implies the estimated time for the study to be carried out (Sekaran & Bougie, 2016; Saunders et al., 2019). There are two types of time horizon identified by scholars in social research (Saunders et al., 2019), as discussed in the following sections.

5.8.1 Cross-sectional study

A cross-sectional research design is utilised for the determination of the frequency of a particular attribute in a defined population at a specific time (Charan & Biswas, 2013). Employing this approach, data are being collected just once. This may occur over an extended period to answer a research question. A cross-sectional study is also referred to as one-shot (Sekaran & Bougie, 2016). The design is relatively inexpensive and less time consuming with

regard to data collection than a longitudinal study and is consistently utilised by students when conducting research studies for the award of degrees in the Management Sciences. This study did not employ a cross-sectional design as it was perceived to be inappropriate as it does not allow for experimentation and observation of the subjects.

5.8.2 Longitudinal Design

The researcher adopted a pseudo-longitudinal approach because of its relevance to the systemic action learning action research project and the design thereof. It aided with an evaluation of change over time, which involves repeated measurement of the same research subjects over an extended period (Caruana, Roman, Hernandez & Soli, 2015). Menard (2008) recommends a minimum of two measurements. Ployhart and Vandenberg (2010) recommended taking at least three repeated measurements to detect any changes over time as opposed to the two recommended by Stoolmiller and Menard (2008). Longitudinal design studies are costly and require more effort and time spent on data collection and processing than other methods to determine the level of variation between the variables embedded in the study. The design also requires data collection at more than one point to provide answers to the research questions and attain the objectives (Sekaran & Bougie, 2016; Saunders et al., 2019).

This study was a vivid example of where variations in the level of participants' behaviour is measured with respect to ESE in relation to entrepreneurship development. This implies that this study collected data at three stages of the project (before, during and after the SHAPE project). The study was equally experimental in nature because of the action learning that was employed and was a significant improvement over case studies as a longitudinal study is known to draw inference from the differences in variables after exposure to a phenomenon (Wang et al., 2017). The author posited that with extreme caution, a longitudinal design can come close to inferring causality and the design is similar to an experimental design and is always a longitudinal study. The relationships between dependent, independent, and mediating variables must be clearly defined; each of these could be either static or dynamic (Ployhart & Vandenberg, 2010).

Longitudinal studies often require the completion of the same questionnaire multiple times (Wang et al., 2017). Respondents in a study may be motivated for completion of the phases of the study; and such incentives may be pool together for later part of the study which must be made known to the participants at the beginning (Wang et al., 2017) such as certificate of

participation or support system. With regard to incentives in this study, certificates of attendance and participation in the SHAPE 2017 project were issued to the participants and these served to add value to their degree. They also served as proof that the participants were certified entrepreneurs and intrapreneurs and could inform potential employers that the applicant has additional skills. There is no doubt that being awarded that certificate would be an incentive to the participants to complete the project.

5.9 RESEARCH CHOICES

Research choices refer to the various techniques for data collection and analysis. These include “mono method, multiple and mixed methods research” (Saunders et al., 2019). According to these authors, the mono method entails the adoption of a data collection technique and conforming the data analysis procedure. The multiple method makes use of two or more data collection techniques and corresponding data analysis procedures. This method employs various data collection techniques and data analysis procedures in either quantitative (mono-method) or qualitative (mixed-method) approaches. It must be noted that the mixed method represents an amalgamation of quantitative and qualitative techniques of data collection and analysis procedures either concurrently or consecutively in a study. This study adopted a mono method technique of data collection. The survey technique was considered an appropriate procedure because of the nature of the study and its aims and objectives.

5.9.1 Mono method

The mono method requires the adoption of a data collection technique and a conforming data analysis procedure (Saunders et al., 2019). Data are collected in numerical form (quantitative) and subjected to complex statistical analyses utilising various tools to report the findings in the same way. This is consistent with Joplin’s (2019) assertion that with a quantitative method, data are analysed by adopting mathematically based methods to explain phenomena under investigation and to answer questions such as how, why and what, while with a qualitative method, data are not necessarily numerical and therefore cannot be analysed by means of statistics (Muijs, 2010). The mono (quantitative) method is related to the scientific philosophy of enquiry to a large extent, hence its adoption for this research.

5.10 STUDY SITE

The site for the study was the School of Management Information Technology and Governance, College of Law and Management Studies, University of KwaZulu-Natal, Westville campus. This site was selected because this was the location where the “SHAPE” training project ran for four months. The project SHAPE 2017 was held at an assigned venue authorised by the management of the University of KwaZulu-Natal. It also served as a point of contact between the researcher and the respondents. Sekaran and Bougie (2016) posit that a research population may be focused on identified group.

5.10.1 Target population

A population in the context of research is the entire group from which a sample is drawn for investigation (Saunders et al., 2019). The target population in the context of this research was the entire group of participants that volunteered for the SHAPE 2017 project at the University of KwaZulu-Natal. This group comprised mainly registered third year entrepreneurship students and a limited number of honours students, as well as some master’s and PhD students that were interested in developing their entrepreneurial skills. Approximately two thousand (2,000) students were in this group (School of Management, IT and Governance (MIG) data base, 2017) and the study focused on these students to train and develop their entrepreneurship skills to proceed from student entrepreneur (SE) status to young entrepreneur status (waiting to create venture) with the aim of gaining the support of entrepreneurship enablers and the University of KwaZulu-Natal Entrepreneurship Directorate. The choice of this group was because they had completed a significant portion of their studies based on theory and they were aware of what the career choice holds for them. Another reason for this choice was the high rate of youth and graduate unemployment and the low level of entrepreneurial activities among the youth in South Africa (Herrington & Kew, 2015). Statistics South Africa (Stat SA, 2019) observes that the afore-mentioned situation remains unimproved and is continuously deteriorating.

The university was therefore identified for the study because of a lack of entrepreneurship action among the graduates and the rise in the unemployment rate that is causing poverty and social vices. Another reason for selecting the university was because of SHAPE’s aims and objectives, as this was a living theory project with continuous cycles of systemic action learning action research to train and empower potential student entrepreneurs (Van der Westhuizen,

2016). The aims and objectives of the project and the study were thus interrelated. The cosmopolitan nature of KwaZulu-Natal's diverse population and the racial mix of the students on campus was also an important factor that was taken into consideration as explained in the demographic structure of the study. Participants in the study were recruited from among the students registered at the university. Recruitment was achieved by creating awareness by means of the university's notice system, news bulletins, banners, flyers, websites and Facebook account dedicated to the SHAPE project (<https://shapetechnology.wordpress.com>).

5.10.2 Sampling Strategies and Sample Size

Probability and nonprobability sampling techniques can be employed to gather quantitative and qualitative data. This study employed a self-selected, non-probability sampling technique to recruit participants who voluntarily indicated their intention to participate in the SHAPE 2017 action research project through the university's notice system. A non-probability sampling (self-selected sampling) technique was adopted because of the nature of the research being conducted, which was an action-oriented investigation that focused on a group of participants that responded to various advertisements on the campus and project SHAPE's website. Two hundred and thirty (n=230) volunteered, registered and participated in the training. The sample was self-selected and although problematic from the viewpoint of being biased, the volunteers had strong views about the SHAPE project and the research subject in relation to their development. In view of this, the study employed purposive sampling for simplicity and to streamline the research population to best fit the focus of the study (i.e. the students) (Sekaran & Bougie, 2016).

Purposive sampling is a non-probability technique that entails the researcher consciously selecting subjects or elements to participate in a research (Saunders et al., 2019). Etikan and Bala (2017:215) described purposive sampling as a sampling technique that is "based on the judgement of the researcher as regards who will provide the best information to succeed for the objectives of the study". It also allows the researcher to identify elements of the population that are accessible and provide relevant information that enhances the study's findings (Masenya, 2018; Sekaran & Bougie, 2016). A purposive sampling technique was adopted for data collection at set intervals during the SHAPE training project following a longitudinal approach. This technique is commonly employed to solve immediate societal problems by creating value to elicit information from specific target groups.

This sampling technique was employed to purposively address unemployment and low total entrepreneurial activity among universities' graduates and suggest solutions. Notwithstanding the advantage of non-probability sampling techniques, they are not without limitations, such as being prone to bias and influence beyond the researcher's control, as the elements are selected based on convenience (Saunders et al., 2019). The respondents are sometimes encouraged to participate by offering a financial reward, but this can lead to bias (Muijs, 2010). Thus, to alleviate bias to some extent, it is often used in collaboration with intense and focused methods of data collection such as pilot groups and pilot studies (Abdi & Williams, 2010).

5.11 DATA COLLECTION PROCEDURES

Data collection is a planned process in any research work and careful consideration must be given to the collection procedures (Ritchie, Lewis & Elam, 2013). Data collection can be defined as the systematic collection and gathering of data that is relevant to the study to measure the variables that have been identified (Creswell, 2014; Saunders et al., 2019). This study collected primary data by means of a questionnaire that was administered at 3 points during the SHAPE project. Additional information was obtained from various sources such as textbooks, conference proceedings, accredited and non-accredited journals, newspapers and media publications, government gazettes and electronic search engines. The primary aim of the study was to explore the students' behavioural and progressive development of their ESE and individual entrepreneurship orientation.

A questionnaire was utilised to elicit information from the participants and to proffer solutions to the problem identified for the study. There are various ways of collecting data that include: observations; interviews; case studies; surveys and questionnaires. The questionnaire method was deemed a suitable way to obtain first-hand information and primary data from the participants. This was to examine the participants' progressive development and behavioural changes that occurred during the training to ascertain the relationship between the two variables. The questionnaire was designed and administered to the registered two hundred and thirty participants during the SHAPE 2017 training project where n=59 participants were analysed based on their consistent attendance in the training and to fulfil the aim of the study; to examine the progressive entrepreneurship development of the participants. A simple layout was employed for the questionnaire, which was designed in a manner that would address the research questions and attain the objectives of the study (Kabir, 2016). A questionnaire was employed because of the longitudinal nature of the SHAPE training project with which the study collaborated and because a questionnaire is the most common instrument for data

collection to capture attitudes, beliefs, and opinions (Fredriks, Spinks, Holman & Dane, 2016).
The questionnaire was

administered repeatedly to examine progressive changes (Fredriks et al., 2016). The questions that were formulated for the questionnaire were closed and pre-coded (Brace, 2018).

5.11.1 Questionnaire Design

Questionnaire was adapted through related literature and studies such as Barbosa (2007) for ESE; Bolton & Lane (2012) and Van der Westhuizen (2016) for IEO. The researcher considered important issues while adapting the questionnaire, which included a) consideration of the variables; b) the structure and wording of the questions and c) utilising simple language for ease of understanding. Sekaran and Bougie (2016) hold that an acceptable questionnaire should focus on three broad areas, namely a) wording of the questions; b) planning of the issues and c) general appearance of the questionnaire. A sample of the questionnaire used for this study is attached as Appendix D

It was important to elicit relevant information from the registered students who had a certain level of theoretical training in the classroom and that were willing to develop themselves in line with venture creation and self-development. Their participation was expected to contribute to the nation's economy by eradicating poverty and unemployment by means of venture creation. Price, Chiang and Jhangiani (2018) posit that the researcher should take cognisance of the questionnaire's structure during preparation thereof and should apply appropriate methods to ensure a reasonable return rate.

The questionnaire was divided into three sections, A, B and C. Section A contained questions that elicited information pertaining to the respondents' demography such as gender, age, educational qualifications, place of residence, place of birth and race. This information was necessary to be able to examine the effect of demographic issues on the main areas of the study. Section B contained questions pertaining to the dependent variable (entrepreneurial self-efficacy). The participants were requested to reveal the extent to which their entrepreneurial self-efficacy was enhanced through the application of action learning. Other questions related to how to develop and sustain a venture and how significant the construct was to their entrepreneurship development considering their educational level in their study areas. This section of the questionnaire also assessed the relevance of ESE to student motivation towards entrepreneurship development in the university.

Section C obtained information pertaining to the interrelatedness of action learning and entrepreneurial self-efficacy in developing students' IEO during and after the systemic action learning action research project. The respondents were requested to rate their level of confidence with the statement contained in the questionnaire according to a seven-point Likert scale (from 1 = not confident to 7 = completely confident). They were to give their opinion as perceived relevant to ESE and IEO constructs based on their behavioural change during the systemic action learning action research project. The Likert scale that was employed was appropriate to determine the respondents' true behaviour as it compelled them to think deeply before the selection of any point on the scale (Rowley, 2014). It is important to emphasise that the weaknesses in scaled responses include the fact that respondents generally tend to respond positively, even when their behaviour indicates a different attitude (Babbie, 2016) and when the researcher cannot ascertain the reason for a particular response (Gillham, 2008). The questionnaire was administered by the researcher and the members of the coordinating team thrice at intervals during the SHAPE 2017 project (July-October 2017). This method was adopted to be able to collect the questionnaire immediately after the completion of the project and to enhance the response rate because the researcher followed up on data collection.

The questionnaire was administered to the volunteer participants of the SHAPE 2017 project at the beginning of the training session to allow enough time for its completion and return. This technique worked out reasonably well for the three stages involved in the administration of the questionnaire. A significant concern was the low response to the study's instrument due to the low attendance of the participants at the project, which may be because of their classes, change of venue and movement from other campuses. The last stage of the questionnaire's administration had the highest attendance with more than 160 participants, although only 103 participants completed the third stage questionnaires.

5.12 RELIABILITY AND VALIDITY OF THE DATA COLLECTION INSTRUMENT

The two concepts of reliability and validity served as criteria for assessing the standard and quality of the study (Bell & Bryman, 2018).

5.12.1 Reliability

Reliability has to do with the acceptability of the research result, whether it can be repeated successfully (Taber, 2018). It has to do with the issues of measuring the concept in relation to uniformity (Drost, 2011). Reliability refers to the consistency of the findings and whether or not the measures that were formulated for the concept were consistent (Taber, 2018). For the instrument to be reliable and trustworthy, it must measure what it was designed to measure (Sekaran & Bougie, 2016). Cronbach's alpha coefficient was employed to confirm the reliability of the variables in the measurement and to determine the internal consistency or average correlation of the items in the survey instrument to check its reliability (Taber 2018). This were presented in the analysis chapter.

According to Gliem and Gliem (2003) the closer the Cronbach's alpha is to 1, the higher the consistency of the research instrument. An alpha coefficient of 0.7 and higher is normal and acceptable (Rahimnia & Hassanzadeh, 2013). This allows the researcher to consider the reliability, stability and consistency of the instrument incorporated in the model developed for the study's analysis. The researcher piloted the instrument among the third-year entrepreneurship students at the University of KwaZulu-Natal in the first semester of the 2017 session during their module class. The test and re-test method were employed to ensure the consistency of the data collection instrument in measuring what it was designed to measure. From the response as stated earlier, the instrument was adjusted and rephrased base on the response of the pilot studies participants.

It must be stated here that based on the low reliability find in a construct of IEO (risk taking) after the analysis, Post-test was also carried out three years after the training to evaluate, assess the participants' perception of changes in their knowledge and skills, attributes, and behaviour whether the expected development took place in the participants of the training program after few years of graduating from the university. It is also meant to re-validate the inconsistency in the IEO risk-taking construct that was found unreliable after the analysis. This is necessary and consistent with the views of Bolton and Lane (2012) who recommends the re-test and revalidation of IEO instrument according to the context of its application as an emerging area of entrepreneurship development. The post-test was carried out on the same consistent analysed sample of the study through mail questionnaire and the result is analysed and interpret in chapter seven and form part of the major contribution to theory.

5.12.2 Validity

In quantitative research validity is the degree to which the study's data collection instrument measures the framework or addresses the research objectives (Thatcher, 2010; Taber, 2018). In research, validity has both internal and external validity to indicate whether the results of the study are legitimate and whether or not the results of the study are transferable to other groups of interest respectively (Wang, Tiang & Tiang, 2001). This is in relation to the integrity of the conclusions that are drawn from the research's findings (Bryman & Bell, 2007). There are categories of validity in the research space, which include construct, discriminant and convergent validity; these are particularly important in studies that involve latent variables.

5.12.2.1 Construct validity

Construct validity applies primarily to quantitative research and to the measures of a social scientific concept (Bryman, 2012). It is otherwise known as measurement validity (Bryman, 2016). An instrument has construct validity when it measures a theoretical, non-observable construct or trait or a construct of interest (Bolarinwa, 2015). It compares whether a measure that was developed for a particular concept really affects what it purports to represent (Bryman, 2016). A construct validity test was employed in this study. To ensure the validity of the instrument employed in this study, the researcher subjected the instrument to a check by the supervisor and validation by a statistician and the instrument was also subjected to pre-testing or pilot testing to determine whether the construct measured what it intended to measure. The model was tested based on the fit indices suggested by Hooper, Coughlan & Mullen (2008). A number of questions were rephrased and those that were ambiguous were expunged from the questionnaire. Construct validity has two sub-types as discussed hereunder.

5.12.2.2 Convergent validity

A test has convergent validity when it has high correlation with another test that measures the same construct. It is a case of where a low correlation coefficient provides evidence of high quality. Malhotra, Dash, Kumar and Purwar (2013) suggested that Average Variance Extracted (AVE) is a better estimation of convergent validity to ascertain that a latent construct is well explained by its observed variables. As a criterion, AVE should be greater than 0.5, which indicates that less than 50% of the variance is due to error.

5.12.2.3 Discriminant validity

This is the degree to which items differentiate among examinees in terms of the characteristics being measured. Discriminant validity is useful for determining that a latent factor or construct is not better explained by some other variables than by its own observed variables. The procedure for determining discriminant validity involves estimating Average Variance Extracted (AVE) and Maximum Shared Variance (MSV). Hair, Black, Babin and Anderson (2010) set the criteria thus: MSV estimates must be less than the corresponding AVE estimates and therefore, discriminant validity is ascertained for the constructs.

In this study, an attempt was made to determine the internal and external validity of the study. The two concepts reflect whether the results of the study are trustworthy and meaningful.

5.12.2.4 Internal validity

Internal validity relates mainly to the issue of causality and is concerned about whether or not a conclusion that incorporates a causal relationship between the two or more variables holds water (Bryman & Bell, 2007). It relates to how well a study is conducted in terms of its structure. It also reflects that a given study makes it possible to eliminate explanation for a finding. If it is hypothesised that x causes y, then the researcher needs to be sure that x is the cause for variations in y and that nothing else could cause the relationship (Bryman & Bell, 2007). This study ensured the validity of the variables using the Pearson Product-Moment Correlation Coefficient to examine the relationships between the variables and validate them with regression analysis to ascertain the level of the variation among the variables by employing multiple regression.

5.12.2.5 External validity

External validity is concerned with the generalisation of the study's results to another population in another research context (Bryman, 2012). It relates to the extent to which the findings are applicable to the real world. External validity is the main reason for quantitative researchers being keen to generate representative samples (Bryman & Bell, 2007). This study's results cannot be generalised beyond the specific research context because non-probability techniques were employed.

5.12.3 Pilot Study

The target population for the pilot study comprised the students that registered for entrepreneurship modules in the first semester of the 2017 academic session in the School of Management, IT and Governance at the University of KwaZulu-Natal. The rationale for the pilot study was to embark on students' entrepreneurial self-efficacy observation to ascertain their skills at various levels of their academic endeavours on campus. Non-probability convenience sampling was employed in administering the questionnaire to entrepreneurship students during their modular classes over a period of three weeks. The exercise was to test the clarity level, comprehension and understanding of the questionnaire before the commencement of the main study (Saunders et al., 2019) and to ascertain if the questions were ambiguous and to make changes in accordance with the suggestions and comments advanced by the respondents. Based on the results and suggestions made by the respondents in the pilot study, a few changes were made regarding testing the IEO constructs and terminology and new questions were included to focus on IEO items.

5.12.3.1 Techniques of Data analysis

Data analysis in a research connotes a process of engaging in systematic searching for and arranging data with the aim of improving the researcher's understanding of the data (Miles & Huberman, 1994; McGregor, 2017). Processing data by means of coding or grouping provides a good understanding of the study. Sutton and Austin (2015) opine that data analysis includes making sense of the data that has been collected and using the analysis to answer the research questions or accept or reject the hypotheses in each study. In this study, a quantitative technique was employed to carry out the data analysis.

In Section A of the questionnaire, the primary data that were collected were analysed using descriptive statistics. This included frequency counts, simple percentages, means and standard deviations, which were all presented in frequency tables. The primary data collected under Section B of the questionnaire was also coded and analysed. The procedure that was adopted involved the conversion of the data to a machine-readable format; a spreadsheet that could be analysed by computer programming using the IBM Statistical Package for Social Sciences (SPSS) version 24. SPSS was used for the data analysis because it is comprehensive statistical software that is configured for the analysis of survey data in the Social and Management Sciences (Muijs, 2010). It also has the features of producing tabularised descriptive statistics, reports, distribution plots and charts and fulfilling multifaceted statistical queries with any data

(Pallant & Manual, 2013). The software was therefore employed to run the descriptive statistics highlighted earlier, as well as the inferential statistics such as Pearson's Correlation Coefficient. Multiple linear regression was also used to validate the relationship output from the correlation analysis and to ascertain the level of the relationship between the dependent and independent variables in the study. It helps to calculate the amount of variance in the dependent variable explained by all the predictors together, this is referred to as R square.

5.12.3.2 Descriptive statistics

Descriptive statistical analysis is a technique that is commonly used to describe or summarise numerical data (Wilson, 2010). This statistical tool is important in the areas of analysing categorical or demographic data. It employs frequency distribution tables to explain the number of occurrences and percentages of different levels of data collected for a particular study (Sekaran & Bougie, 2016). Data presentation using descriptive statistics can be in tabular form or diagrammatic presentation. While tabular presentation is in the form of frequency distribution tables, diagrammatic presentation can be made with the aid of bar charts and pie charts. For the purpose of this study, tabular presentation of the data was preferred and standard deviation was also utilised in the analysis to measure dispersion to compare the extent to which the data values for the variables was spread around the mean value (Saunders et al., 2019). Standard deviation is commonly used as a measure of dispersion in descriptive analysis as it measures the square root of variance, which indicates the range of variability in the analysed data (Sekaran & Bougie, 2016). In this study, data analysis began with descriptive statistics to gain a clear understanding of the data that were collected (Wilson, 2010). Students' research analysis in projects, dissertations or theses usually commences with descriptive statistics. The researcher therefore applied this method in the presentation and analysis of this study's data.

5.12.3.3 Inferential statistics

Inferential statistics are employed to draw inferences about a population from a sample of that population (Wilson, 2010). Inferential statistics refers to the evaluation of a population's value, referred to as statistical confirmation of the research hypothesis (Laake & Fagerland, 2015). In inferential statistics, non-parametric and parametric tests can be carried out to test the research hypotheses. According to Saunders et al. (2019) and Wilson (2010), non-parametric tests are employed when the data are not normally distributed and parametric tests are performed when the sample is drawn from a normally distributed population. This implies that non-parametric

testing is commonly performed on categorical data, whereas parametric tests are performed on numerical data. This study employed a non-parametric technique for the analysis of the independent and dependent variables with the aid of various computer software packages, as discussed earlier.

5.12.3.4 *Principal Component Analysis (PCA)*

Principal component analysis (PCA) is an approach to factor analysis that is utilised to check the total variance in data (Abdi & Williams, 2010). It is a technique used for streamlining the dimensions of the variables and can retain as much data variation as possible (Groth, Hartmann, Klie & Selbig, 2013). Principal component analysis can also be used to elicit information from a table and present it as a new orthogonal variable referred to as PCA. These data are then utilised to explain similarity patterns in the observation and the variables (Abdi & Williams, 2010; Groth et al., 2013). The study employed an exploratory approach to streamline the variables' dimensions and to retain data variation in the analysis.

5.12.3.5 *Pearson's Product-Moment Correlation Coefficient (PPMC)*

Pearson's product-moment correlation coefficient (PPMC) is used to determine the direction of the strength and the importance of bivariate associations among the indicators' variables (Saunders et al., 2019). PPMC was used in this study to examine the associations among the latent variables investigated with the aid of the IBM Statistical Package for Social Sciences (SPSS) version 24. PPMC enables researchers to quantify the strength of a linear relationship between two ranked or numeric variables (Saunders et al., 2019). Saunders et al., (2019) explained that a value of 0 implies that the variables are perfectly independent. The closer the value is to 1, the stronger the relationship, and a correlation of 0 indicates there is no linear relationship between the variables (Muijs, 2011). A T-test was employed to ascertain if the correlation coefficient was significantly different from zero and if there was evidence of an association between the two variables. It must be noted that coefficients can be either negative or positive and can express the associations between variables (endogenous and exogenous) (Sekaran & Bougie, 2016). The hypotheses were tested to validate the objectives and to examine the degree of the relationship between the variables using Mauchly's test of sphericity, tests of between and within and an analysis of variance using repeated measures. For this study, the exogenous variable was entrepreneurship self-efficacy, and the endogenous variable was individual entrepreneurial orientation, assessed by means of indicators such as opportunity

identification, relationship self-efficacy, managerial self-efficacy, tolerance self-efficacy and risk taking, innovation and proactivity for the IEO variable. All these were analysed based on the data collected and by means of PPMC, which is a non-parametric test, with the aid of the IBM Statistical Packages for the Social Sciences (SPSS) version 24.

5.13 TEST FOR NORMALITY

In this study it was essential to test for normality before selecting the statistical test to be used (Saculinggan & Balase, 2013). Various processes in statistical analysis rely on the underlying assumption of normality (Park, 2015; Hair et al., 2014), such as t-tests, linear regression and analysis of variance (ANOVA). The most popular tests of normality are the Kolmogorov-Smirnov (KS) and the Shapiro Wilk (SW). These two tests the level of significance for difference in the normal distribution (Hair et al, 2014). Miot (2017) and Hair et al. (2014) posit that if the p-value is greater than 0.05, the data set is normally distributed and the study can apply a parametric test; if significantly skewed, a normal parametric test should be employed. When the p-value is small (statistically significant), the implication is that the covariance matrices are statistically different (Hair et al., 2014). Researchers should always take cognisance of the fact that tests of significance are less useful when the sample size is less than 30 and particularly sensitive when the sample contains more than 1000 elements (Hair et al., 2014).

5.14 ETHICAL CONSIDERATIONS

The researcher followed the research guidelines laid down by the University of KwaZulu-Natal to ensure the study's authenticity and credibility. Preliminary ethical clearance was granted for project SHAPE 2017 for subsequent build on approval to be applied for accordingly when research commences. A letter of approval from the Human and Social Science Research Ethics Committee of the University of KwaZulu-Natal was issued linking the research with the initial research project SHAPE carried out in 2014. The University's ethical clearance and gatekeeper's letter with the number HSS/1546/018D are attached as appendix B

To reduce bias in the study, the researcher ensured objectivity when writing the report. Avoiding plagiarism was a high priority and all the secondary data that were collected and used for this study were adequately cited and referenced. All other ethical considerations in research were treated as important when conducting this study. The participants were notified of the purpose and objectives of the study and informed that their participation was voluntary. They

were therefore required to complete an informed consent form before taking part, indicating their willingness to voluntarily take part in the project. The participants were also informed that they could withdraw from the study at any stage if they so wished. The participants were also informed beforehand of what was expected from them as participants, in line with ethical demands (Zikmund, Carr & Griffin, 2013). Anonymity and confidentiality of the participants were guaranteed throughout and after the study. According to the Department of Higher Education and Training, at the points of data collection, processing, storage and dissemination, confidentiality could be broken; this is a common occurrence in an organisational environment when data are distributed within (Veldsman, Gevers & Crewe, 2019; Kartz, 2019). The researcher only disseminated the final thesis within the university; only the supervisor and one other student involved in the research had access to the raw data that were collected. Upon completion of the study, the researcher would deposit the data that were collected during this study with the School of Management, IT and Governance at the University of KwaZulu-Natal for record and reference purposes. Copies of the ethical clearance, informed consent form and the questionnaire that was employed as a data collection instrument are attached as appendices.

5.15 LIMITATIONS OF THE METHODOLOGY

The research instrument that was administered was limited to the participants of the systemic action learning action research project (SHAPE 2017) at the University of KwaZulu-Natal, specifically the third year and post-graduate students in the school of Management IT and Governance. The study collaborated with SHAPE 2017 as an intervention training that examined the effect of entrepreneurship training on students. It engaged the practitioner and social technology to enhance the impact of the training and to bridge the unemployment gap in the society through the development of the students in relation with the aims and objectives of the project and the study. This is consistent with Isaksen assertion on the placebo effect which was to improve on the outcomes measured in subjects of the study (Isaksen, 2012). The data collected from the participants were used as a yardstick to clarify the relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation in South African university students. The explanatory analysis was based on the two variables of students' entrepreneurship development in the university of KwaZulu-Natal, therefore, the result can not be generalised because it focused on a group of students in a single university.

Major limitation identified in the study was the low total number of the participants data analysed which was due to the aim of the study to examine the progressive development of the participants; this was achievable by analysing the consistent participants (n= 59) that attended

and completed the thirteen weeks training for adequate and proper evaluation and observation of the development over time. This limitation could have affected the reliability rate of the data hence the repeated measures employed to establish the consistency and reliability in phases and further data collection through actioning a 2-year ad hoc post-test for instrument refinement to improve reliability. Another methodological limitation to the study was the adoption of a non-probability technique that has limited generalisability and was limited to the number of statistical analysis methods that could be adopted for data analysis. The choice of the study site and focusing on the UKZN students was because of limited funding, which limited the generalisability of the results to all entrepreneurship students in South Africa. Another challenge was the time interval of the repeated measurements and attrition (Ployhart & Vandenberg, 2010), which affected the trend because the project interfered with the participants' lectures that were their primary focus. This

accounts for the low response rate and the decision to analyse data collected from the fifty-nine consistent participants that completed the sessions.

Task exhaustion is when participants tire of the study or project and this was another significant limitation in this study. The closing ceremony or the awarding of certificates witnessed a large turnout of participants but despite this, the response rate was low. This implies that the participants that responded at the end of the last round of the project could have been more motivated than those that ignored the questionnaire they received. This could have positively affected the skewness of the results.

The results of the study were clearly limited to the relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation at a South African university. A comparative study could be undertaken at other South African higher institutions of learning that are running entrepreneurship courses that are also crucial to the entrepreneurship development and economic growth of the nation.

5.16 SUMMARY

The chapter provided a vivid account of the different research philosophies underlying the study. It also explained their strengths and weaknesses and nondualism was considered as the most appropriate philosophical approach for the study. The research design employed in this study and justification for selecting it were explained. Regarding the sampling techniques that were adopted, the study population was considered and the sample size for the study was based on the proximity and availability of subjects and their willingness to participate. This accounts for the choice of convenience sampling being employed in the study, while non-probability sampling was also instrumental in selecting the project and study participants at the UKZN. The data collection instrument, design and administration thereof were explained. Data analysis by means of the statistical software package that was employed was examined in this chapter. The statistical packages used to analyse the data that were collected in each section of the questionnaire were comprehensively explained and justified. Limitations of the methodology were explained, and ethical considerations were given priority and clearly stated. The following chapter presents and discusses the empirical findings of the study.

CHAPTER SIX

DATA ANALYSIS AND DISCUSSION OF FINDINGS

6.1 INTRODUCTION

This chapter provides a detailed analysis of the data collected from the longitudinal study in collaboration with project SHAPE 2017. The Statistical Package for the Social Sciences (IBM SPSS 24) was used to analyse the data. The preliminary data were cleaned to ascertain that there were no errors and to ensure parity. A test of reliability was performed to ensure that the instrument tested the factors under investigation, namely opportunity identification self-efficacy (OI_SE), relationship self-efficacy (REL_SE), managerial self-efficacy (MNG_SE) and tolerance self-efficacy (TOL_SE) and risk taking individual entrepreneurial orientation (RT_IEO), innovation individual entrepreneurial orientation (INN_IEO) and proactive individual entrepreneurial orientation (PROACT_IEO). This was followed by the normality test using Kolmogorov-Smirnov and Shapiro-Wilk, which were the appropriate tests to employ to analyse the data. Demographic data were analysed using descriptive and inferential statistics to measure the relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation and to establish the changes that were effected through the SHAPE action learning training project. To gain a proper understanding of entrepreneurship development, the researcher presented the analysis in rounds pertaining to all the constructs of ESE and IEO based on the nature of this research (longitudinal).

6.1.1 Response rate

The respondents in this study were regarded as nascent entrepreneurs in line with previous studies pertaining to entrepreneurship, such as Hsu, Wiklund and Cotton (2015) who opine that as soon as such students have drawn up their business plan they have grown to be considered as nascent entrepreneurs. The study registered 320 voluntary participants or self-selected volunteers for the second project cycle (SHAPE 2017) thus building on the first project cycle. Questionnaires were administered to the participants at intervals; three rounds - before, during and after the project. The data that were gathered were analysed and the findings reported. The data presented indicated that fifty-nine (59) participants were consistent in **attended** the project's sessions and completed all three rounds of the questionnaire. These questionnaires (n=59) were analysed specifically as a repeated measure to understand the entrepreneurial mindset related to behavioural development levels and at what point it occurs in the action

learning action research. The data represented the whole focus group under investigation. The analysed participants were focused on to examined and observed effect of the model and method applied and at what time the progressive development and behavioural changes took place. It is worthy of note that generally there is no consensus among scholars regarding what can be considered as an acceptable and reasonable response rate (Agustini, 2018). Walters and Fox (2015) posit that in some cases, a 30-40% response rate is generally received in case of within survey, and 10-15% response rate could be considered externally. There are instances where the response rate is above the de facto standard (Green, Krosnick & Holbrook, 2001).

Pearson and Mundform's (2010) recommendation of the minimum sample size required to yield quality results has been refuted by numerous scholars, which is an indication that the ideal sample size is still being debated amongst scholars. The exploratory factor analysis (EFA) statistical package employed for this research was consistent with the views of some scholars who assert that EFA can produce results even from a sample of fewer than fifty (50) elements provided the factor loadings are high, the number of factors is limited and there are numerous variables (de Winter, Dodou and Wieringa, 2009). The data analysed in this study was based on responses from the participants that volunteered and consistently attended the SHAPE sessions.

Reliability and validity tests were employed to determine various significant changes in constructs between the three rounds of questionnaires administered during the SHAPE project.

6.2 INTERNAL CONSISTENCY OR RELIABILITY OF INSTRUMENT

Reliability of measurements refers to the extent to which there is minimal bias, minimum errors and that consistency of measurement is optimised across time and items in the data collection instrument (Sekaran & Bougie, 2016). If the data collection instrument consistently measures what it was meant to measure, then it is reliable. The measuring instrument employed in this study was assessed using Cronbach's alpha coefficient via IBM SPSS version

24. Cronbach's alpha is a reliability coefficient that measures the extent to which the items in a set are positively correlated (Sekaran & Bougie, 2016). It is used whenever there are multiple items, especially when using a Likert scale in a questionnaire (Bonett & Wright, 2015). Repeated measures were employed in this study to establish consistency and reliability of the instrument using Cronbach's alpha to calculate the reliability of the data collection instruments in phases of the multi-dimensional scale (opportunity identification self-efficacy (OI_SE),

relationship self-efficacy (REL_SE), managerial self-efficacy (MNG_SE) and tolerance self-efficacy (TOL_SE); risk taking individual entrepreneurial orientation (RT_IEO), innovation individual entrepreneurial orientation (INN_IEO) and proactive individual entrepreneurial orientation (PROACT_IEO). Each item's Cronbach's alpha was calculated, as well as for the elements of entrepreneurial self-efficacy (ESE) and individual entrepreneurial orientation (IEO). The reliability report is presented in a section that follows.

6.3 ENTREPRENEURIAL SELF-EFFICACY, INTERNAL CONSISTENCY AND FACTOR ANALYSIS

Accumulative Reliability, KMO and Bartlett's Statistics: Entrepreneurial self-efficacy

This section investigates the propensities of entrepreneurial self-efficacy, namely, opportunity identification self-efficacy (OI_ESE), relationship self-efficacy (REL_ESE), managerial self-efficacy (MNG_ESE) and tolerance self-efficacy (TOL_ESE). The question included thirty-seven (37) items that determined the relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation propensities and how they develop students' entrepreneurship potential while at university. All the questions were answered on a seven-point Likert scale as follows: "not confident"; "mostly not confident"; "somewhat not confident"; "undecided"; "somewhat confident"; "mostly confident" and "completely confident".

Table 6.1: Reliability, KMO and Bartlett's Statistics: Entrepreneurial self-efficacy (Rounds 1-3)

Round	Cronbach's Alpha	No of items	KMO	Eigenvalues	Percentages
1	0.953	37	0.733	14.201	38.382%
2	0.966	37	0.747	17.513	47.333%
3	0.977	37	0.792	20.907	56.505%

Table 6.1 indicates that the Cronbach's alpha for Round 1 was $\alpha=0.953$, Round 2 was $\alpha=0.966$ and Round 3 was $\alpha=0.977$. It can therefore be deduced that the Cronbach's alpha for all the constructs of ESE passed the reliability test according to the rule of the thumb that the Cronbach's alpha value should be above 0.7. The ESE reliability results indicate a good and acceptable level of reliability from round one to round three. It can be observed that the Cronbach's alpha was acceptable throughout the three stages of the ESE construct measuring reliability. This is likely due to the training model, teaching and delivery methods of the

systemic action learning action research that was applied and the students' understanding of entrepreneurship as a viable career.

KMO. Sampling adequacy for the three rounds were Round 1, KMO = 0.733, Round 2, KMO = 0.747, and Round 3, KMO = 0.792. As all the KMO values were greater than 0.50, they were all adequate for where the data was collected.

Eigenvalues. The Eigenvalues for the three rounds were: Round 1 had an Eigenvalue of 14.201 with 38.382% of the variance explained, round 2 had an Eigenvalue of 17.513 with 47.333% of the variance explained and Round 3 had an Eigenvalue of 20.907 with 56.505% of the variance explained. The items all had a loading ≥ 0.50 , which were considered excellent, very good or good (Ruscio & Roche, 2012). Bartlett's test of Sphericity that tests the overall significance of all correlations within the correlation matrix was significant in all rounds: Round 1 $\chi^2 (666) = 1837.653$, $p < 0.001$. Round 2, $\chi^2 (666) = 1792.974$, $p < 0.001$. Round 3, $\chi^2 (666) = 2107.830$, $p < 0.001$. All these indicate that it was appropriate to use the factor analytical model on this set of data. 79.250% was accounted for by the first 9 factors in Round 1, 76.882% was accounted for by the first 7 factors in Round 2 and 74.534% was accounted for by the 5 factors in Round 3 of the overall variance.

6.3.1 Reliability, KMO and Bartlett's Statistics: OI_ESE

The questionnaire contained seven (7) items that examined the relationships between opportunity identification self-efficacy propensity and participants' progressive development. These questions were answered on a seven-point Likert scale. Table 6.2 presents a summary of the reliability, KMO and Bartlett's statistics of OI-ESE (Round 1) in relation to the findings.

Table 6.2: Reliability, KMO and Bartlett's Statistics: OI_ESE (Round 1)

Round	Cronbach's Alpha	No of Items	KMO	Eigenvalues	% of variability
1	0.880	7	0.820	4.180	59.7
2	0.854	7	0.871	4.147	59.2
3	0.918	7	0.877	4.844	69.1

From Table 6.2 above, it can be deduced that the Cronbach's alpha was $\alpha = 0.880$ in Round 1, $\alpha = 0.854$ in Round 2, and $\alpha = 0.918$ in Round 3. The results indicated a good level of internal consistency for opportunity identification ESE above the threshold of 0.7. This implied that all the items' measurements used for opportunity identification ESE were reliable. It also indicated that the outputs of the analysis established that all factors were adequately loaded and satisfied the results of the study (Maskey, Fei & Nguyen, 2018).

KMO. For rounds one to three of the reactive and generative stages of Theory U that underpinned the study and opportunity identification self-efficacy propensity it was revealed that a KMO = 0.820 was recorded for Round 1; a KMO = 0.871 was recorded for Round 2 and a KMO = 0.877 was recorded for Round 3. The recorded KMOs were greater than the required value of 0.50 (Grande, 2016a), which implies that there was evidence of sampling adequacy. The sampling adequacy test indicated that data collected for OI_ESE were adequate for the analysis.

Eigenvalue. The reactive and generative stages and OI_ESE items that measured the three rounds indicated that Round 1 had an Eigenvalue of 4.180 with 59% of the variance explained; Round 2 had an Eigenvalue of 4.147 with 59.2% of the variance explained and Round 3 had an Eigenvalue of 4.844 with 69.1% of the variance explained. The item loadings implied that all the items have loadings ≥ 0.5 as presented in Table 5.1. The extracted factors explained the percentage of the total variance and the communalities indicated that the extracted components represented the variable.

Bartlett's test of Sphericity. This is a test of the overall significance of all correlations within the correlation matrix. Bartlett's test of Sphericity indicated high significance and thus implied potential development of participants' ESE for all rounds at $P < 0.001$. The items that measured opportunity identification ESE were reliable and this may be due to the participants' understanding of the items. Learning environment and individual entrepreneurship awareness were factors for the reliability fit because they aid commitment to self-development. It is instructive to note that perception of the emerging future might inspire learners to identify gaps (Oh, Guay, Kim, Harold, Lee & Heo, 2014) This ability is also enhanced by the reactive stages of Theory U as well as prior knowledge acquired from the traditional entrepreneurship classroom teaching that informed their voluntary participation in the development training project.

Table 6.3 presents the reliability, Cronbach's alpha coefficient, KMO and Eigenvalues for REL-ESE (rounds 1-3).

6.3.2 Reliability, KMO and Bartlett's Statistics: REL_ESE (rounds 1-3)

Table 6.3: Reliability statistics for REL_ESE (rounds 1-3)

Round	Cronbach's Alpha	No of Items	KMO	Eigenvalues	Percentages
1	0.912	6	0.854	4.192	69.861%
2	0.897	6	0.820	4.003	66.713%
3	0.922	6	0.871	4.331	72.181%

The questionnaire contained six (6) items that examined the relationship between managerial self-efficacy and individual entrepreneurial orientation. Table 6.3 indicates that the Cronbach's alpha for REL_ESE was for Round 1, $\alpha = 0.912$, Round 2, $\alpha = 0.897$ and for Round 3, $\alpha = 0.922$. The relationship indicated excellent reliability for rounds one and three and very good reliability for the round two. The improvement may be due to the participants' understanding of the context and concept that allowed internal and external transformation to take place (Yeo & Marquardt, 2015). The development of the participants' relationship self-efficacy towards entrepreneurship as a career through pedagogical interventions is essential for active entrepreneurial learning (Fredrick, 2007). It also indicates the level of interconnectivity built by the learner within and outside the ecosystem (micro, macro, meso and mundo) and individual connections with various stakeholders (Scharmer & Yukelson, 2015).

KMO. For the three rounds of the SALAR applying Theory U's reactive and generative stages, as reflected in week two of the training pertaining to relationship ESE, the loading was ≥ 0.50 . In Round 1, KMO = 0.854, in Round 2, KMO = 0.820 and in Round 3, KMO = 0.871. This indicated that the sampling was adequate from the data collected in the study and adequate to test the construct of entrepreneurial self-efficacy to determine the reliability of the construct. This was the effect of co-initiation and the participants' understanding of the REL_ESE items.

Eigenvalues. The relationship ESE items measured in the three rounds indicated as Eigenvalue of 4.192 with 69.8% of the variance explained. In Round 1, an Eigenvalue of 4.003 with 66.7% of the variance explained, in Round 2 and Round 3, Eigenvalues of 4.331 with 72.1% of the variance explained. The items' loadings indicated that all the items were ≥ 0.5 , which surpassed

the rule of the thumb for Eigenvalues, as presented in Table 6.3. The extracted factors explained the percentage of the total variance and the communalities indicated that the extracted components represented the variable. See the factor loading in appendix G.

Bartlett’s test of Sphericity. This tested the overall correlation matrix and was found to be significant for all rounds at $P < 0.001$. All three rounds indicated that it was appropriate to use the factor analytical model on this data set. The items measuring relationship self-efficacy were reliable. This could be due to proper application of the theory and the training model for the development, which provided confidence and motivate for the participants to work together. This is consistent with the views of Scharmer & Kauffer (2013) who posit that action learning influences learners’ behaviour and determines networking relationships with various investors and stakeholders to obtain cooperation from the network (Schunk & Mullen, 2012). Regarding Schumpeter’s ‘creative disruption’, Tuluca and Yurtkur (2015) assert that motivation enhances the development of new ideas to generate economic growth. These authors view innovation and creativity as facilitators of entrepreneurship development to initiate new products, market, and production techniques. This is an indication of an open heart, mind and will to a new future (bigger picture); leaving the old self by disrupting the market for innovation and creativity to evolve in the market either collectively or individually. This was made possible by the training, particularly in the week three of SALAR in which a film was shown to motivate and encourage participants about “doing the impossible”. The development occurred because of information acquired through social media and an evaluation based on personal attributes that inform the perception of relationships and how relationships with others can assist with the creation of a new venture (Hsu, Burmeister-Lamp, Simmons, Foo, Hong & Pipes, 2019).

6.3.3 Reliability, KMO and Bartlett’s Statistics: MNG_ESE (Rounds 1-3)

Table 6.4: Reliability, KMO and Bartlett’s Statistics: MNG_ESE (Rounds 1-3)

Round	Cronbach’s Alpha	No of Items	KMO	Eigenvalues	Percentages
1	0.886	11	0.848	5.303	48.208%
2	0.889	11	0.838	5.451	49.599%
3	0.938	11	0.891	6.927	62.977%

Table 6.4 presents the reliability, KMO and Bartlett's statistics for managerial ESE. The questionnaire contained eleven (11) items that were meant to determine the relationship between MNG_ESE and IEO development. The table indicates that the Cronbach's alpha in Round 1 was $\alpha = 0.886$, Round 2, $\alpha = 0.889$ and Round 3, $\alpha = 0.938$. This indicates that the Cronbach's alpha improved from each Round 1 to the next and there was a good level of reliability for rounds 1 and 2 and an excellent level of reliability in Round 3. This progressive development may be due to the training that enhanced the participants' understanding of entrepreneurship. The development also made it possible for them to set achievable goals for themselves through self-regulation, which was anticipated to enhance their managerial performance in the future. This is consistent with the views expressed by Frese and Gielnik (2014) that goal setting enhances performance, as it challenges the entrepreneur to exhibit self-regulation to achieve the goals, vision, and mission of the establishment and to incorporate feedback for goal adjustment. The implication of this is that the participants were able to understand that setting and achieving goals is a tool for achievement in any human endeavour. Consequently, ESE advocates strong projections about entrepreneurship tasks as individuals feel more daring to engage in a task that they trust rather than what they can genuinely handle (Topkaya, 2010; Markman, Baron & Balkin, 2005). An inspection of the items' total statistics indicated that in no instance could Cronbach's alpha be improved by deleting any of the questions.

KMO. The sampling adequacy of managerial self-efficacy indicates that in Round 1, KMO = 0.848, in Round 2, KMO = 0.838 and in Round 3, KMO = 0.891. All these values were greater than the recommended KMO, which is ≥ 0.50 . This implied that the sampling was adequate from the sample where the data was collected and indicated high significance. It also indicated that the sample size and the variables were reliable and suitable for the analysis.

Eigenvalues. The items that measured MNG_ESE in the three rounds were: Round 1, an Eigenvalue of 5.303 with 48.208% of the variance explained, round 2, an Eigenvalue of 5.451 with 49.599% of the variance explained and Round 3, an Eigenvalue of 6.927 with 62.977% of the variance explained. The items' loading indicated that all the items had a loading greater than 0.50, which was very good (Braeken & Van Assen, 2017). The Bartlett's test of sphericity, which tests the overall significance of the correlations within the correlation matrix, was significant in all rounds at $P < 0.001$. All three rounds indicated that it was appropriate to use the factor analytical model on this data set, see appendix G.

6.3.4 Reliability, KMO and Bartlett's Statistics: TOL_ESE (Rounds 1-3)

Table 6.5: Reliability, KMO and Bartlett's Statistics: TOL_ESE (Rounds 1-3)

Round	Cronbach's Alpha	No of Items	KMO	Eigenvalues	Percentages
1	0.899	13	0.808	6.019	46.297%
2	0.955	13	0.873	8.622	66.323%
3	0.954	13	0.889	8.493	65.331%

Table 6.5 presents the reliability, KMO and Bartlett's tests for TOL_ESE. The questionnaire included thirteen (13) items that examined the relationship between TOL_ESE and individual entrepreneurial orientation development. The table indicates that Cronbach's alpha was $\alpha = 0.899$ in Round 1, $\alpha = 0.955$ in Round 2 and $\alpha = 0.954$ in Round 3. This indicates that the Cronbach's alpha developed from round one to round three. The development may be due to the participants' understanding of the tolerance items and skill development from their traditional classroom learning that was abstract and for grades. However, systemic action learning action research participants through technological advancement had contacts with professional, technology, Co-initiate with business friends to initiate ideas and develop on it to fruition. This indicated a good level of reliability in Round 1 and an excellent fit in rounds 2 and 3 in relation to Theory U's co-initiating, co-sensing, co-inspiring and tolerance self-efficacy with a scale above the threshold of 0.7. An inspection of the items' total statistics table indicated that in no instance could Cronbach's alpha be improved by deleting any of the questions.

KMO. The sampling of adequacy for the three rounds of the TOL_ESE indicated values greater than 0.50 as follows: in Round 1, KMO = 0.808, in Round 2, KMO = 0.873 and in Round 3, KMO = 0.889. This implied that the sampling was adequate from the sample from which the data were collected. This indicated participants' understanding of the items and the development that took place during the project that had an impact on their entrepreneurial self-efficacy propensity and behaviour.

Eigenvalues. The Eigenvalues for the three rounds were: in Round 1, an Eigenvalue of 6.019 with 46.297% of the variance explained, in Round 2, an Eigenvalue of 8.622 with 66.323% of the variance explained and in Round 3, an Eigenvalue of 8.493 with 65.331% of the variance explained. The items' loading indicated that all the items had a loading greater than 0.50, which were considered good for the analysis. Bartlett's test of Sphericity indicated the overall

correlation matrix significance for all rounds at $P < 0.001$. The items measuring self-efficacy in relation to entrepreneurship development were reliable.

6.4 INDIVIDUAL ENTREPRENEURIAL ORIENTATION AND INTERNAL CONSISTENCY

Accumulative Reliability, KMO and Bartlett's Statistics: Individual entrepreneurial orientation

The questionnaire contained twenty-five (25) items that were meant to determine the relationship between individual entrepreneurial orientation propensities and students' progressive development regarding entrepreneurship. All the questions were answered on a four-point Likert scale as follows: "Disagree", "Somewhat disagree", "Somewhat agree" and "Agree". The results of the three rounds for IEO propensities are presented in Table 6.6.

This section includes a discussion of KMO, Eigenvalues and Bartlett's test of Sphericity, which is discussed in line with Table 6.6.

Table 6.6: Reliability, KMO and Bartlett's Statistics: Individual Entrepreneurial Orientation (Rounds 1-3)

Round	Cronbach's Alpha	No of Items	KMO	Eigenvalues	Percentages
1	0.743	25	0.574	4.722	18.889%
2	0.672	25	0.506	3.879	15.517%
3	0.806	25	0.597	5.948	23.793%

Table 6.6 presents the Cronbach's alpha for all the constructs of IEO as it passes the reliability tests according to the rule of thumb, which states that the reliability value should be above 0.7. The test indicated that the Cronbach's alpha in Round 1 was $\alpha = 0.743$, for Round 2, $\alpha = 0.672$ and for Round 3, $\alpha = 0.806$. The overall Cronbach's alpha indicated acceptable reliability except for round two that showed $\alpha = 0.672$, which was near the threshold and could be approximated to 0.7. This fit indicated the studentpreneurs' spiral dynamic behaviour in decision making about risk taking, which must have resulted in low proactivity and dampened the innovativeness and creativity of individual participants. This reveals the need and essence of developing ESE to affect youth individual entrepreneurial orientation through the application of the developed model, theory U and the learning method (SALAR).

KMO. KMO sampling of adequacy revealed that for Round 1, KMO = 0.574, Round 2, KMO = 0.506 and Round 3, KMO = 0.597. These results indicated that the KMOs were all greater than the recommended KMO > 0.05.

Eigenvalues. The Eigenvalues for the three rounds indicated values of 4.722 with 18.889% of the variance explained in Round 1, 3.879 with 15.517% of the variance explained in Round 2 and 5.948 with 23.793% of the variance explained in Round 3. The items' loading revealed that all the items for rounds one and two had loadings below the recommended threshold while round three had a very good loading. The Bartlett's test of Sphericity, which tests the overall significance of all correlations within the correlation matrix, was significant for all rounds; $\chi^2(300) = 473.302$, $p < 0.001$ for Round 1, $\chi^2(300) = 422.090$, $p < 0.001$ for Round 2 and $\chi^2(300) = 640.238$, $p < 0.001$ for Round 3. The results from all three stages indicated that it was appropriate to use the factor analytical model data set. 71.021% was accounted for in the 8 factors in Round 1, 71.236% was accounted for in the 9 factors in Round 2 and 74.395% was accounted for in the 8 factors in Round 3 of the overall variance respectively, see appendix G.

6.4.1 Reliability, KMO and Bartlett's Statistics: IEO propensities (Rounds 1-3)

Table 6.7: Reliability statistics for RT_IEO (Rounds 1-3)

Round	Cronbach's Alpha	No of Items	KMO	Eigenvalues	Percentages
Low 1	0.199	7	0.488	1.884	26.912%
2	0.001	7	0.546	2.081	29.728%
3	0.679	7	0.610	2.426	34.652%

Table 6.7 presents the reliability, KMO and Bartlett's statistics. The questionnaire contained seven (7) items that were meant to determine the relationship between risk taking IEO and participants' progressive development. The table indicated a Cronbach's alpha for Rounds 1-3 as follows: Round 1, $\alpha = 0.199$, Round 2, $\alpha = 0.001$, and in Round 3, $\alpha = 0.679$. The risk taking IEO results indicated a low level of internal consistency for Rounds 1 and 2 and a fair level of reliability for Round 3, which made the Cronbach's alpha significant at ≤ 7 . This indicated poor reliability of the scale. In Table 6.7 it was revealed that the Cronbach's alpha was low in the first two rounds, although it was reinforced in Round 3. It is worthy to note that the repeated measurement of the items over a period increased the reliability co-efficient to $\alpha = 0.679$. This result can be approximated to $\alpha = 0.7$, which is the acceptable threshold. It was observed that

the poor reliability level was due to the participants finding some of the items to be similar in terms of the responses provided. It can also be said that the participants lacked a good understanding of the items because there was a significant difference between classroom learning and their action learning experiences. There is no doubt that in action learning the participants experienced the reality of learning for entrepreneurship, unlike in traditional classroom learning where learning is 'about' entrepreneurship. This might have been responsible for their limited understanding of the items: *I am willing to work full-time for myself; I am willing to invest my own money in a business; I can handle risky situations with confidence; It is a safe career choice to work for an organisation that offers a good salary; It is preferable for me to have job security by working for a well-established business that offers a good salary; I would rather initiate a business alone than in partnership with somebody else and I would prefer to start a business in partnership with an established business in the private sector.*

It must be emphasised that, based on the nature of this study (longitudinal) and administration of the instrument in phases that the researcher, having noticed some of the problems during the course of questionnaire administration in rounds one and two that resulted in low reliability coefficients, attempted to clarify some of these questions to remove possible ambiguities associated with the items in Round 3. At the end of the exercise, there was a significant improvement in the reliability coefficient, from $\alpha = 0.199$ and $\alpha = 0.001$ in Rounds 1 and 2 respectively to $\alpha = 0.679$ in the third round. This reliability coefficient can be rounded up to 0.7, which was the permissible threshold for the reliability coefficient.

KMO. The KMOs for the three rounds indicated that in Round 1, KMO = 0.488, which was near the accepted value, in Round 2, it improved to a good value of KMO = 0.546 and in Round 3, KMO = 0.610, both of which were greater than the minimum required value of 0.50.

Eigenvalues. Eigenvalue measures for the three rounds were 1.884 with 26.912% of the variance explained in Round 1, in Round 2, 2.081 with 29.728% of the variance explained and 2.426 with 34.652% of the variance explained in Round 3. The items' loading revealed that all items had a loading lower than the threshold of 0.50, which was poor. This could be attributed to ambiguity in the wording of some of the items in the questionnaire that made it difficult for the participants to understand. See appendix G.

Bartlett’s test of Sphericity. The Bartlett’s test of sphericity tests the significance of the correlation matrix about risk taking. The result indicated that it was not significant in all rounds at $P < 0.001$. The items measuring RT_IEO were not reliable, which may be due to participants’ limited understanding of the importance of business risk and what it is. Also, limited understanding of the principle of nondualism with risk taking and proactivity, which cannot be separated from each other. The low level recorded could also be because of the spiral-dynamic nature of human beings in decision making and “knowing in action” (action learning) exhibited by the practitioners who were groomed in the career, competent and able to teach the reality of what risk taking involves in business. Castello-Sirvent (2016) posits that most of the learning exhibited here was tacit rather than implicit.

Table 6.8 presents the reliability, KMO and Bartlett’s statistics for INN-IEO propensity (Rounds 1-3).

6.4.2 Reliability, KMO and Bartlett’s Statistics: INN_IEO (Rounds 1-3)

Table 6.8: Reliability, KMO and Bartlett’s Statistics: INN_IEO (Rounds 1-3)

Round	Cronbach’s Alpha	No of Items	KMO	Eigenvalues	Percentages
1	0.666	11	0.644	2.913	26.482%
2	0.562	11	0.570	2.376	21.602%
3	0.734	11	0.537	3.149	28.626%

Table 6.8 presents the reliability, KMO and Bartlett’s statistics for INN_IEO validity of objectives and measured the outlined chapter one objectives. The questionnaire contained eleven (11) items that determined the relationship between innovationIEO and participants’ progressive development. The Cronbach’s alpha for the three rounds were: Round 1, $\alpha = 0.666$, Round 2, $\alpha = 0.562$ and Round 3, $\alpha = 0.734$. The results revealed a low level of internal consistency in Round 2 and an acceptable level of internal consistency in Round 3 for innovation IEO and participants’ progressive development. The Cronbach’s alpha of 0.66 was approximated and equated to 0.7, which showed consistent reliability in the round. The low level of internal consistency recorded in Round 2 may be due to the high level of abstract teaching in entrepreneurship education (classroom learning), which probably limited their understanding of the concepts of innovation and creativity as they relate to business. In SALAR training, learning involves action, hands-on and collective collaboration, which in the opinion of

Secundo, Del Vecchio, Schiuma and Passiante (2017), tends to significantly enhance learners' innovation, creativity, and risk-taking behavioural outcomes and concerns for results (proactiveness) of the MSEs.

KMO. The KMO sampling of adequacy for the three rounds indicated: in Round 1, KMO = 0.644, in Round 2, KMO = 0.570 and in Round 3, KMO = 0.537. These results indicated that all the KMOs for all the rounds were greater than the recommended $KMO > 0.50$, which implies that the data collected from the sample were adequate. Bartlett's test of Sphericity, which tests the overall significance of all the correlations within the correlation matrix was significant for all rounds at $P < 0.001$.

Eigenvalues. The Eigen values for the three rounds were 2.913 with 26.482% of the variance explained in Round 1, 2.376 with 21.602% of the variance explained in Round 2 and 3.149 with 28.626% of the variance explained in Round 3. The items' loadings equally indicated that all items had loadings greater than 0.50, which were very good, see appendixG for the factor loading.

6.4.3 Reliability, KMO and Bartlett's Statistics: PROACT_IEO (Rounds 1-3)

Table 6.9: Reliability, KMO and Bartlett's Statistics: PROACT_IEO (Rounds 1-3)

Round	Cronbach's Alpha	No of Items	KMO	Eigenvalues	Percentages
1	0.686	7	0.763	2.625	37.505%
2	0.683	7	0.694	2.500	35.709%
3	0.817	7	0.751	3.481	49.723%

Table 6.9 presents the reliability, KMO and Bartlett's statistics for PROACT_IEO propensity (Rounds 1-3). The construct contained seven (7) items to determine the relationship between proactivity IEO and students' progressive entrepreneurship development. The Cronbach's alpha for Round 1-3 of PROACT_IEO were: Round 1, $\alpha = 0.686$, Round 2, $\alpha = 0.683$ and Round 3, $\alpha = 0.817$. The results indicated that the internal consistency was close to the threshold of 0.7 in Rounds 1 and 2 and very good in Round 3.

KMO. The KMOs for the three rounds were: Round 1, KMO = 0.763, Round 2, KMO = 0.694 and in Round 3, KMO = 0.751. The internal consistency of the IEO variables was spiral dynamically due to the Eurocentric nature of the environment from whence the items were

adopted. The items were adopted with less or no consideration for the African entrepreneurial ecosystem. The behavioural changes in the level of consistency were attributed to the wording of the items and the participants' understanding of individual entrepreneurial orientation, which was the main aim of this research; to develop entrepreneurial self-efficacy by activating students' individual entrepreneurial orientation by means of action learning. This corroborated the view of Bolton and Lane (2012) who formulated the items. It must also be noted that the development of the entrepreneurial heart-set is a continuous process and the timespan before these developments result in entrepreneurial action differs from one individual to another. The implication of this is that to act proactively, one needs to open up his or her deeper levels to overcome the barriers of the voice of judgement (VOJ), the voice of cynicism (VOC) and the voice of fear (VOF) (Scharmer, 2007). These are the factors that keep the current mindset separate from the highest future potential. These three barriers can be faced through resistance from within to allow transformation of thought, heart and will. According to Scharmer and Kauffer (2013), personal traits and the perception of having the skills but lacking the capacity to shut down or suspend the voice of judgement hinders progress towards accessing creativity.

Table 6.9 indicates that the KMO for the three rounds indicated in Round 1, $KMO = 0.763$, which was above the required threshold; Round 2, $KMO = 0.694$, which could be approximated to the required threshold of 0.7 and Round 3, $KMO = 0.751$, which was a very good value.

Eigenvalues. The Eigenvalues for the three rounds indicated 2.625 with 37.505% of the variance explained in Round 1, 2.500 with 35.709% of the variance explained in Round 2 and 3.481 with 49.723% of the variance explained in Round 3. Bartlett's test of Sphericity for the overall significance of all correlations within the correlation matrix was significant at $P < 0.001$. The result indicated that the items measuring proactivity IEO were reliable. This is due to the participants' eagerness to create a venture to exhibit what they had learnt and become self-reliant employers of labour in the future. This was in line with the objectives of the current study, which were to develop youth entrepreneurial self-efficacy and to activate individual entrepreneurial orientation.

6.5 TEST OF NORMALITY

The Kolmogorov-Smirnov and Shapiro Wilk tests were used to test for normality among the variables for Rounds 1-3 and collectively for the ESE and IEO variables, namely: opportunity self-efficacy; relationship self-efficacy; managerial self-efficacy and tolerance self-efficacy as well as the risk taking, innovation and proactivity constructs of individual entrepreneurial orientation for all rounds. The results indicated that all the factors were normally distributed in D (41) with $P > .05$ except for risk taking, which was $D(41) = 0.01$ $p < 0.05$. In Round 2, the factors OI and MNG were normally distributed at $D(41) = 0.128$, $p > .05$ and $D(41) = 0.078$, $p > .05$ respectively. Other factors were significantly non-normal with $p < 0.05$. In Round 3, only the factors REL and risk taking were significantly non-normal, REL $D(40) = 0.013$, $P < 0.05$ and risk-taking $D(40) = 0.027$, $p < 0.05$. The remaining factors were normally distributed with $p > .05$.

The overall normality test for the variables in the three rounds indicated that in Round 1, both aggregated data for ESE and IEO were normally distributed with $D(41) = .200^*$ $p > .05$. In Round 2, both ESE and IEO were normally distributed with $D(41) = 0.081$ $p > .05$ and IEO $D(41) = 0.078$, $P > .05$ respectively. In Round 3, the two variables were normally distributed at $D(40) = .200^*$ $p > .05$ and IEO at $D(40) = .200^*$ $p > .05$, respectively. Therefore, a non-parametric test was applied for the factors highlighted in pink (in Table 6.10) and a parametric test for the factors highlighted in blue (in Table 6.10) under Shapiro Wilk with no difference in the study. One sample t-test was conducted leading to repeated measures of ANOVA because of the nature of the data that were gathered at different time intervals (i.e. three rounds). No attempt was made to make a distinction between the Kolmogorov-Smirnov (KS) and Shapiro Wilk tests. The combination of different statistical analysis was to ensure the participants ability to contribute to the research questions and objectives.

Table 6.10 presents the Kolmogorov-Smirnov and Shapiro-Wilk tests of normality table for the variables constructs for Rounds 1-3.

Table 6.10: Test of Normality (Rounds 1-3)

	KOLMOGOROV_SMIRNOV			SHAPIRO-WILK			KOLMOGOROV_SMIRNOV			SHAPIRO_WILK			KOLMOGOROV_SMIRNOV			SHAPIRO_WILK		
	ROUND ONE						ROUND TWO						ROUND THREE					
	Statistic	dif	Sig.	Statistic	dif	Sig.	Statistic	dif	Sig.	Statistic	dif	Sig.	Statistic	dif	Sig.	Statistic	dif	Sig.
<u>OI ESE</u>	0,124	41	0,116	0,956	41	0,110	0,122	41	0,128	0,976	41	0,533	0,132	40	0,075	0,963	40	0,217
<u>REL ESE</u>	0,118	41	0,167	0,957	41	0,119	0,145	41	0,031	0,928	41	0,012	0,158	40	0,013	0,892	40	0,001
<u>MNG ESE</u>	0,089	41	.200*	0,987	41	0,903	0,130	41	0,078	0,946	41	0,049	0,131	40	0,082	0,896	40	0,001
<u>TOL ESE</u>	0,099	41	.200*	0,965	41	0,232	0,158	41	0,011	0,952	41	0,085	0,112	40	.200*	0,968	40	0,304
<u>RISK IEO</u>	0,184	41	0,001	0,953	41	0,090	0,166	41	0,006	0,961	41	0,175	0,148	40	0,027	0,910	40	0,004
<u>INN IEO</u>	0,118	41	0,162	0,964	41	0,212	0,147	41	0,027	0,939	41	0,029	0,102	40	.200*	0,975	40	0,526
<u>PROACT IEO</u>	0,090	41	.200*	0,987	41	0,915	0,163	41	0,008	0,938	41	0,026	0,122	40	0,135	0,935	40	0,023
<u>ESE</u>	0,079	41	.200*	0,983	41	0,804	0,130	41	0,081	0,955	41	0,102	0,104	40	.200*	0,934	40	0,023
<u>IEO</u>	0,084	41	.200*	0,984	41	0,813	0,130	41	0,078	0,948	41	0,061	0,111	40	.200*	0,972	40	0,411

*This is a lower limit of the true significance

a. Lilliefors Significance Correction.

6.6 DEMOGRAPHIC DESCRIPTION OF THE PARTICIPANTS

The demographic section presented, and analysed data based on the fifty-nine (59) consistent participants in the project. These participants were consistent and participated in all three rounds of the training programme, which lasted for thirteen weeks (13 weeks). These participants served as representatives of the population for the study. This is important because of the nature of the study and the aim thereof, which was to activate or harness participants' individual entrepreneurial orientation and development during the 13-week programme. The low level of participation experienced during the project could be attributed to the project coinciding with the participants' scheduled lectures, movement to and from various campuses of the university and frequent changes in the programme's venue. It is instructive to note that similar challenges were encountered during the first 'SHAPE' project held in 2014 at the University of KwaZulu-Natal. A low turnout of participant was a significant challenge (Van der Westhuizen, 2016).

The questionnaire was designed to elicit eight categories of demographic data from the participants representing the provinces of South Africa and the eThekweni Municipal districts. These included studentship, gender, race, age, place of birth, place of residence, highest qualification attained and business preference. The demographic data are important for understanding the empirical findings in line with the study's aims and objectives. Relevant demographic data are presented, analysed and interpreted in the ensuing section.

Table 6.11 indicates the respondents' percentages based on whether they were students or entrepreneurs at the time of the project.

Table 6.11: Participants' classification-based status as students or entrepreneurs

Round			Frequency	Percentage	Cumulative Percentage
1	Valid	1 Yes	56	94.9	94.9
		2 No	3	5.1	100.0
		Total	59	100.0	

Table 6.11 indicates the distribution of fifty-nine consistent respondents that participated in the three rounds of the project. The table reveals that 56 participants representing 94.9% were students while the remaining 3, which accounted for 5.1%, were non-students (n=59). It is instructive to note that the sample size was limited to the undergraduate entrepreneurship students and post graduate students in the School of Management, IT and Governance of the university because the study specifically focused on the SHAPE project organised within the UKZN environment, which also served as the study site. A few of the respondents were non-student participants who took part in the programme by special request.

6.6.1 Gender of Respondents

Table 6.12: Gender Classification of the Respondents.

Gender			Frequency	Percentage	Cumulative Percentage
1	Valid	1 Male	23	39.0	39.0
		2 Female	36	61.0	100.0
		Total	59	100.0	

Table 6.12 presents the respondents' gender classification. In terms of gender, there were 36 female participants representing 61% of the analysed sample while the remaining 23 participants, representing 39%, were male (n=59), with a median of 2 (female), which indicated that many of the participants were female. The gender distribution in the sample was consistent with the population of the students that were enrolled at the University of KwaZulu-Natal at the time of the study. The female participants presented stronger indications of involvement in entrepreneurship projects than did their male counterparts and this also applied to the possibility of taking entrepreneurship action after the project. This is consistent with the study conducted by Maritz and Brown (2013) in Australia, where ESE was empirically measured using effectuation in a longitudinal study. The study indicated that more women than men have high motivation for entrepreneurship and venture creation. This finding was consistent with the views of Wilson, Kickul and Marlino (2007) who also emphasised the role of women in the sector globally and argued that women owned 25% of all businesses in advanced market economies. Two similar studies conducted by Van der Westhuizen (2016; 2019) confirmed that female entrepreneurial student participants were outnumbered males because they formed the largest percentage of students enrolled in the university and their

prevalence on social media was a contributing factor; females were thus more likely to have seen the advertisements for volunteer participants. This is contrary to the view expressed by Yukongdi and Lopa (2017), who observed that males are more likely to engage in total entrepreneurial activities and business risk than are females in most cultures. Similarly, Vamvaka, Stoforos, Palaskas and Bostsaris, (2020) opine that men have stronger commitment and higher preference for entrepreneurship and are more engaged in activities associated with business start-ups than are females.

Although both genders had equal opportunities to participate, the study indicated that there were more females than males who attended the training sessions, which reflected that more females were registered as students. Generally, it was discovered that the reason for the low turnout of participants for the training programme might have been because the students prioritised attending their class module lectures and the distances between the UKZN Westville campus and the other four campuses whenever there was a change of venue. Table 6.13 presents the race classification of the participants.

6.6.2 Respondents' Race Distribution

Table 6.13: Respondents' classification according to race

Race			Frequency	Percentage	Cumulative Percentage
1	Valid	1 Black	41	69.5	69.5
		3 Indian	15	25.4	94.9
		4 Coloured	3	5.1	100.0
		Total	59	100.0	

Table 6.13 presents the participants' classification according to race. It was apparent that the students who identified themselves as black were in the majority. The data revealed that 41 respondents (69%) were blacks with a median of 1 (black or African) while 15 respondents (25.4%) were Indians with a median of 3 (Indians) and the remaining 3 respondents (5.1%) (n=3) were coloured with a median of 4. The reason for the high percentage of black participants in the project reflects the university's racial composition, as the black students constitute 70% of the total population of students (Zulu, 2017). A contributing factor is that the university is situated in a black community of KwaZulu-Natal.

6.6.3 Age Distribution of Respondents

Table 6.14: Respondents' classification according to age

Age Group				Frequency	Percentage	Cumulative Percentage
1	Valid	1	19-25	42	71.2	71.2
		2	26-30	10	16.9	88.1
		3	31-35	5	8.5	96.6
		7	51-55	2	3.4	100.0
			Total	59	100.0	

Table 6.14 presents the respondents' age distribution. Most of the students (71.2%, n=42) fell within the 19-25 years' age bracket with a median of 1. The youngest was 20 years of age and the oldest was 53. The age demography for the study was perfect because the SHAPE project focused on the students registered at that time, which suggested that most of the students would fall within that range. Many of the participants fell within the age bracket referred to as youth in a South African context. This was corroborated by the Global Entrepreneurship Monitoring Report (Ismail, Tolba, Barakat & Menshrecki, 2018), which reported that entrepreneurship studies generally attract students within a wide range of age groups.

6.6.4 Respondents' Place of Birth

Table 6.15: Respondents' birthplace

Place of Birth				Frequency	Percentage	Cumulative Percentage
Valid	1	Durban		21	35.6	36.2
	2	Limpopo		1	1.7	37.9
	3	Melmoth		1	1.7	39.7
	4	South Africa		3	5.1	44.8
	5	Inanda		1	1.7	46.6
	6	Uganda		1	1.7	48.3
	7	Newcastle		1	1.7	50.0
	8	Pietermaritzburg		6	10.2	60.3

Place of Birth	Frequency	Percentage	Cumulative Percentage
9 Ulundi	1	1.7	62.1
10 Richards Bay	1	1.7	63.8
11 Umlazi	2	3.4	67.2
12 Standerton	1	1.7	69.0
13 Congo	1	1.7	70.7
14 Empangeni	1	1.7	72.4
15 Ghana	1	1.7	74.1
16 Eshowe	2	3.4	77.6
17 Nguthu	1	1.7	79.3
18 Kokstad	2	3.4	82.8
19 Angola	1	1.7	84.5
20 Ndumo	1	1.7	86.2
21 Kingsway	1	1.7	87.9
22 Pretoria	1	1.7	89.7
23 Welkom	1	1.7	91.4
24 Umzinto	1	1.7	93.1
25 Eastern Cape	1	1.7	94.8
26 Escourt	1	1.7	96.6
27 Nigeria	2	3.4	100.0
Total	58	98.3	
Missing	1	1.7	
Total	AR	100.0	

Table 6.15 indicates the participants' place of birth according to their district and revealed that 35.6% (n = 21) were born in Durban, which according to Ngwenya (2018), is a city that contributes significantly to the nation's GDP and economic wealth. 54.2% of the respondents were born outside Durban but in South Africa and the remaining 10.2% were born in other African countries. In entrepreneurship development, the place of birth can influence orientation

and efficacy, especially for those respondents who came from families that operated small and medium scale businesses. This category of respondents might have learnt some skills before registering for the training project, hence the importance of the demography in the focus on development training.

6.6.5 Respondent' Place of Residence

Table 6.16: Respondents' place of residence

Place of Residence		Frequency	Percentage	Cumulative Percentage
Valid	1 Durban	39	66.1	67.2
	8 Pietermaritzburg	2	3.4	70.7
	10 Richards Bay	1	1.7	72.4
	11 Umlazi	1	5.1	74.1
	22 Pretoria	1	1.7	75.9
	27 Ndewedwe	1	1.7	77.6
	28 Pinetown	3	5.1	82.8
	29 Westville	3	5.1	87.9
	30 KwaMakhutha	1	1.7	89.7
	31 Montclair	1	1.7	91.4
	32 Kloof	1	1.7	93.1
	33 Park Rynie	1	1.7	94.8
	34 Mayville	1	1.7	96.6
	35 Endlaveleni	1	1.7	98.3
	36 Stanger	1	1.7	100.0
	Total	58	98.3	
Missing	System	1	1.7	
	Total	59	100.0	

Table 6.16 indicates that 66.1% (n = 39) with a median of 1 lived in Durban, while 33.9% lived in other districts of KwaZulu-Natal. Backman, Karlsson and Kekezi (2019) posit that KwaZulu-Natal and Gauteng contribute the most to the nation's GDP and economic wealth. This implies that the geographical location of the province is good for entrepreneurial activities and employment. There is no doubt that the participants' residence was a factor that could influence their ESE and individual entrepreneurial orientation. The area in which one resides could expose one to seeing and learning informally how a venture is created and managed in their city or locality.

6.6.6 Respondents' Educational Qualification

Table 6.17: Respondents' Educational Qualifications

Educational Qualifications				Frequency	Percentage	Cumulative Percentage
1	Valid	1	Matric	16	27.1	27.1
		2	Diploma/Certificate	2	3.4	30.5
		4	Bachelor's Degree	35	59.3	89.8
		5	Honour's Degree	3	5.1	94.9
		7	Master's Degree	3	5.1	100.0
			Total	59	100.0	

Table 6.17 presents the respondents' educational qualifications. The distribution was based on their level of education and revealed that a significant portion of the sample 59.3% (n = 35,) held bachelor's degrees as their highest qualification with a median of 4. 27.1% (n = 16) had earned a matric certificate as their highest qualification with a median of 1. The remaining 12 respondents, representing 13.6%, held diplomas, honours and master's degrees. The distribution depicted in Table 6.17 revealed that the respondents who participated in the project were drawn from various categories of students in the university. The implication is that the higher one's level of education, the more positive the effect on business networking, awareness of government support and credit worthiness (Dzomonda & Fatoki, 2018). The fact that educational level increases awareness is in line with one of the five stages of Theory U (co-initiating) in which this study was situated (Scharmer, 2007). The implication of this might be that the students have chosen to learn, understand and embrace entrepreneurship to change their

orientation to act and be self-reliant now and in the future, especially those who have been to the labour market with their first degree and returned to university for postgraduate studies.

6.6.7 Respondents' Business Preference

Table 6.18: Respondents' business preference

Business Preference			Frequency	Percentage	Cumulative Percentage
1	Valid	1 Alone	16	27.1	27.1
		2 Partnership	41	69.5	96.6
		3 Both	2	3.4	100.0
		Total	59	100.0	

Table 6.18 presents the respondents' business status intention for future action. The table indicates that 69.5% (n = 41) student entrepreneur participants preferred to do business in partnership with a median of 2 while 27.1% (n = 16) with a median of 1 preferred to initiate a business alone. 2 respondents representing 3.4% preferred both. The intensive training organised for the participants in the project emphasised the importance of forming business friendships with like-minded, like-hearted, and like-willed people through the application of Theory U (co-initiating, co-sensing and co-inspiring). This had to do with how the participants perceived themselves through the relationship established as a network of future entrepreneurs who were willing to collaborate in future for business purposes. Financial issues could have been a factor that the participants took into consideration when making their choice, as fear of taking a risk alone could make them more likely to seek a partner to share the risk (Engelbrecht, 2012).

6.7 DESCRIPTIVE STATISTICS FOR ENTREPRENEURIAL SELF-EFFICACY

In this section an attempt was made to present and analyse the data collected from the respondents, stage by stage using descriptive statistics such as simple percentages, graphs, multiple bar-charts, means and standard deviations. A summary of the participants' entrepreneurship development was provided after the presentation and analysis of each item to be able to measure the extent to which the study had achieved its objectives. All the items discussed in this section focused on the reactive and generative stages and the implications regarding the development of students' ESE.

6.7.1 Opportunity Identification Self-Efficacy

The first item on the questionnaire, which had to do with the effect of opportunity identification on the development of students' ESE was: *I can recognise a good opportunity when I see it*. Opportunity identification is when an individual embarks on a process of scanning the economic environment so that it can lead to satisfying the self and society by creating new economic activities (Wasdani & Mathew, 2014). This statement was made to gather information from the respondents about knowledge of entrepreneurship prior to the training. This is in relation to Theory U's co-initiation and co-sensing and having activated classroom teaching that introduced the participants to learning for entrepreneurship. The results of the data obtained from the respondents are presented in this section. Figures 6.1 to 6.7 present an analysis and interpretation of OI_ESE development.

Figure 6.1: Opportunity Identification Development

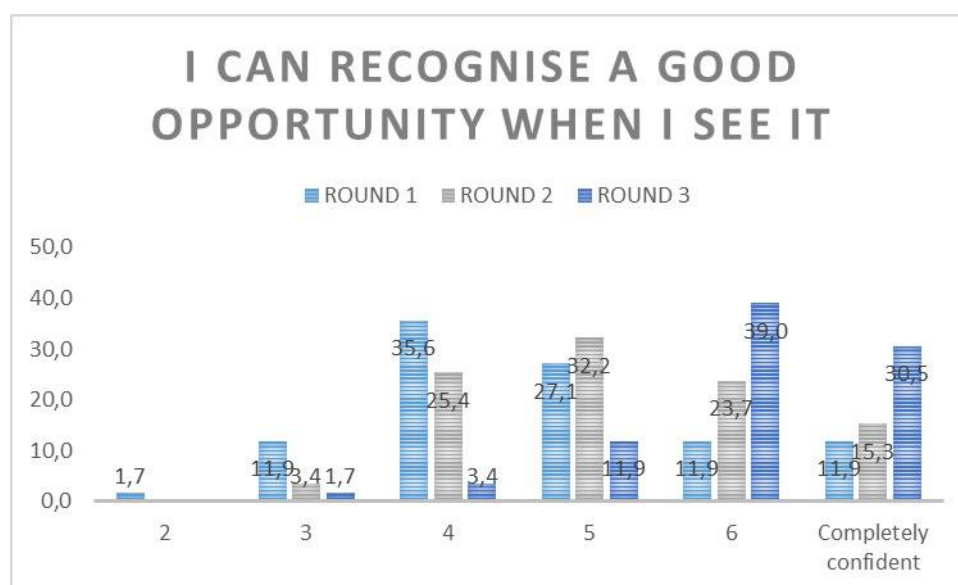


Figure 6.1 presents the graph pertaining to the early-stage development from theoretical classroom knowledge of entrepreneurship. The item investigated the level of entrepreneurship awareness among the participants and how to identify opportunity while collaborating with like-minded people. Figure 6.1 indicates that in Round 1, 35.6%, N = 59 of the respondents were undecided about whether *they can recognise a good opportunity when they see it*, while 1.7% were not confident in Rounds 2 and 3 and in Round 3, 3.4% were somewhat not confident. The median measure was 4 (undecided), 5 (somewhat confident) and 6 (mostly confident) in Rounds 1, 2 and 3 respectively. This indicated development through the application of Theory U's reactive and generative stages based on the action learning action

research, which indicated the impact of co-initiating in terms of creating opportunities for development and awareness before the training and during the first and second weeks of the training and that learning took place during the thirteen weeks of the longitudinal research in conjunction with the SHAPE project (Morrone & Livuza, 2018).

The training produced the expected changes in line with the assertions of scholars such as Van der Westhuizen (2016); Nyamuda and Van der Westhuizen (2019) and Mutanda et al. (2018), who posited that the incorporation of entrepreneurship training pedagogies into entrepreneurship education at a mainstream university and a yet to be established entrepreneurship university, in the South African context, will yield the expected results, as the training will engender a rise in entrepreneurship intention.

Figure 6.2: Opportunity Identification Development

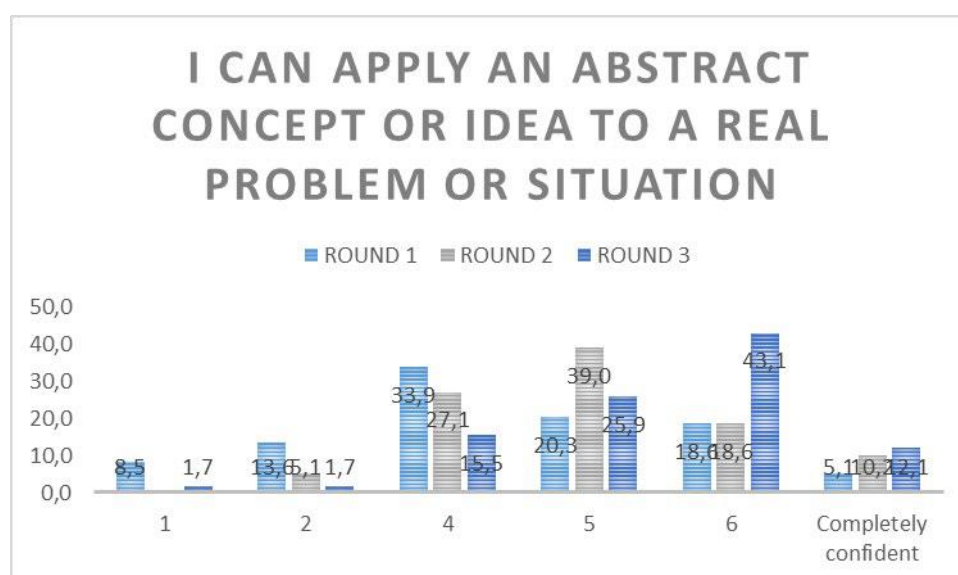


Figure 6.2 indicates that in Round 1, 33.9% N = 59 of the respondents were undecided (median of 4) about whether *they can apply an abstract concept or idea to a real problem or situation*. 39.0% N = 59 was somewhat confident (median of 5) in Round 2 and in Round 3, 43.1% N = 58 of the respondents were mostly confident (median of 6). 8.5% of the respondents were not confident, 5.1% was mostly not confident and 1.7% was not confident from Rounds 1 to 3 respectively. This indicated that action learning is ideal for youth entrepreneurship development, as exemplified in Kolb's four-circle process for learning (Kolb, 1984; Hyams-Ssekasi & Caldwell, 2018). The participants co-inspired in weeks 5 and 6 to learn how to innovate and use technology to create a business model canvas and abstract market at the closing ceremony of the training. This was an indication of the spiral dynamic nature of each

week of the training that employed nondualism. In Round 3 of this project there was an improvement from 33.9% that were undecided to 43.1% that were mostly confident applying abstract concepts. This indicated the role that common and shared values play in systemic action learning action research to promote socio-economic development (Bidmon & Knab, 2018).

Figure 6.3: Opportunity Identification Development

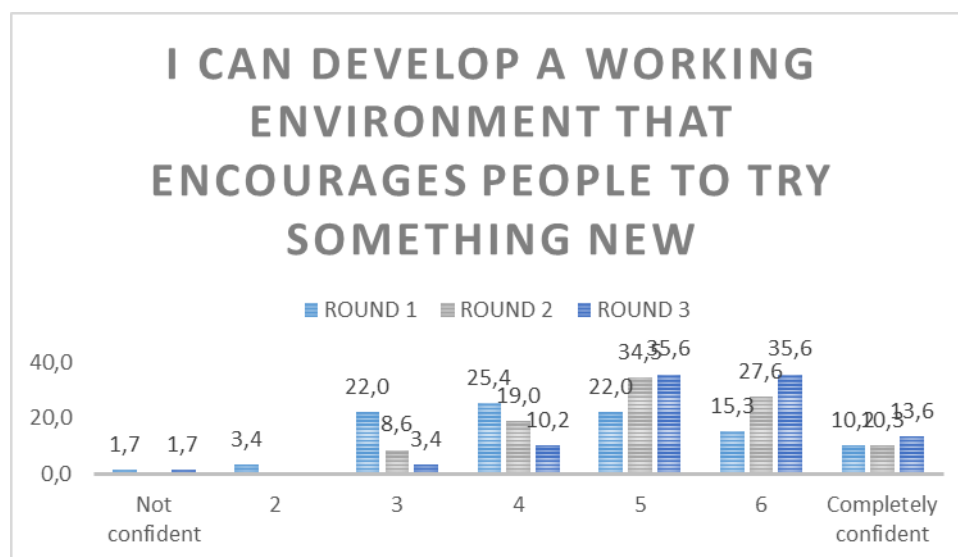


Figure 6:3 indicated that in Round 1, 25.4% N = 59 of the respondents were undecided (median of 4) about whether or not *they can develop a working environment that encourages people to try something new*. 34.5% N = 58 was somewhat confident (median of 5) in Round 2 and in Round 3, 35.6% N = 59 was somewhat confident and mostly confident. This indicates the importance of “co” as it is applicable to developing creativity and innovation, which is consistent with the opinion of Scharmer (2009). In week 6 (Round 2), the application of Theory U’s propensities allowed for co-initiation and co-sensing, which enabled the participants to come together with like-minded friends to create an improved entrepreneurship ecosystem (innovation and creativity). Similarly, in the ninth week (third round) the group of participants worked together to put into action what was learnt in the previous weeks in line with Theory U’s co-creating and co-evolving thus crystallising the future they desired. This was consistent with the views of Linton and Walsh (2013) who support modification and the integration of practical dimension learning rather than theory-based learning with little or no practical experience. Authors such as Potgieter (2013) and Swart (2014) opine that decades ago, most universities in South Africa taught theory with little or no practical learning, which placed the

student entrepreneurs at a disadvantage when learning to act on their entrepreneurship intention.

Figure 6.4: Opportunity Identification Development

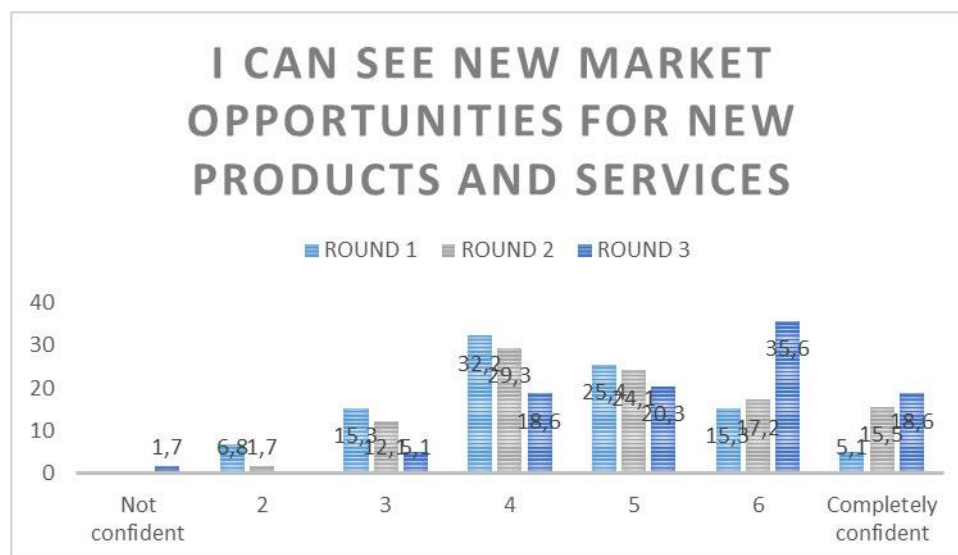


Figure 6.4 indicates that in Round 1, 32.2% N = 59 of the respondents were undecided (median of 4) regarding whether or not “*They can see new market opportunities for new products and services*”. 29.3%, N = 58 were undecided (median of 4) in Round 2 and in Round 3, 35.6% N = 59 were mostly confident (median of 6). This indicated a significant improvement between the rounds, and this could be as a result of learning about identifying new opportunities and markets and the effects of “co” in the development of studentpreneurs or the interaction with the practitioners and facilitators who shared their experiences as entrepreneurs.

In Round 2, 29.3% of the participants were still undecided at because there was a lack of proactivity and experience of what a new market really was and what it entailed. However, in Round 3, 35.6% were mostly confident, which indicated that the participants were developing at this stage. This stage also saw the unveiling of different types of skills development such as personal and product innovations, brand development and business model canvas that changed participants’ orientation to see the multitude of opportunities and new markets that abounded for their product. This was related to Theory U’s co-sensing and connecting with the entrepreneurship sector, as the boundary between oneself and others was removed while sharing observations (Dana, Ratten & Honyenuga, 2018). This also reaffirms the effect of relationship self-efficacy on individual entrepreneurial orientation by connecting with the practitioners, stakeholders, and entrepreneurship enablers.

Figure 6.195: Opportunity Identification

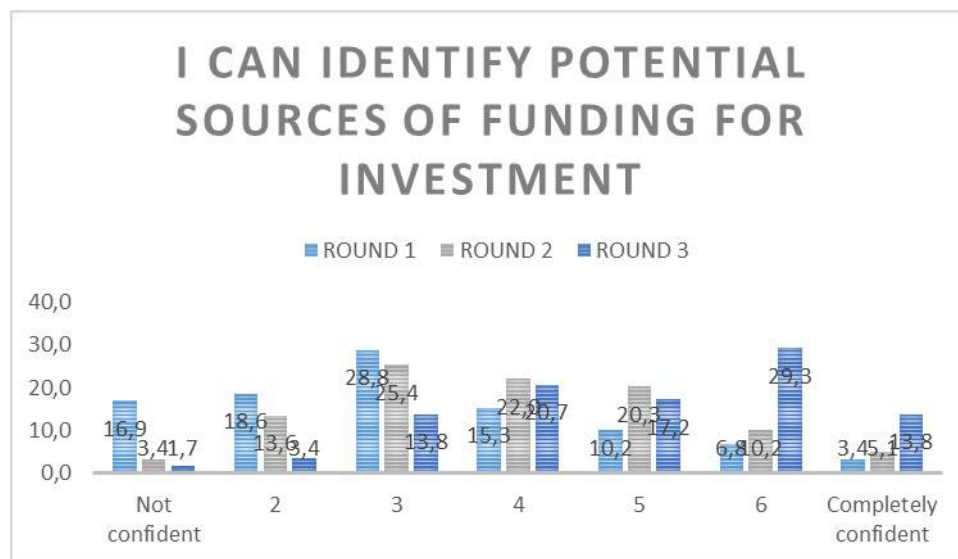


Figure 6.5 depicts that in Round 1, 28.8%, N = 59 of the respondents were somewhat not confident (median 3) that *they can identify potential sources of funding for investment*. 25.4% were somewhat not confident in Round 2 (median 3) and in Round 3, 29.3% were mostly confident (median 6). This indicated the need to teach business finance in entrepreneurship, as the participants initially lack the skill to identify sources of funding for a business. However, at the third round of the project it was observed that, based on the knowledge acquired during the training project, the participants were skilled enough to identify a number of sources of financing. The data presented in Figure 6.5 revealed that many potential entrepreneurs' inability and failure to sustain a venture was due to a lack of finance to start or sustain the business. The participants viewed finance as a challenge and were invariably not willing to take a risk (Engelbrecht, 2012). This was the reason for the 'somewhat not confident' responses to most questions in Round 1 and 2. This was also an indication that the participants had not acquired the proper entrepreneurship training about finance in the classroom. Sitharam and Hoque (2016) posit that financial challenges are a significant cause of business failure and low total entrepreneurial activities (TEA), which prompted the government to establish various agencies to provide financial support to potential entrepreneurs, for example, the Small Enterprise Finance Agency (SEFA), the Small Enterprise Development Agency (SEDA) and the Department of Small Business Development (DSBD) (Dzomonda & Fatoki, 2018c). This no doubt underscores the importance of learning 'for' and 'about' entrepreneurship and venture creation.

Figure 6.196: Opportunity Identification

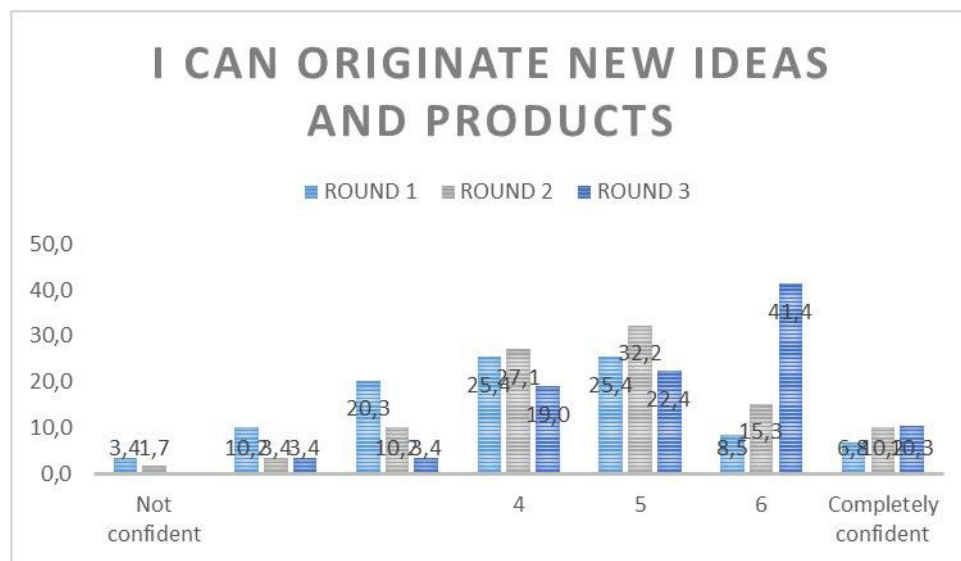


Figure 6.6 indicates that in Round 1, 25.4%, N = 59 of the respondents were undecided and somewhat not confident (median 4 & 3) that *they can originate new ideas and products*. 32.2% N = 59 were ‘somewhat confident’ (median 5) in Round 2 and in Round 3, 41.4% N = 58 were ‘mostly confident’ (median 6), while 3.4% and 1.7% were not confident in Rounds 1 and 2 respectively, and in Round 3, 3.4% were ‘mostly not confident’ and ‘somewhat not confident’. The implication of this result is that the participants were confident of their ability to innovate, create and launch new products and services into the market. It also indicates that there was progressive development of skills in the action learning project. Oyugi (2014) posits that academia has decided not to teach the students to write business plans but rather how to write business ideas. In his opinion, this practice may encourage students to generate ideas without responding to stimulus. The students’ skills development was thus enhanced during the training as the participants were previously taught to write business plans that did not translate to intention or action but were now encouraged to write business ideas. Figure 6.7 presents an analysis of variance and an overall summary of opportunity identification self-efficacy from rounds one to three of the training.

Figure 6.7: Overall Summary of OI-ESE

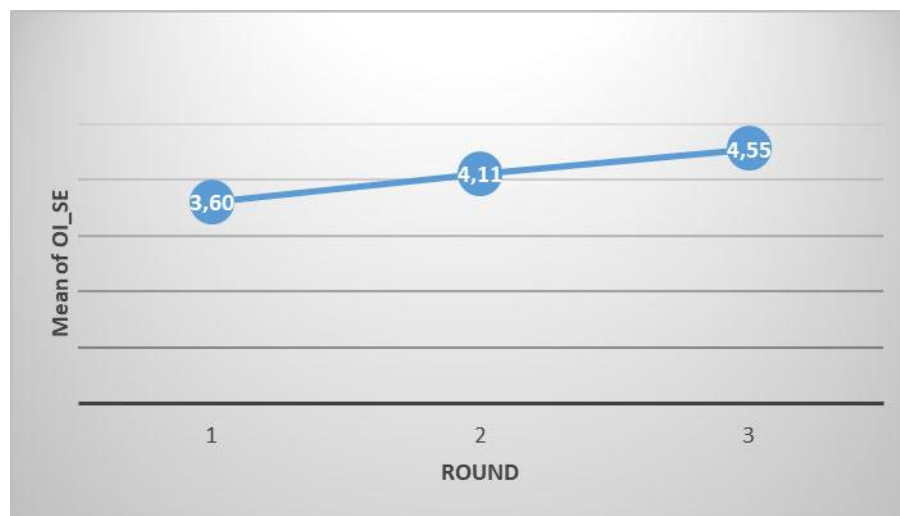


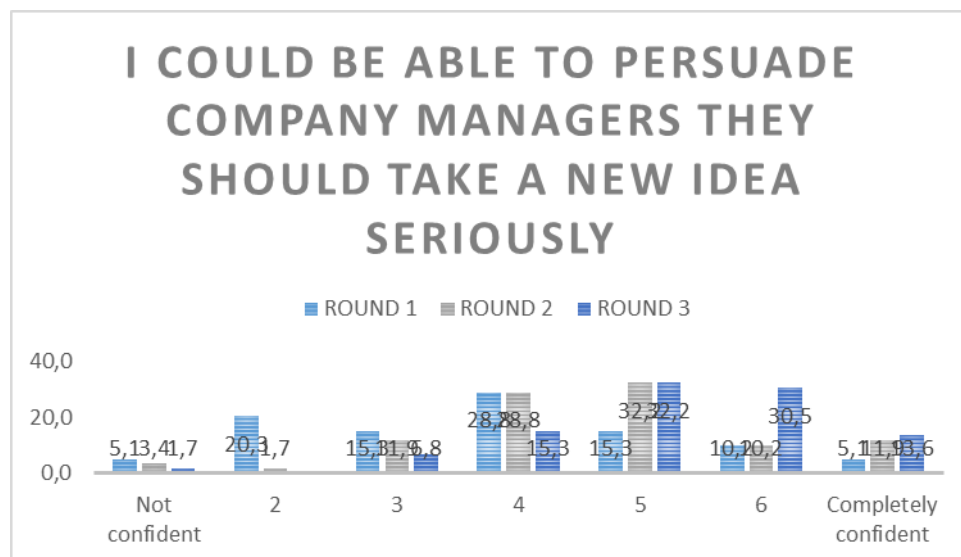
Figure 6.7. indicates the progressive development of the participants' ESE aided by the application of the training model and Theory U that developed the participants to co-initiate, co sense, co-inspire, co-create and co-evolve. It indicates that the participants were able to reason together with like-minded, like-hearted, and like-willed business friends. A progressive development was noticed in Round 1 with $N = 59$, with a mean and standard deviation of 3.59 and 0.964 respectively. It can therefore be deduced that on average, the participants developed entrepreneurially by increasing their opportunity identification self-efficacy, which was more pronounced during Rounds 2 and 3, with $N = 58$ and mean and standard deviation of 4.10 and 0.778 respectively and Round 3 $N = 56$, mean and standard deviation of 4.55 and 0.836 respectively. This indicates that there was a significant difference in opportunity identification throughout the rounds at ($F(2,108) = 25.433, p < 0.001$). The participants responded on the scale of 'somewhat confident' and 'mostly confident', which indicated progressive development. This could be because of the pedagogical method, content, context, materials or technological equipment, environment, and new learning methods the participants were exposed to by the facilitators who trained and shared their experiences as practitioners.

It must be emphasised that the participants were inspired to identify different business ideas in the learning hub, as well as develop the self, which later transformed to intention at the end of the project as a result of the training.

6.7.2 Relationship Self-Efficacy

The items here are based on the relationship that existed between potential entrepreneurs and the stakeholders that would enable dreams to be fulfilled. The establishment of this relationship entails gathering resources such as capital, labour, customers, and suppliers, without which the goals cannot be achieved (Ran, 2013). Relationship self-efficacy takes into consideration the push and pull factors that motivate any individual to become an entrepreneur and it is the first factor to be considered in the regulatory policy of creating a venture in any economy. The construct examines how the participants developed over time during the systemic action learning action research training project that applied Theory U. Figures 6.8 to 6.15 present the analysis and interpretation of REL_ESE development.

Figure 6.8: Relationship ESE Development



In figure 6.8, it was observed that in Round 1, 28.8% N = 59 of the respondents were undecided (median 4) that *they could persuade company managers that they should take a new idea seriously*. 32.2% were ‘somewhat confident’ (median 5) in Round 2 and in Round 3 respectively and 5.1% were not confident in Round 1, 1.7% ‘mostly not confident’ in Round 2 and in Round 3, 1.7% were ‘not confident’. The item was based on the relationship self-efficacy that focused on co-initiating, co-sensing, co-creating and co-evolving to develop participants’ relationships with the stakeholders in entrepreneurship development and their ability to open-up connections (Barbosa et al., 2007; Du and Kadyova, 2015). Rounds 2 and 3 reflect the “co” propensities in Theory U that bring the participants together to collaborate for future challenges. In week 5 of the training project the participants were taught how to engage one

another in ESE qualities of decision making and leadership development. The participants explored possible new business teams and ideas that could be introduced to entrepreneurship enablers to open-up connections for partnerships. This was consistent with the opinion of Kickul et al. (2009) that new business ideas may influence learners to seek assistance from others (e.g., partners, consultants, investors and enablers) who can support them to complete the stages of venture creation.

Figure 6.9: Relationship ESE Development

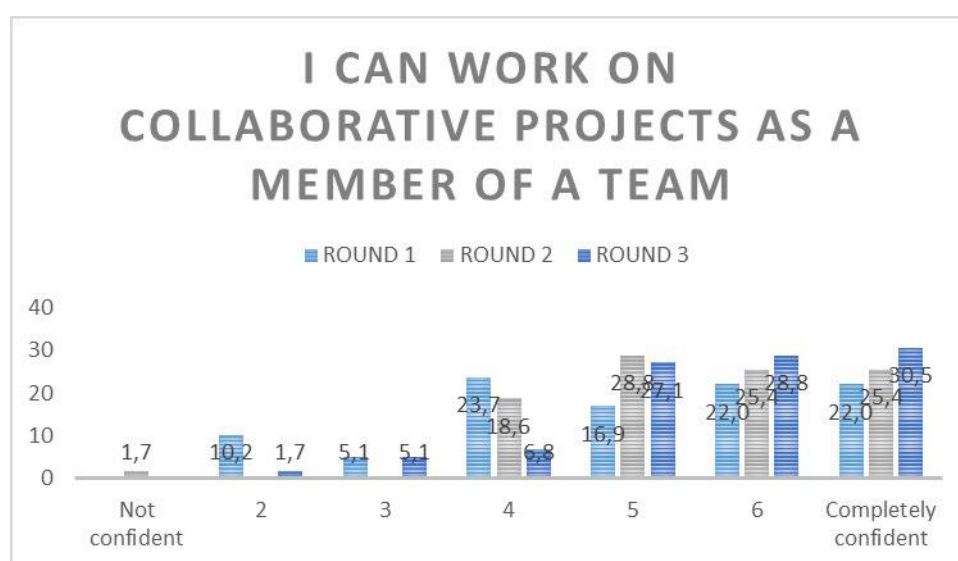


Figure 6.9 revealed that in Round 1, 23.7% N = 59 of the respondents were undecided (median 4) that *they can work on collaborative projects as a member of a team*. 28.8% N = 59 were ‘somewhat confident’ (median 5) in Round 2 and in Round 3, 30.5% N = 59 were ‘completely confident’ (median 7). 10.2% were ‘mostly not confident’ in Round 1, 1.7% ‘not confident’ in Round 2 and in Round 3, 1.7% were ‘mostly not confident’. This item was an attempt to determine if collaborative effort can develop members of a team to create a helpful relationship. The data indicated that there was a positive result in collaborative projects among the team members.

This is an indication that collaborative efforts or partnership venture creation will be beneficial to the participants because it will afford them the opportunity to jointly initiate a business instead of taking the risk alone. This development took place at the stages of co-inspiring and co-creating, where the decision was made to leave the old self to allow the new self to emerge (Scharmer, 2007) and the ability was developed to form like-minded, like-hearted and like-

willed business friendships (Scharmer & Kauffer, 2013) in week six of the training and transfer liability to insurance companies.

Figure 6.10: Relationship ESE Development

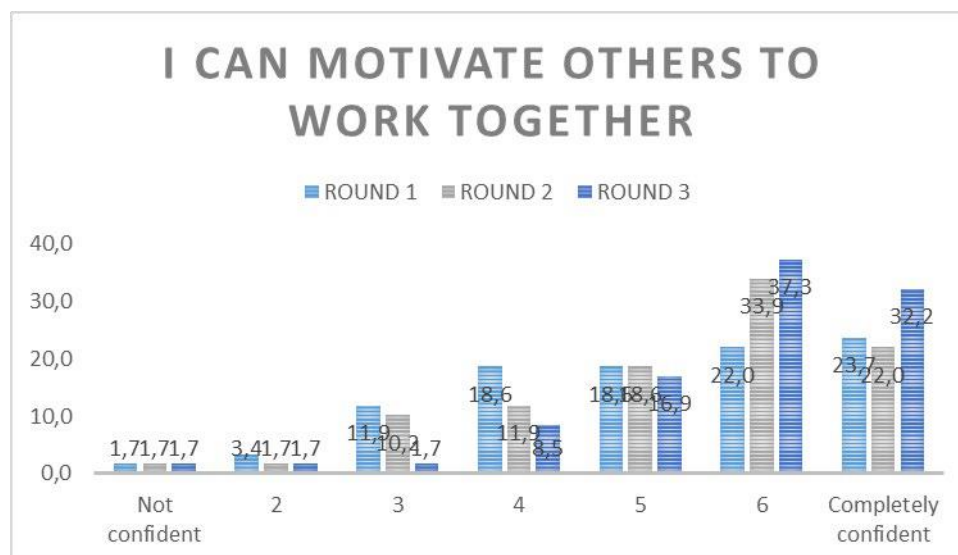


Figure 6.10 indicates that in Round 1, 23.7% $n = 59$ of the respondents were ‘completely confident’ (median 7) that *they can motivate others to work together*. 33.9% $N = 59$ were ‘mostly confident’ (median 6) in Round 2 and in Round 3, 37.3% $n = 59$ were ‘mostly confident’. 1.7% were ‘not confident’ in all 3 rounds. The implication was that the SALAR training had enabled the participants to develop leadership efficacy to become future leaders. It also revealed the effects of Theory U leadership development on learning. This strategy was designed to positively affect individual effectiveness and was grouped into three categories (a focus on behaviour, natural reward and constructive thought patterns) (Houghton, Bonham, Neck & Singh, 2004; Ricketts, Carter, Place & McCoy, 2012). The response indicates that participants develop and grow their skills and knowledge as a result of meeting like-minded people during weeks six to twelve of the project; an opportunity they did not have before the training.

Figure 6.201: Relationship ESE

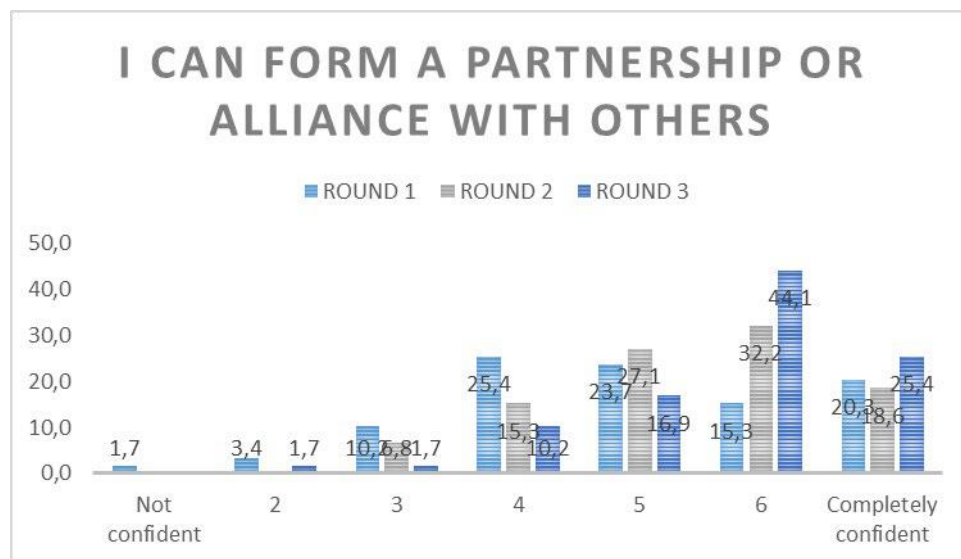


Figure 6.11 indicates that in Round 1, 25.4% N = 59 of the respondents were undecided (median 4) that they can form a partnership or alliance with others. 27.1% N = 59 were ‘somewhat confident’ (median 6) in Round 2 and in Round 3, 44.1% N = 59 were ‘mostly confident’ (median 6). 1.7% of the respondents were ‘not confident’ in Round 1 and Round 3, while 26.8% were ‘somewhat not confident’ in Round 2. This indicates that an individual can exhibit their efficacy to create a partnership or alliance as capability needed to perform certain activity with others as submitted by scholars such as Bandura (2010) and Prescott and Stibbe (2014). This development was no doubt due to the training as shown by the responses of the participants to the items in the questionnaire which aided the exhibition of their efficacy to build partnership and business alliance, a capability needed for entrepreneurship action as posited by scholars such as Bandura (2010) and Kregar, Antocic and Ruzzier (2019).

Figure 6.202: Relationship ESE

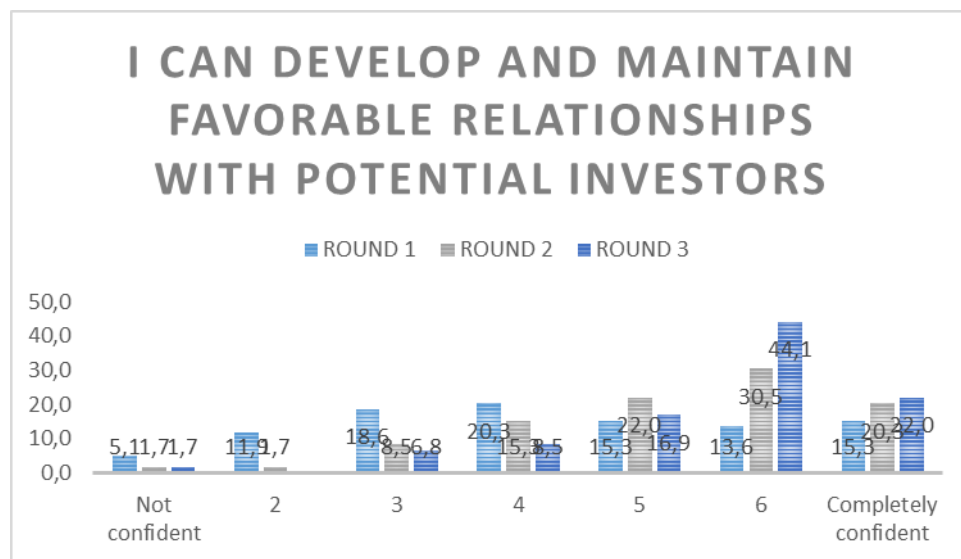


Figure 6.12 reveals that in Round 1, 20.3% N = 59 of the respondents were ‘undecided’ (median 4) about whether *they can develop and maintain favourable relationships with potential investors*. 30.5% N = 59 were ‘mostly confident’ (median 6) in Round 2 and in Round 3, 44.1% N = 59 of the respondents were ‘mostly confident’ (median 6). 5.1% were ‘not confident’ in Rounds 1, while 1.7% were ‘not confident’ in Rounds 2 and 3 respectively. The improvement and development in the percentage of respondents in Rounds 1 and 3 could be because of the application of Theory U’s co-initiation in relation to REL_ESE with the intention of developing the entrepreneurial ecosystem, as explained in the LEKGOTLA conference proceedings (Lekgotla, 2019; Herrington & Coduras, 2019). This underscores the importance of entrepreneurship education and training in higher institutions of learning and the fact that classroom teaching needs to be the foundation for such development.

Figure 6.203: Relationship ESE

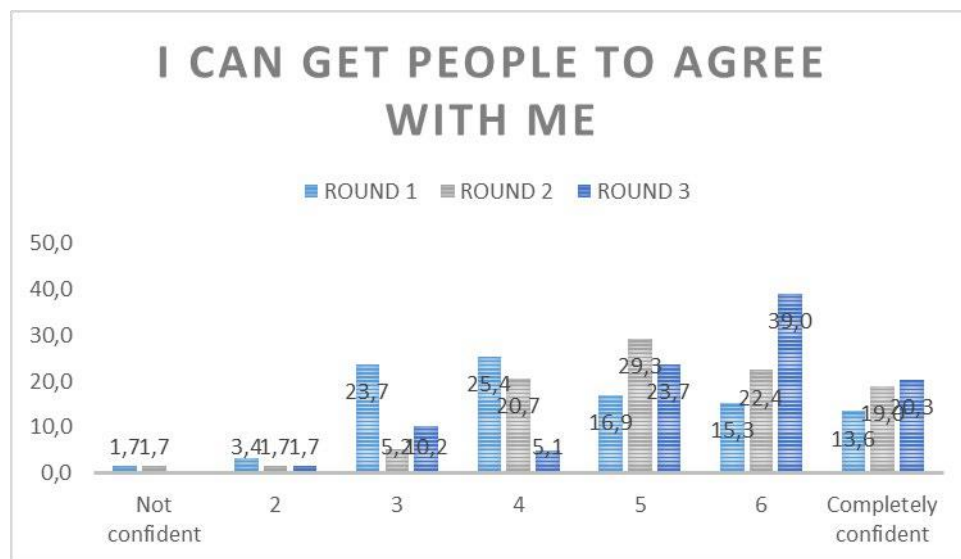


Figure 6.13 indicates that in Round 1, 23.7% (N = 59) of the respondents were ‘somewhat not confident’ (median 3) that *they can get people to agree with them*. 29.3% of these respondents were ‘somewhat confident’ (median 5) in Rounds 2 and 3 and 39.0% (N=59) were ‘mostly confident’ (median 6). 1.7% were ‘not confident’ in Rounds 1 and 2, while 1.7% were ‘mostly confident’ in Round 3. The analysis of the data presented in Figure 6.13 is in line with the opinion of Gao, Janssen and Shi (2011) who posit that the development of critical potential, individual efficacy and behavioural changes will reshape germane parts of reality in securing the entrepreneurial ecosystem. In the opinion of Gardner, Coglisier, Davis and Dickens (2011), it reflects multiple intelligence in which participants need to identify socio-economic development around them and how they see themselves as potential entrepreneurs in the sector now and soon. These are leadership and managerial traits essential for institutional development in line with the training objective that targeted the development of future entrepreneurial leaders.

Figure 6.14: Analysis of Variance and Overall Summary OF REL_ESE Development

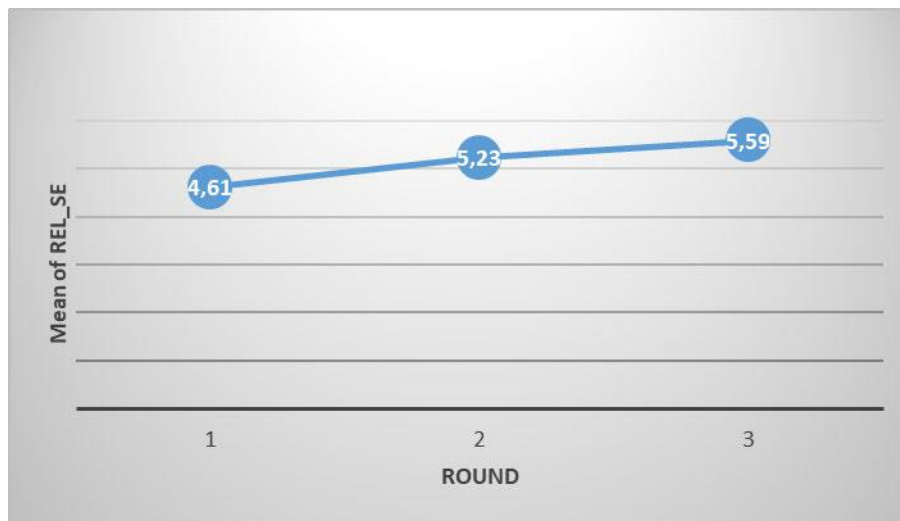


Figure 6.14 indicates the development of REL_ESE as enhanced by the application of the training model and Theory U for the participants' ESE development during the SALAR training project. The participants were taken through the stages of Theory U in learning. This was in a bid to develop their entrepreneurship relationship with stakeholders' and other enablers to persuade them to accept new ideas and work in collaboration as a team. Also, to motivate others to achieve a collective goal, forming a business team or partner with investors and encouraging them to agree with their business idea. Development was seen throughout the three developmental rounds of the training project. In Round 1, N = 59 with a mean and standard deviation of 4.613 and 1.318 respectively; in Round 2, N = 58 with a mean and standard deviation of 5.227 and 1.0912 respectively and in Round 3, N = 59 with a mean and standard deviation of 5.587 and 1.0446 respectively. The figure indicates that learning took place and the participants developed, which was explained through the participants' response median that indicates 'mostly confident' and 'completely confident' with regard to the items of the construct. This indicates the effectiveness of the training model, chosen pedagogy, technology, environment, and other learning factors that were beneficial for the development of youth entrepreneurship intention and action.

6.7.3 Managerial Self-Efficacy

Managerial self-efficacy entails the manner in which resources (i.e. information, human, financial, production or services) that are germane to the organisation are managed and how the regulatory policy provides room for the accomplishment of the organisation's mission and vision. Based on the understanding and insight into entrepreneurship self-efficacy and the task-

specific process, this construct was utilised to develop participants' managerial, leadership and decision-making skills for practice. Figures 6.16 to 6.27 present the analysis and interpretation of MNG_ESE development.

Figure 6:15: Managerial ESE Development

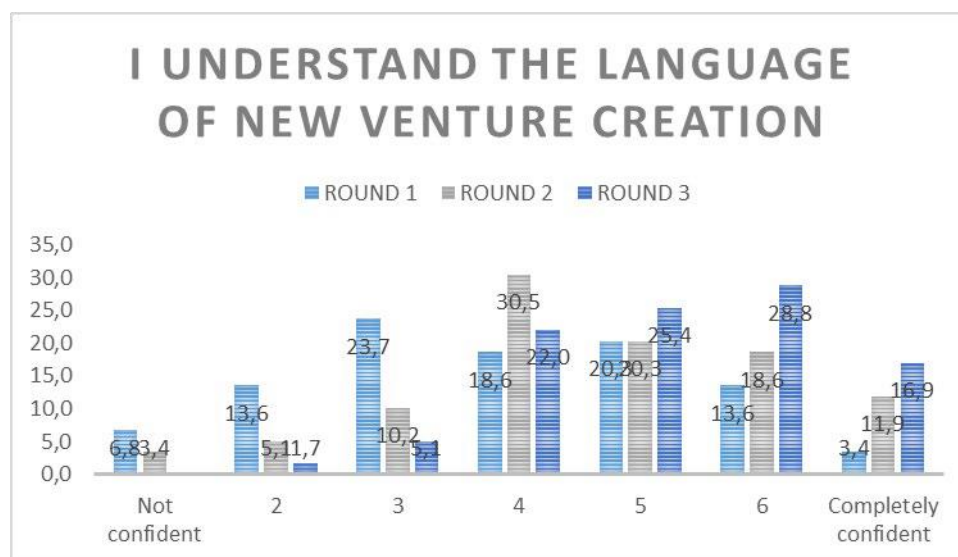


Figure 6.15 indicates that in Round 1, 23.7% (N = 59) of the respondents were 'somewhat not confident' (median of 2) that they understand the language of new venture creation. 30.5% (N = 59) of the respondents 'were undecided' (median 4) in Round 2 and in Round 3, 28.8% (N = 59) were 'mostly confident' (median of 6). 3.4% of the respondents were 'completely confident' in Round 1, 3.4% were 'not confident' in Round 2 and 1.7% were 'mostly not confident' in Round 3. These figures revealed that the participants initially did not understand the language of new venture creation until they saw the opportunity to develop, learn, understand, and experience the real meaning of management and sustaining a venture as well as taking a calculated risk for venture growth and development. It is a stage in which the old self is discarded for the new self to emerge. This refers to co-inspiring with the assistance of teammates or business friends' collaboration for would-be entrepreneurs that wish to acquire more skills and experience. It suggests the need to develop such skills through partnership with established firms and mentoring by successful entrepreneurs.

Figure 6:16: Managerial ESE Development

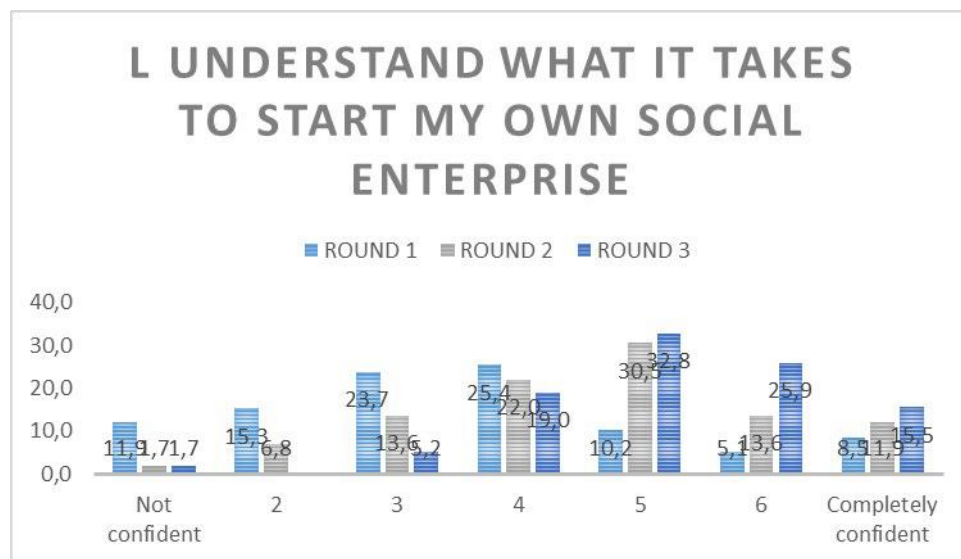


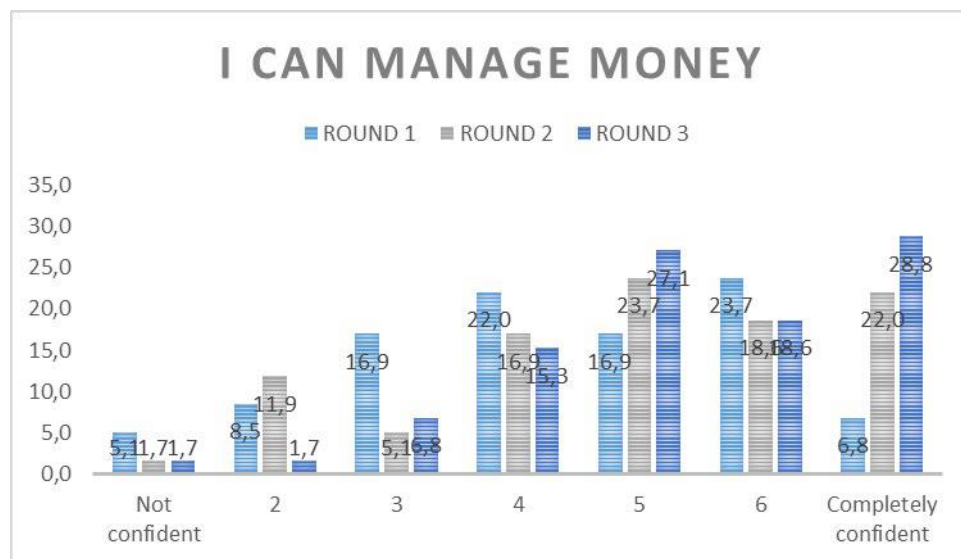
Figure 6.16 indicates that in Round 1, 25.4% (N = 59) of the respondents were ‘undecided’ (median of 4) if *they understand what it takes to start their own social enterprise*. 30.5% (N = 59) of the respondents were ‘somewhat confident’ (median of 5) in Round 2 and in Round 3, 32.8% (N = 58) were ‘somewhat confident’ (median of 5). 1.7% were ‘not confident’ in both Rounds 2 and 3. The application of Theory U by the facilitators showed that the training had enhanced and progressively developed the participants’ innovativeness and creativity, risk-taking behaviour and outcomes. This builds the confidence required to perform a given task as a future leader and the capability to nurture efficacy to fruition, as depicted in the training activities when the facilitators mentored the participants based on their personal experience and growth in their various businesses. This is the main reason for engaging practitioners with experience as facilitators to train and mentor the participants. This no doubt enhances and develops their post-training entrepreneurial output, as demonstrated in the development training model employed for this study.

Figure 6.207: Managerial ESE



In Figure 6:17 it was revealed that in Round 1, 22.0% (N = 59) of the respondents were ‘somewhat not confident’ (median of 3) that *they can start a successful business if they want to*. 23.7% (N = 59) of the respondents were ‘completely confident’ (median of 7) in Rounds 2 and in Round 3 32.2% (N = 59) were ‘mostly confident’ (median of 6). 5.1% and 1.7% were ‘mostly not confident’ in Rounds 2 and 3 respectively. This analysis aligns with Khang, Ki, Park and Baek (2012) who opine that the participants understand their moral obligations as a need that is essential to increase predictive power, which is utilised to project an individual’s behavioural intention at a given time and a confirmation of self-convictions that at any point in time they can either go into partnership or individually start a business. At the end of the project, 32.2% of the respondents were ‘mostly confident’ and 22.0% were ‘somewhat not confident’. The changes and development observed in the participants over time was in alignment with the development training model and Theory U that were applied for the study and understanding of time factor in starting a venture to take over market as a strategy to become market leader and pace setters (Managerial self-efficacy qualities).

Figure 6.208: Managerial ESE



In Figure 6.18, it was observed that in Round 1, 23.7% (N = 59) of the respondents were ‘mostly confident’ (median of 6) that *they can manage money* and 23.7% (N = 59) of the respondents were ‘somewhat confident’ (median of 5) in Rounds 2 and 3, whereas 28.8% (N = 59) were ‘completely confident’ (median of 7). 5.1%, 1.7% and 1.7% were ‘not confident’ in Rounds 1 to 3 respectively. The figure indicates that an individual can exercise control over behaviour to attain a goal and the importance of learning entrepreneurial finance from established entrepreneurship practitioners for venture creation and development, as revealed in week 10 of the training. In support of this was the suggestion that relevant pedagogies be employed to teach tacit skills (Silby & Watts, 2015). Scharmer and Kaufer (2013) opine that experiential learning should be built on the initial experience and present action of the learners to inculcate in them the spirit of learning from experience and the future as it emerges. This is in line with the training model and can also be seen in Theory U as applied in this study. There is no doubt that the model aided the development of the students’ entrepreneurship behaviour in this study. However, the change was not significant in the three rounds.

Figure 6.209: Managerial ESE

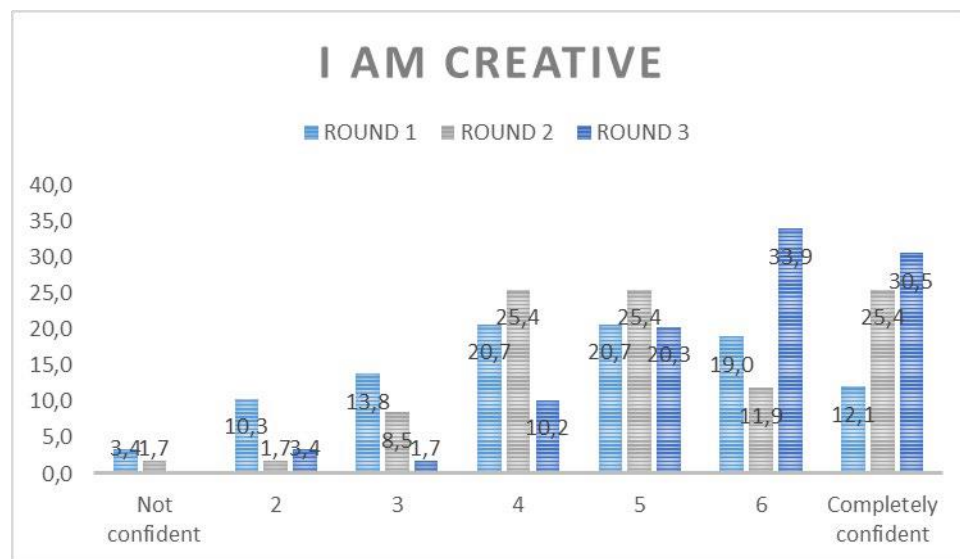


Figure 6.19 indicates that in Round 1, 20.7% (N = 58) of the respondents were ‘somewhat confident’ (median of 5) that *they are creative*; 25.4% (N = 59) were ‘undecided’ (median of 4) and ‘mostly confident’ in Rounds 2 and 3 respectively whereas 33.9% (N = 59) of the respondents were ‘mostly confident’ (median of 6). 3.4% were ‘not confident’ in Round 1; 1.7% were ‘not confident’ in Round 2 and 3.4% were ‘mostly not confident’ in Round 3. The analysis presented above reveals that creativity is all about mind, heart and will for new things to evolve or emerge and the analysis indicates a progressive development to achieve the aim of the training project and the study. The findings here correspond with the opinion expressed by Van der Westhuizen (2016) that students’ orientation and intention are shaped and improved through the selected teaching and learning pedagogy and technology. This explains why Theory U was relevant in presenting different learning pedagogy for positive mindset outcomes among youth entrepreneurs in combination with systemic action learning action research (hands-on learning) techniques.

Figure 6.210: Managerial ESE

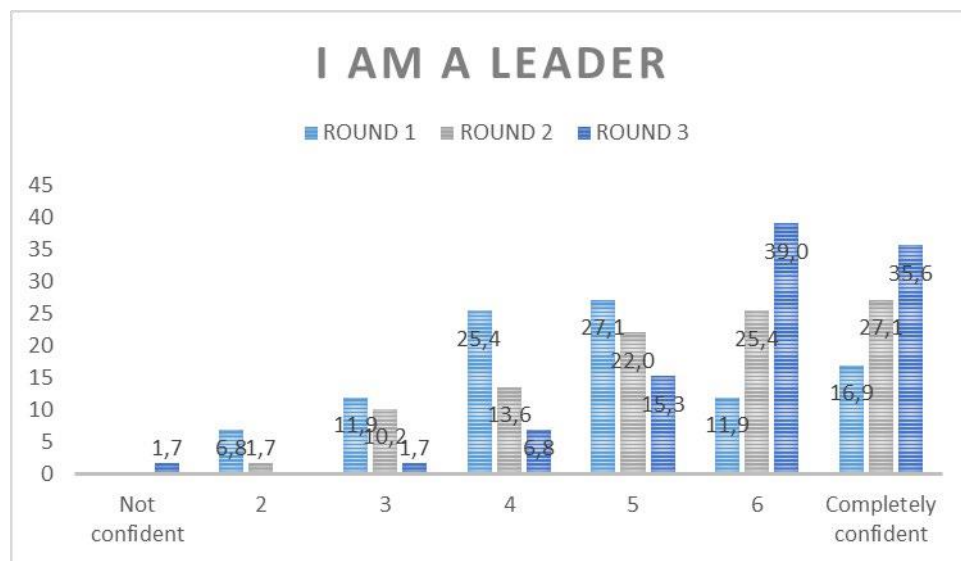


Figure 6.20 above indicates that 27.1% (N = 59) of the respondents were somewhat confident (median of 5) and completely confident that *they are leaders* in Rounds 1 and 2 respectively while 39.0% (N = 59) were mostly confident (median of 6) in Round 3. 6.8% (N = 59) were mostly not confident (median of 2) in Round 1, 1.7% were mostly not confident in Round 2 and 1.7% were not confident in Round 3. The development in Figure 6.20 indicates that from rounds one to three the participants were inspired at the bottom stage of Theory U (co-inspiring) and allowed their new selves to emerge as leaders with the confidence to exhibit leadership qualities. The percentages in the three rounds reflect the kinds of leaders of entrepreneurship that participated in the facilitation of the project in a bid to accomplish a given task with a long-term result related to economic change, growth, and the sustainability of future leaders. The training ensured the development of future self-leaders over time from the studentpreneurs, which in the opinion of Houghton et al., (2004); Moldoveanu and Narayandas (2019), is a strategy to enhance perceptions to advance maximum output levels.

Figure 6.211: Managerial ESE

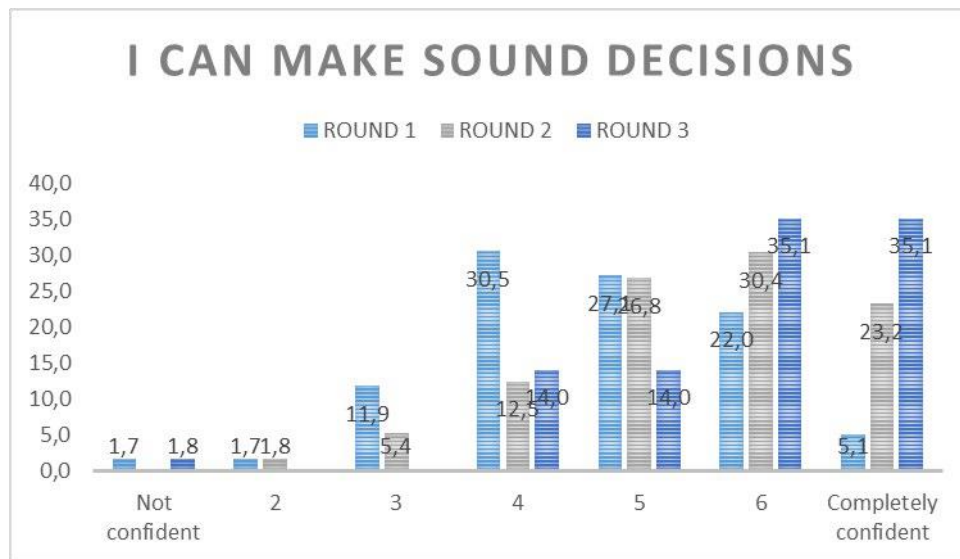


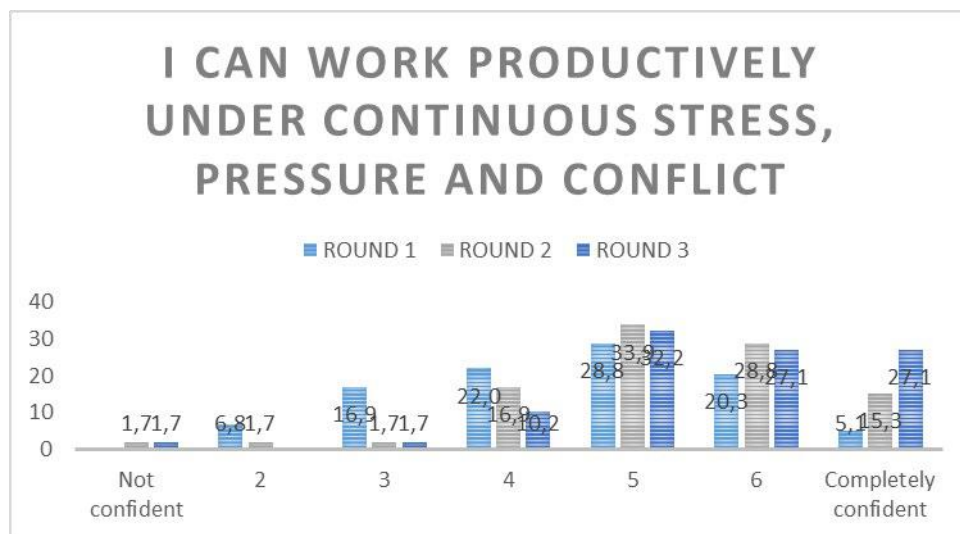
Figure 6.21 indicates that in Round 1, 30.5% (N = 59) of the respondents were undecided (median of 4) that *they can make sound decisions*; in Round 2, 26.8% (N = 56) (median of 5) of the respondents were somewhat confident and in Round 3, 35.1% (N = 56) of the respondents were mostly and completely confident (median of 7). 1.7% were not confident in Round 1, 1.8% were mostly not confident in Round 2 and 1.8% were not confident in Round 3. Figure 6.21 indicates effort on the part of the participants to develop their entrepreneurship career by volunteering to complete the action learning action research sessions of the project, learning different skills and developing ideas for the sector and the economy. Round 1 revealed the classroom teaching reflection with 30.5% undecided, 26.8% somewhat confident and 35.1% mostly and completely confident in Round 2 and 3 respectively. This was corroborated by Van der Westhuizen (2016) who observed that systemic action learning action research is a pedagogy method that paves the way for reflection-in-action learning rather than operating in only in a classroom (Costello, 2017). This development justified the adoption of the nondualism philosophy in this study.

Figure 6.212: Managerial ESE



Figure 6.22 reveals that in Round 1, 23.7% (N = 59) of the respondents were somewhat confident (median of 5) that *it is easy for them to stick to their aims and accomplish their goals*. In Round 2, 27.1% (N = 59) of the respondents were somewhat confident (median of 5) and in Round 3, 28.8% were somewhat and mostly confident (median of 5 & 6 respectively). 10.2% were not confident in Round 1, 15.3% were somewhat not confident in Round 2 and 1.7% were mostly not confident in Round 3. Little development was shown regarding this item, although all the respondents were confident with their development, believing that to achieve the aims and objectives of any task requires strict adherence to process. It was revealed that only fifty-nine of the registered participants were so committed, developed, and analysed in the project revealing their goal getting charisma. The analysis above indicates that the participants are goal getters such as Dr Terera Trent video used in the week two of the training to encourage them to be determined which might be part of the reason for their voluntary participation in the project and that they were also willing to become self-reliant and employers of labour.

Figure 6.213: Managerial ESE



In figure 6.23, most of the respondents were somewhat confident (median of 5) that they *can work productively under continuous stress, pressure, and conflict* with the following percentages: 28.8% (N = 59) in Round 1, 33.9% (N = 59) in Round 2 and 32.2% (N = 59) in Round 3. However, 1.7% were not confident in Rounds 2 and 3 respectively and 6.8% were mostly not confident in Round 1. The figure indicated that there was significant development in Rounds 1 and 2 but this trend did not continue in round three, indicating that stress in any business will not translate into the desired results, which explains why Ganiyu (2018) suggested a work-life balance strategy for individual growth and development. The respondents understood that working under stress, pressure and conflict affects them emotionally and reduces performance and output.

Figure 6.214: Managerial ESE

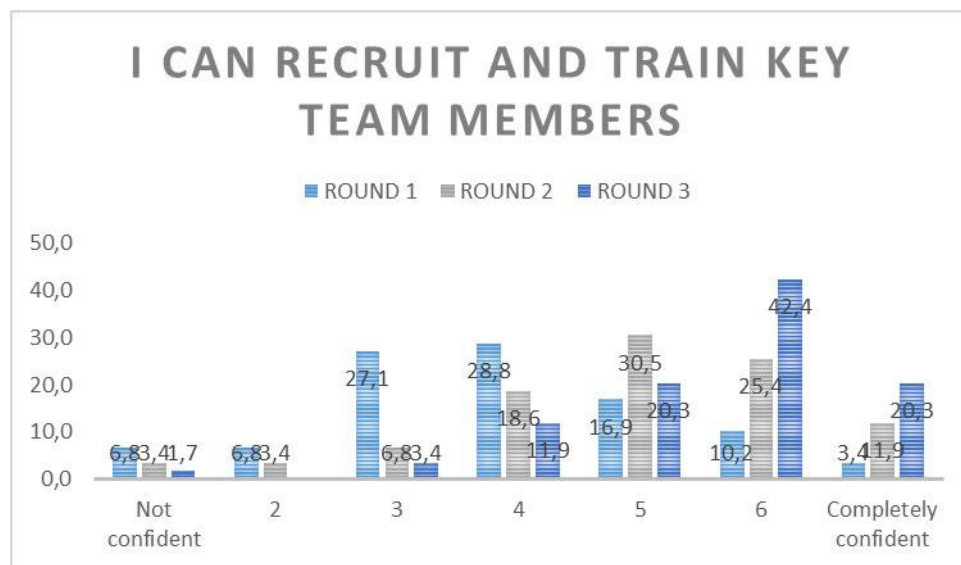


Figure 6.24 indicates that in Round 1, 28.8% (N = 59) of the respondents were undecided (median of 4) that *they can recruit and train key team members*; in Round 2, 30.5% (N = 59) were somewhat confident (median of 5) and in Round 3, 42.4% (N = 59) were mostly confident (median of 6). 6.8%, 3.4% and 1.7% were not confident in Rounds 1, 2 and 3 respectively. The data presented in the figure revealed that in Round 1 28.8% were undecided because such modules might not have been taught in the classroom before the project, while in Round 2 during the project, action learning developed the participants in the area of human resource management, and they were taught how to recruit and train team members. Consequently, 30.5% and 42.4% were recorded for ‘somewhat confident’ and ‘mostly confident’ respectively in Rounds 2 and 3, indicating managerial skills development. Figure 6.24 further revealed that the human resources and managerial skills developed over time during and after the project thus enabling the participants to identify the potential for start-up, growth, and development. This implies that the managerial and leadership skills required for the start-up of a business were learnt with enthusiasm during the training sessions. The development experienced during the three rounds reflected the necessity for the adoption of the nondualism philosophy in this study.

Figure 6.215: Managerial ESE

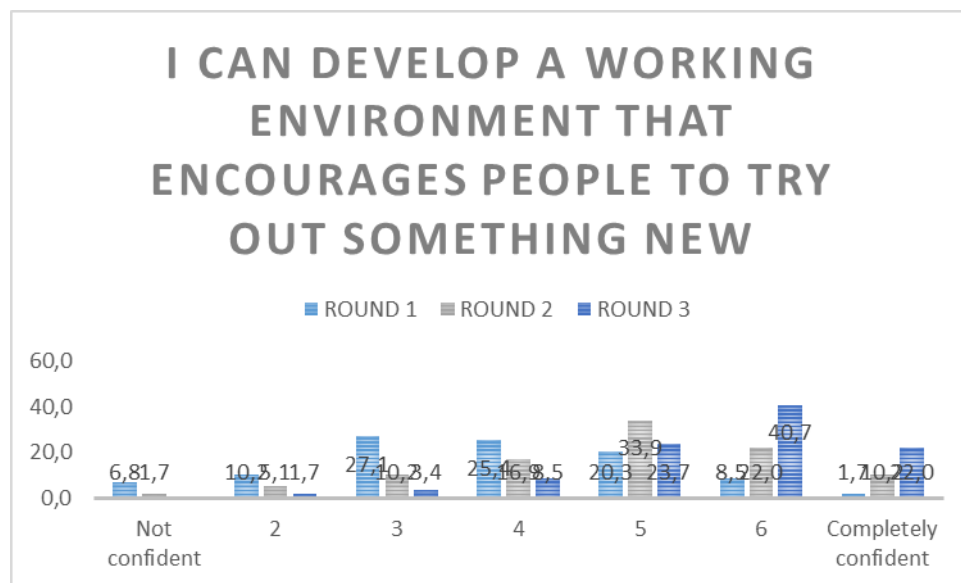


Figure 6.25 revealed that 27.1% (N = 59) of the respondents were somewhat not confident (median of 5) that *they can develop a working environment that encourages people to try something new*; 33.9% (N = 59) of the respondents were somewhat confident (median of 5) and 40.7% (N = 59) were mostly confident (median of 6) in Round 3. 6.8% and 1.7% of the respondents were not confident in Rounds 1 and 2 respectively and in Round 3, 1.7% were mostly not confident. The analysis in Figure 6.26 implies that the reactive stages of Theory U were successful, as many of the participants were mostly confident that they can develop a working environment that encourages them to work together and try out something new. Scharmer (2009) explains that “co” can be used for collectivism in human management development for innovation and creativity accomplishment. Figure 6.25 further revealed that the participants developed well in collaboration with team members in the project. This no doubt developed their skills regarding collaboration and bringing together people with business-like minds, hearts and will as partners and as team members, which is the effect of “co” in the application of Theory U.

Figure 6.26: Analysis of Variance and Overall Summary of MAN_ESE Development

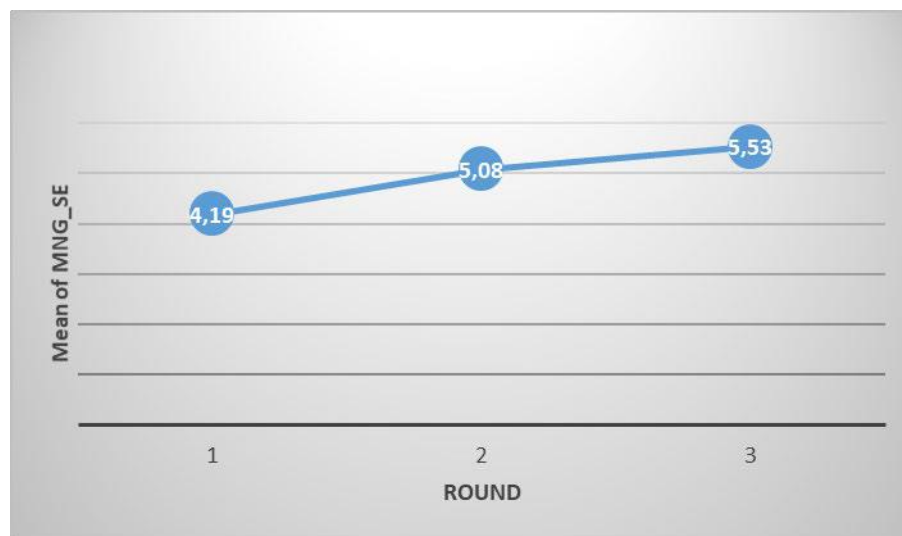


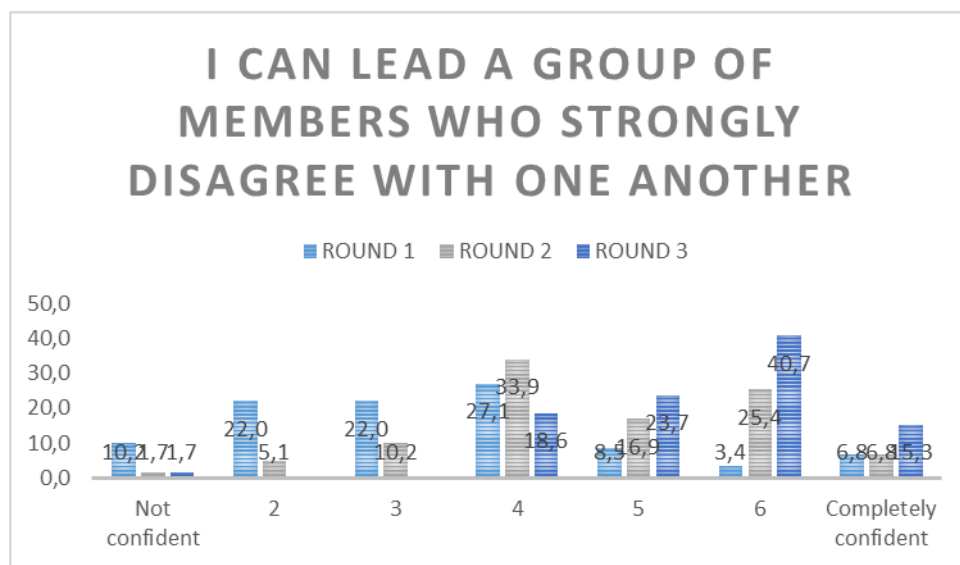
Figure 6.26 indicates the result of the phases of participants' ESE development with the application of Theory U in a systemic action learning action research project that was designed to develop the participants' managerial ESE skills with regard to time and money management, leading a team, making sound decisions, attaining targets, introducing human capital development and developing and encouraging a working environment that is conducive to new venture development in line with the nondualism philosophy adopted in this study. The development was assessed through the three developmental rounds of the training project, which was also a demonstration of the appropriateness of the training model developed for this study. In Round 1, $N = 58$ with a mean and standard deviation of 4.188 and 1.0535 respectively. In Round 2, $N = 56$ with a mean and standard deviation of 5.077 and 0.965 respectively and in Round 3, $N = 56$ with a mean and standard deviation of 5.526 and 0.978 respectively. This indicates a significant difference in managerial self-efficacy throughout the three rounds ($F(2, 102) = 48.066, P < 0.001$). During the project, various managerial skills were learnt, which introduced innovation in terms of products and services. The formation of business teams and business ideas in the first six weeks would no doubt facilitate the development of entrepreneurship in South Africa. It can also be deduced that the application of Theory U to the learning pedagogy transformed and developed the participants, as shown in Figure 6.26. The participants were on the median of 'somewhat' and 'mostly confident', which indicated a high level of confidence on the part of the participants to perform well in any undertaking (Bandura, 2010; Richardson, 2019). The SALAR training was more effective than the classroom teaching that is taught for a certificate or degree. Confidence was a push factor that

inspired the participants to engage in a business model canvas that indicated the type of businesses the participants intended to venture into soon.

6.7.4 Tolerance Self-Efficacy

Tolerance self-efficacy relates to ones' ability to persevere and overcome criticism when initiating a venture or doing business, ensuring the sustainability of the venture with little or no supervision. It must be emphasised that the ability to embrace failure is essential for an entrepreneur to ensure the growth and development of a new venture and it is also germane to entrepreneurial self-efficacy. The dimensionality of self-efficacy was a strong explanatory construct in determining the ability of entrepreneurial intentions and the likelihood that the intention will translate to entrepreneurial action. Figures 6.28 to 6.41 present an analysis and interpretation of TOL_ESE development.

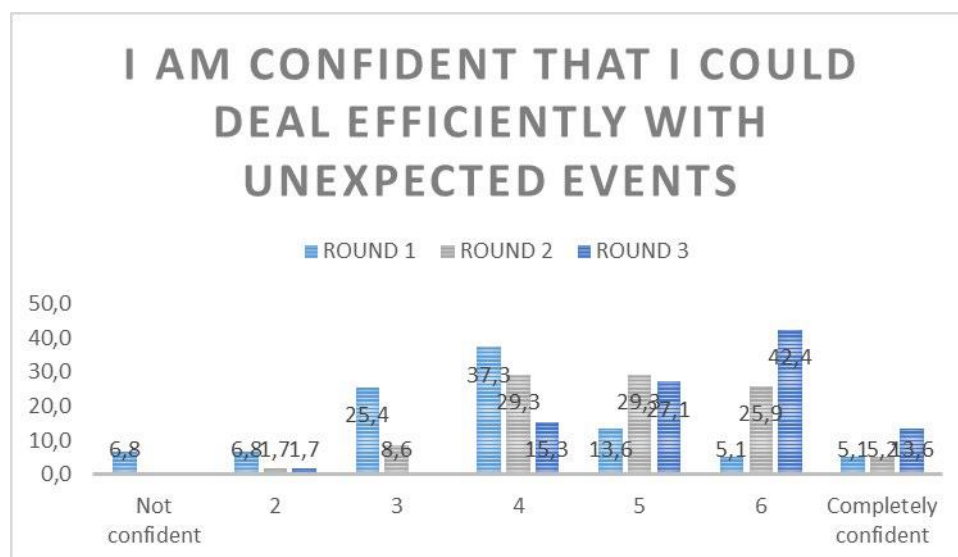
Figure 6.27: Tolerance ESE Development



In figure 6.27, 27.1% (N= 59; median of 4) of the respondents were undecided if they can lead a group of members who strongly disagree with one another; 33.9% (N = 59) of the respondents were undecided (median of 4) in Round 2 and 40.7% (N = 59) were mostly confident (median of 6) in Round 3. 10.1% were not confident in Round 1 and 1.7% were not confident in Rounds 2 and 3 respectively. Figure 6.27 indicates the effect of leadership development on the participants in the project. In Rounds 1 and 2 most of the participants were undecided but after being inspired by the bottom level of Theory U's co-inspiring, they developed the confidence and leadership charisma that can be used to strategically outsmart competitors in the practice

of entrepreneurship. Round three indicated that they were mostly confident to lead, and effect change to agree with one another. This is consistent with the view of Estivill (2003), who argued that the only way to curtail the insurmountable global challenge of social exclusion is to actively combat the cause thereof on the micro or individual level to save the world by improving our lives and relationships.

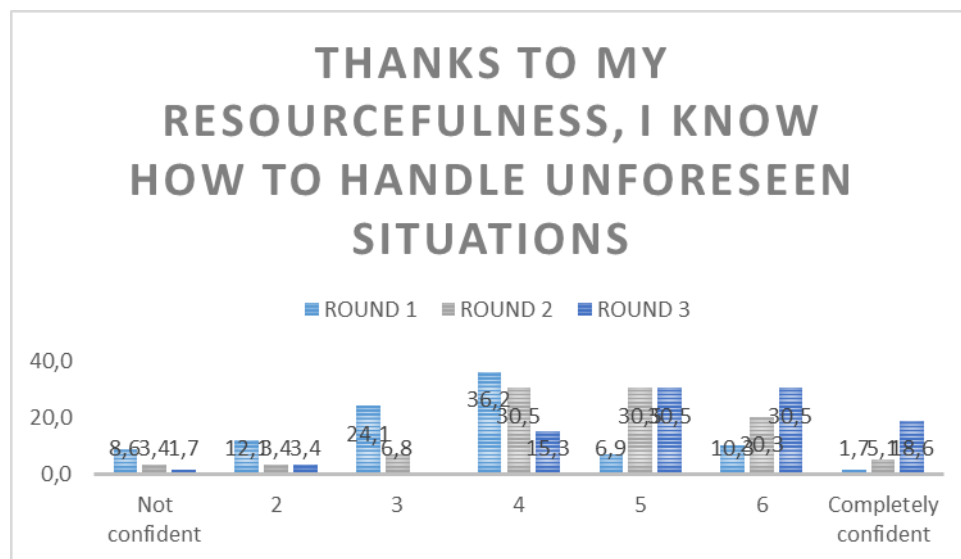
Figure 6.28: Tolerance ESE Development



In table 6.28, 37.3% (N = 59) of the respondents were undecided (median of 4) in Round 1 if *they could deal efficiently with unexpected events*. 29.3% (N = 58) of the respondents were also undecided (median of 4) in Round 2, while 42.4% (N = 59) were somewhat and mostly confident (median of 6) in Round 3. 6.8% were not confident in Round 1, 1.7% in Round 2 and in Round 3, 1.7% were mostly not confident.

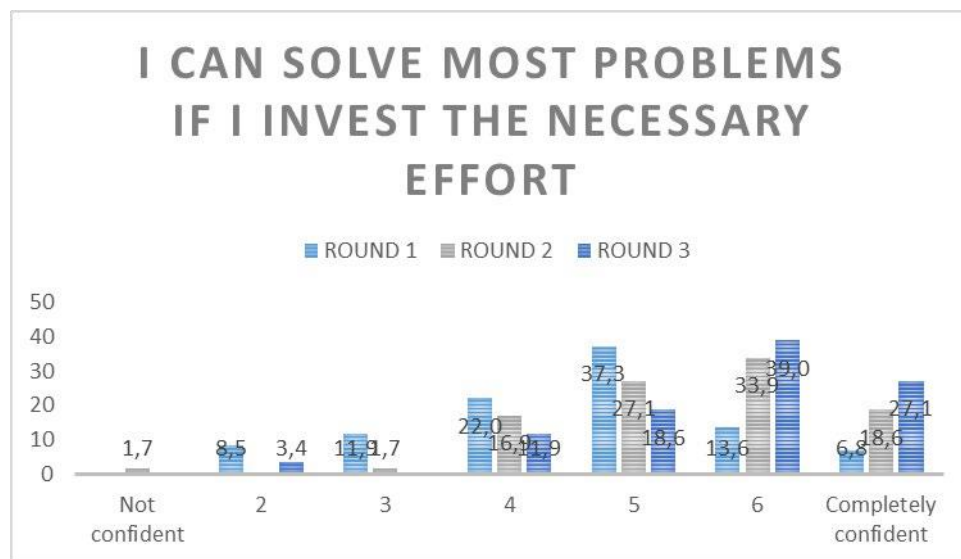
Rounds one and two of the training indicated dual response of ‘undecided’ and ‘somewhat confident’ respectively, which was an indication that from week eight to week twelve the progressive development that was experienced was due to the efficiency, effectiveness of professionalism of the facilitators of the learning. In Round 3, 42.4% of the participants were mostly confident and exhibited their efficiency in action learning by means of a business model canvas. The implication was that higher education institutions could improve their efficiency if such practice is incorporated into the curriculum for learning entrepreneurship (Kuttim, Kallaste, Venesaar & Kiis, 2014; Sudrajat, Rahman, Guzman, Ricky & Sasongko, 2018).

Figure 6.29: Tolerance ESE Development



In Figure 6.29, 36.2% (N = 58) of the respondents were undecided (median of 4) in Round 1 if they are thankful for their resourcefulness as they know how to handle unforeseen situations. 30.5% (N = 59) were undecided and somewhat confident (medians of 4 & 5 respectively) in Round 2 and 30.5% (N = 59) of the respondents were somewhat confident and mostly confident (medians of 5 & 6 respectively) in Round 3. 8.6% were not confident in Round 1, 3.4% in Round 2 and in Round 3, 1.7% were not confident. One can therefore deduce that the teaching method adopted for training the participants afforded them the opportunity to acquire the necessary skills to deal with salient issues and challenges as the facilitators took them on the path of business reality, business model canvas, central business concept, value chain marketing and financing. The learning by doing and systemic action learning action research developed their innate qualities to identify their resourcefulness, hence the development revealed by the percentages depicted in figure 6.29. This also crystallises the future they desire for themselves in the entrepreneurship ecosystem (Webb, 2013) through pre-sensing power as depicted in the bottom of the U in Theory U (Scharmer, 2009).

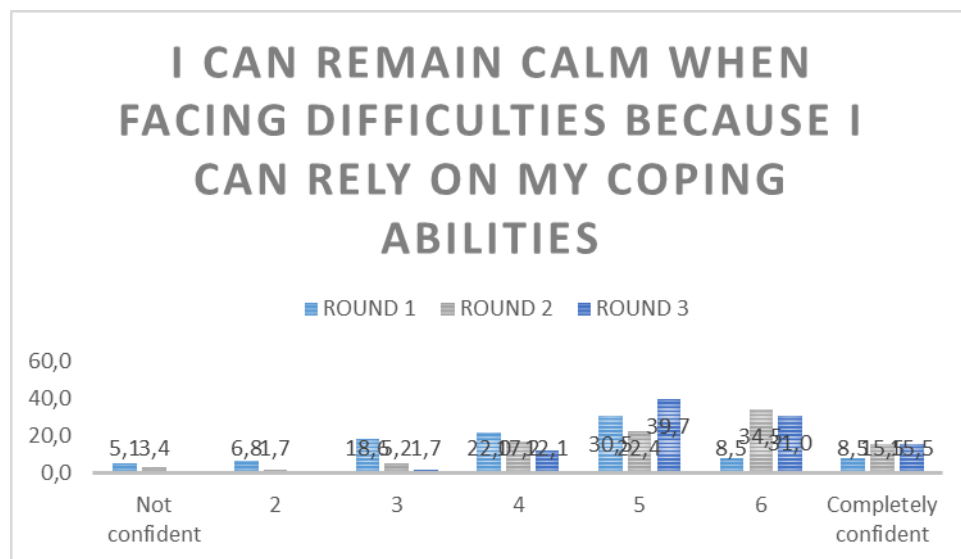
Figure 6.220: Tolerance ESE



In Figure 6.30 it was revealed that 37.3% (N = 59) of the respondents were somewhat confident (median of 5) that they *can solve most problems if they invest the necessary effort*. 33.9% (N = 59) of the respondents were mostly confident (median of 6) in Round 2 and 39.0% (N = 59) were mostly confident (median of 6) in Round 3. 8.5% were mostly not confident in Round 1, 1.7% were not confident and 3.4% were mostly not confident in Round 3. The figure indicated that the participants indicated some level of development in Rounds 1 to 3 in the quality of their self-efficacy to solve problems through investment of effort and proactivity, which are important attributes of entrepreneurship development when applying the nondualism philosophy. This was learnt by watching the video that was shown to inspire the participants to live their dream. This indicates that the participants were all confident by choosing responses ranging from ‘somewhat confident’ to ‘mostly confident’ (39.0%) in Round 3. This implies that taking risks proactively with the required effort will solve entrepreneurship problems and transform the potentials in them into action.

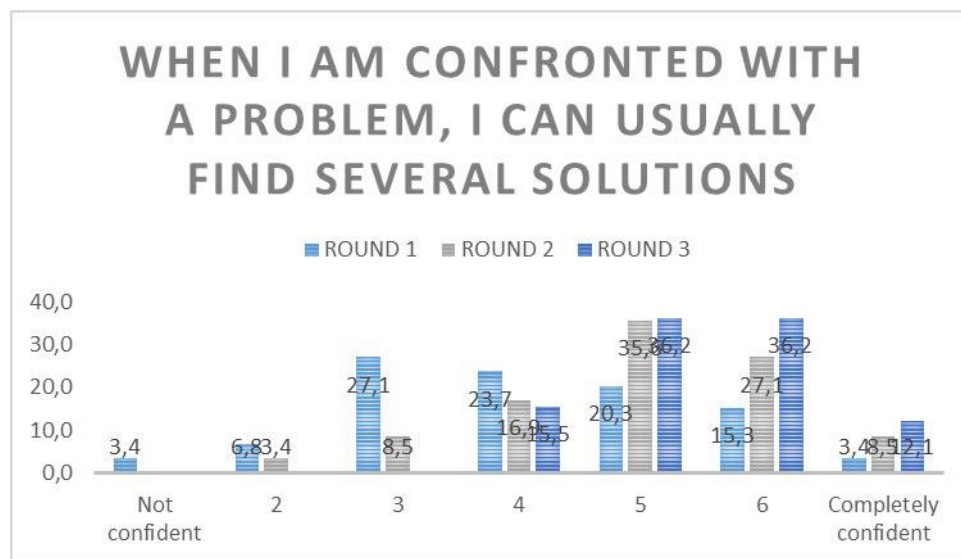
The findings from the analysis presented in Figure 6.31 agreed with Dess and Lumpkin (2005) and Henry, Hill, and Leitch (2017) who opine that there is an individual exhibition of independent human activities to tolerate with focus on solving problem or challenges with tolerance.

Figure 6.221: Tolerance ESE



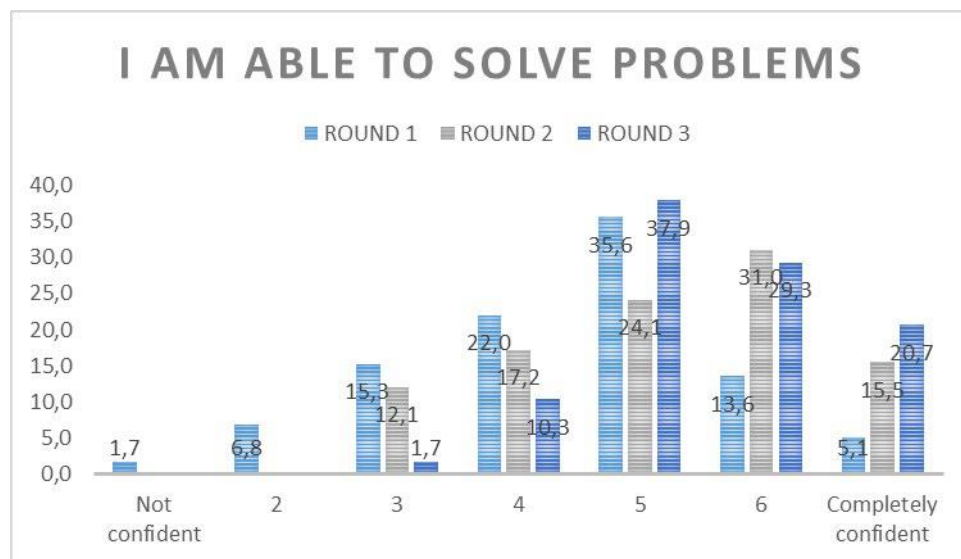
In Figure 6.31, 30.5% (N = 59) of the respondents were somewhat confident in Round 1 (median of 5) that they *can remain calm when facing difficulties because they can rely on their coping abilities*, 34.5% (N = 58) of the respondents were mostly confident (median of 6) in Round 2 and 39.7% (N = 58) were somewhat confident in Round 3 (median of 5). 5.1% were not confident in Round 1, 3.4% were not confident in Round 2 and 1.7% were somewhat not confident in Round 3. The analysis presented in the Figure 6.31 revealed that there was a progressive percentage increase in the level of development experienced by the participants, which is an indication that the training had a positive impact on individual capability to address business challenges, as entrepreneurship self-efficacy is task specific. The motivational story of Terreira Trent shown to the participants in a video was meant to motivate them that with resilience they can face both business and personal challenges and accomplish success in an entrepreneurial business. This developed the participants' entrepreneurial self-efficacy to enable them to face difficulties believing in their coping abilities to address difficult situations. This is a result of creating good relationships, managerial capabilities, and tolerance in the systemic action learning action research with Theory U propensities.

Figure 6.222: Tolerance ESE



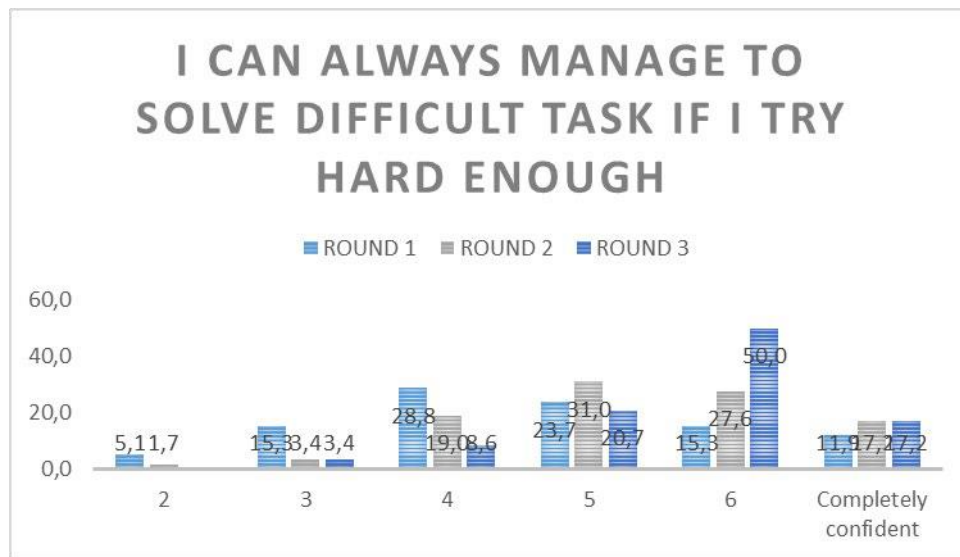
In Figure 6.32, 27.1% (N = 59) of the respondents were somewhat not confident (median of 3) in Round 1 that *when they are confronted with a problem, they can usually find several solutions*; 35.6% (N = 59) of the respondents were somewhat confident (median of 5) in Round 2 and 36.2% (N = 58) of respondents were somewhat and mostly confident (medians of 5 & 6 respectively) in Round 3. 3.4% were not confident in Round 1, 3.4% were mostly not confident in Round 2 and 5.5% were undecided in Round 3. Figure 6.32 indicates that entrepreneurship self-efficacy constructs enhance entrepreneurship problem solving ability by enabling the participants to provide solutions to challenges. Kirkley (2016) posits that the implementation of solutions to certain problems can remove the certainty of significant and costly failure. The fact that in Rounds 2 and 3, 35.6% and 36.2% were ‘somewhat confident’ and somewhat and mostly confident’ respectively indicates a progressive development in participants’ confidence in finding solutions to entrepreneurship challenges in consonance with Theory U’s generative stages of development. The implication is that traditional entrepreneurship learning added no value to entrepreneurship development over time, as can be seen from the ESE variable depicted in the analysis.

Figure 6.223: Tolerance ESE



In Figure 6.33, 35.6% (N = 59) of the respondents were somewhat confident (median of 5) in Round 1 that *they were able to solve problems*, 31.0% (N = 58) of the respondents were mostly confident (median of 6) in Round 2 and 37.9% (N = 58) of the respondents were somewhat confident (median of 6) in Round 3. 1.7% were not confident in Round 1, 12.1% were undecided in Round 2 and 1.7% were somewhat not confident in Round 3. As far as this item in the figure is concerned, most of the participants were confident that they were able to solve problems after the hands-on learning pertaining to the business model canvas to test their innovative and creative skills, meaning that the action learning project availed them the opportunity to experience learning by doing. This resulted in the development of the participants' self-efficacy by igniting their potential and ability to grow cognitively for entrepreneurial action, as depicted in the training model. This was revealed in the third round and closing ceremony of the project when the researcher was able to identify seventy-three participants, including the fifty-nine participants analysed in this study, of the registered volunteers (230 participants) that were ready to create a venture to solve societal problems.

Figure 6.224: Tolerance ESE



In Figure 6.34, 28.8% (N = 59) of the respondents were undecided (median of 4) in Round 1 that they *can always manage to solve difficult tasks if they try hard enough*; 31.0% (N = 58) of the respondents were somewhat confident (median of 5) in Round 2 and 50.0% (N = 58) were mostly confident (median of 6) in Round 3. 5.1% and 1.7% of the respondents were not confident in Rounds 1 and 2 respectively, while 3.4% were somewhat not confident in Round 3. The item presented in Figure 6.34 indicates that the ability and efficacy of the participants was developed through a business model canvas for innovation and creativity to carry out a task with courage (Fellnhöfer, 2017). ESE is task specific and was learnt in the project, which developed the participants' managerial skills (31.0% and 50.0% were 'somewhat confident' and mostly confident' in Rounds 2 and 3 respectively). However, the result obtained in Round 1 was an indication that traditional teaching does not build problem-solving ability because it is theoretical learning for degree acquisition and certification rather than practical application.

Figure 6.225: Tolerance ESE

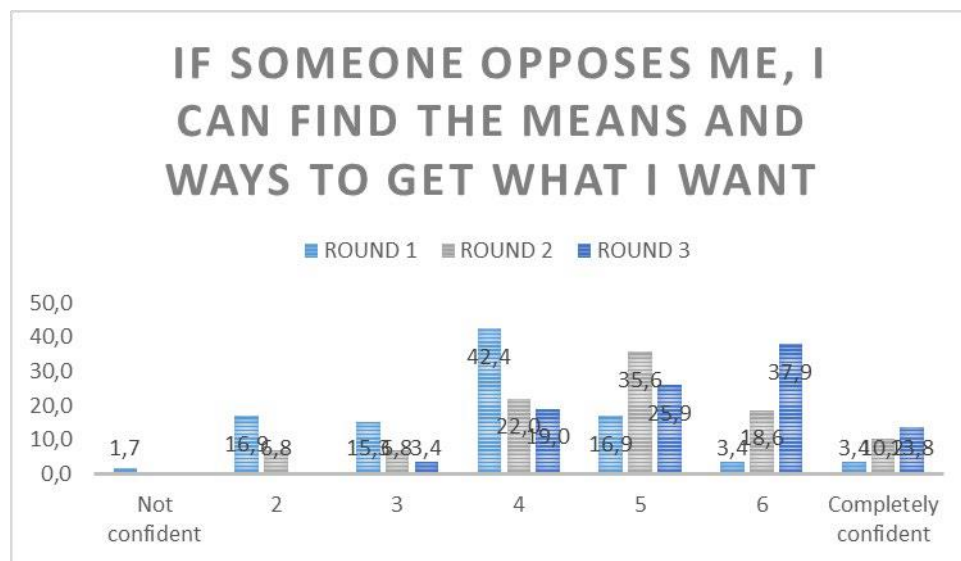


Figure 6.35 indicates that 42.4% (N = 59) of the respondents were undecided (median of 4) in Round 1 that *if someone opposes them, he or she can find the means and ways to get what they want*; 35.6% (N = 59) were somewhat confident (median of 5) in Round 2 and 37.9% (N = 58) were mostly confident (median of 6) in Round 3. 1.7% were not confident in Round 1, 16.9% were mostly not confident in Round 2 and in Round 3, 3.4% were somewhat not confident.

The fit was developed through “co” in Theory U that was applied for the development training project, which is not applicable in traditional teaching. It must be emphasised that the development was in tandem with the tolerance self-efficacy concept that can enhance collaborative efforts in entrepreneurship development in South Africa through the SHAPE training model. From all the measuring factors of ESE adopted in the study, it was observed that traditional teaching has not in any way-built confidence in the participants to develop entrepreneurially; this only began with their participation in the project. This was achieved through the training model and the calibre of the facilitators that mentored and taught from their wealth of experience.

Figure 6.226: Tolerance ESE

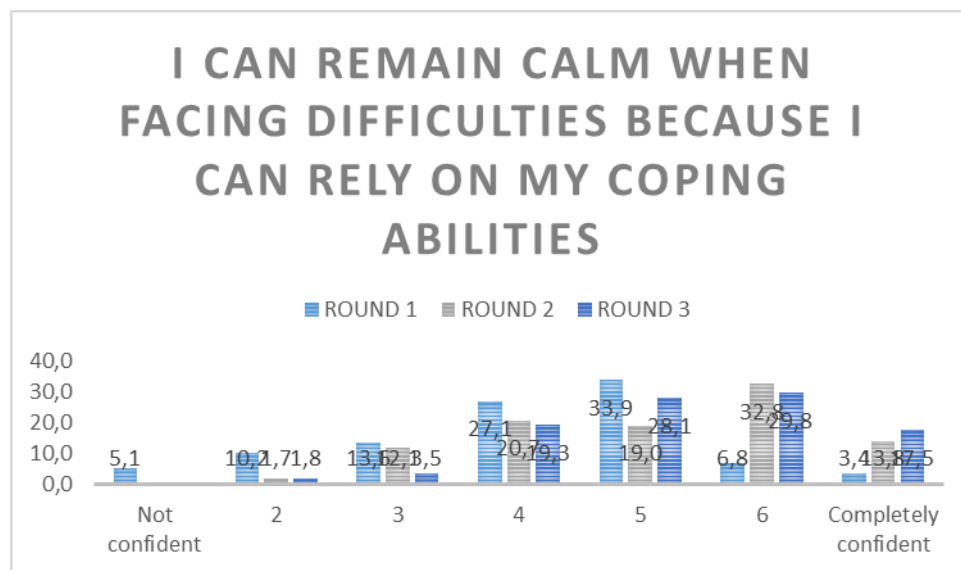
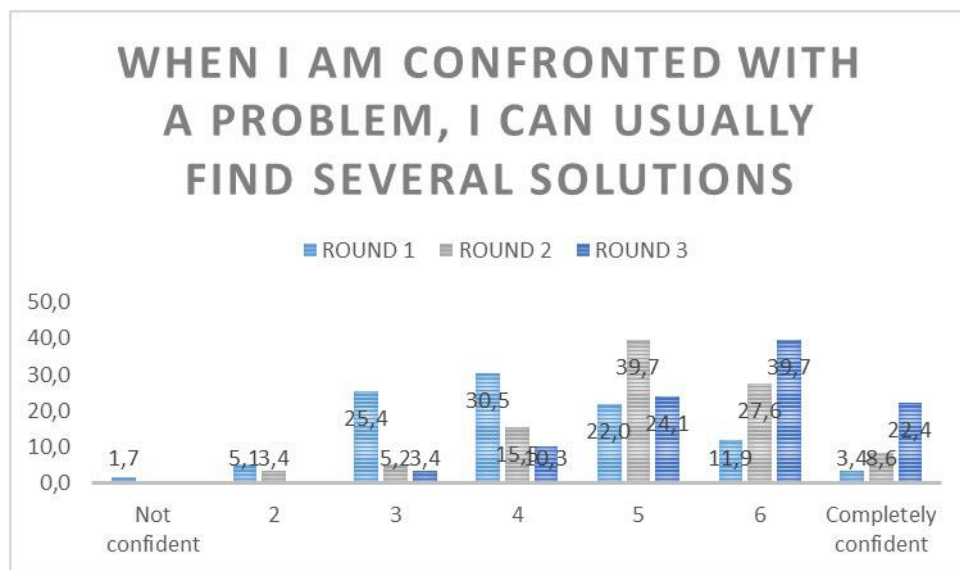


Figure 6.36 revealed that 33.9% (N = 59) of the respondents were somewhat confident (median of 5) in Round 1 that *they can remain calm when facing difficulties because he/she can rely on his/her coping abilities*, 32.8% (N = 58) and 29.8% were mostly confident (median of 6) in Rounds 2 and 3 respectively. 5.1% were not confident in Round 1, whereas 1.7% and 1.8% were mostly not confident in Rounds 2 and 3 respectively.

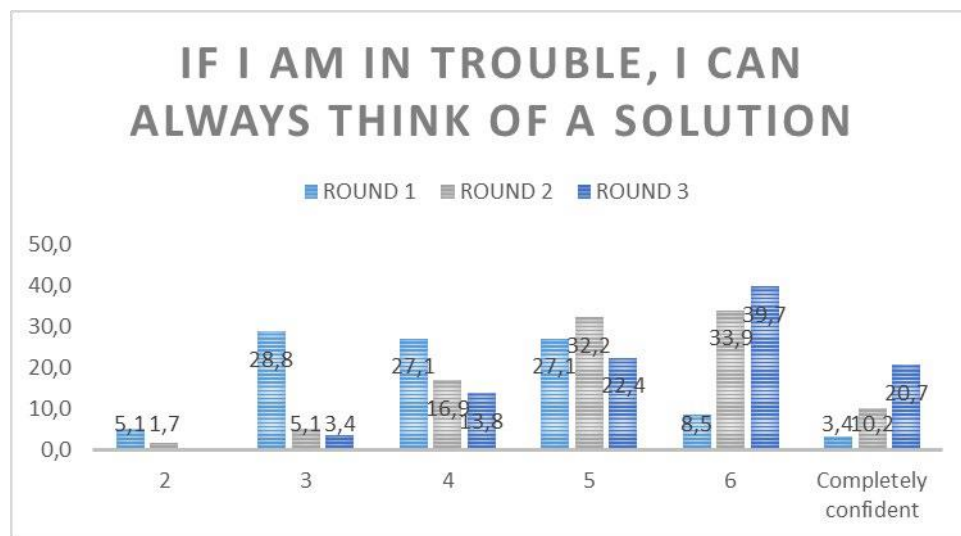
The data that were gathered and analysed during the training project supported the views of Dess and Lumpkin (2005) and Kerr, Kerr and Xu (2017) that action learning develops calmness, courage, perseverance and tolerance, which are qualities of a good leader and entrepreneur when making business decisions in uncertain times. The development was inspired by the bottom of Theory U (co-inspiring) while the participants' old selves were giving way for the new selves to emerge by means of positive reasoning.

Figure 6.227: Tolerance ESE



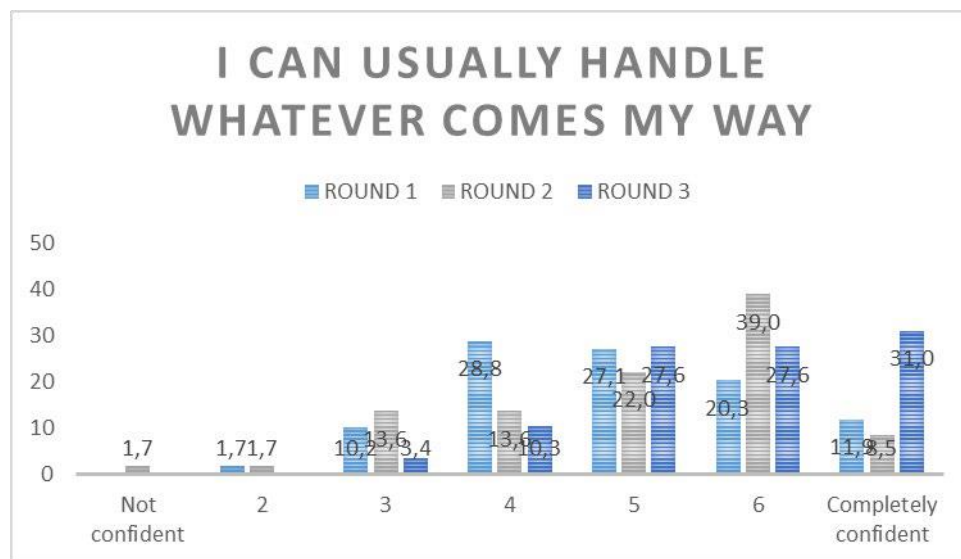
In Figure 6.37, 30.5% (N = 59) of the respondents were undecided (median of 4) in Round 1 that *when they are confronted with a problem, they can usually find several solutions*; 39.7% (N = 58) were somewhat confident (median of 5) in Round 2 and 39.7% (N = 58) were mostly confident (median of 6) in Round 3. 1.7% were not confident in Round 1, 3.4% were mostly not confident in Round 2 and in Round 3, 1.4% were somewhat not confident. Figure 6.37 revealed that the participants developed at a different pace when learning. Thus, during Round 1, most of the participants were undecided, while in Rounds 2 and 3, 39.7% were ‘somewhat confident’ and ‘mostly confident’ respectively. It can therefore be deduced that the confidence displayed by the respondents was because of the training content, the quality of the project facilitators and the learning environment. Costley (2016) posits that learning environment and technology have a significant influence on the achievement of goals.

Figure 6.228: Tolerance ESE



In figure 6.38, 28.8% (N = 59) of the respondents were somewhat not confident (median of 3) in Round 1 that *if they are in trouble, they can always think of a solution*; 33.9% (N = 59) and 39.7% (N = 58) were mostly confident (median of 6) in Rounds 2 and 3 respectively. 5.1% and 1.7% were not confident in Rounds 1 and 2 respectively, while 3.4% were somewhat not confident in Round 3. This is an indication that the participants had developed regarding providing solutions when facing trouble because they have ‘learnt the business’ by ‘experiencing the business’ through business operation performance during the course of the entrepreneurship training project. This is consistent with Dhliwayo’s model that advocated the need to “learn the business” by “experiencing the business” (Dhliwayo, 2008; Martin & Smith, 2010). The development could be seen from the responses from Rounds 2 and 3 implying that learning had taken place and skills were developed. This was revealed in the evidence of intention that was shown by the participants at the close of the project.

Figure 6. 229: Tolerance ESE



In Figure 6.39, 28.8% (N = 59) of the respondents were undecided (median of 4) in Round 1 whether or not *they can usually handle whatever comes their way*; 39.0% (N = 59) were mostly confident (median of 6) in Round 2 and 31.0% (N = 58) were completely confident (median of 7) in Round 3. 1.7% were mostly not confident in Round 1, 1.7% were not confident in Round 2 and in Round 3, 3.4% were somewhat not confident. There was progressive development from Round 2 to Round 3, which indicated that the action learning had transformed the participants. This revealed the capability and potential of the participants to be managers and leaders in any given situation and when there is risk or a turbulent situation they will persevere. Rounds 2 and 3 of the training programmes indicated that the participants were ‘mostly confident’ and ‘completely confident’ respectively about their ability to handle whatever comes their way. The results obtained in rounds 1-3 proved and showed that the research objectives were successfully achieved and was an indication that participants had learnt from the action learningaction research project.

Figure 6.40: Analysis of variance and overall summary of TOL_ESE

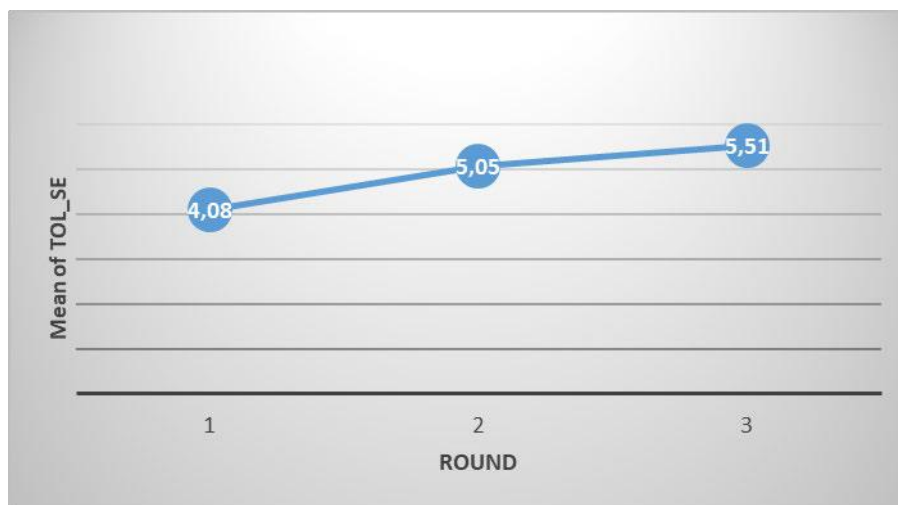


Figure 6.40 indicates that in Round 1 $N = 58$ with a median and standard deviation of 4.081 and 0.948 respectively; in Round 2 $N = 54$ with a median and standard deviation of 5.052 and 0.980 respectively and in Round 3, $N = 57$ with a median and standard deviation of 5.514 and 0.866 respectively. This indicates that there was a significant difference in relationship self-efficacy throughout the three rounds ($F(2, 100) = 59.016, p < 0.001$). It can therefore be deduced from the items' responses that the participants were somewhat and mostly confident. This indicates that in Round 1 when the project had just commenced, the participants were undecided but after their involvement in the training project, in Rounds 2 and 3, progressive development was experienced. It was observed that the participants could relate, tolerate, persevere, and build their own business group, partner with people with like minds, hearts, and wills, take calculated risks and embrace failure related to IEO development. This development can be attributed, at least in part, to the quality and wealth of experience of the facilitators, the facilities that were available and the willingness of the participants to develop themselves, which was demonstrated by their voluntary participation in the project. The participants learnt business financing, product branding and business ethics and how to tolerate turbulent situations strategically to outsmart competitors and become market pacesetters.

Figure 6.41: Analysis of Variance and Overall Summary of ESE Development

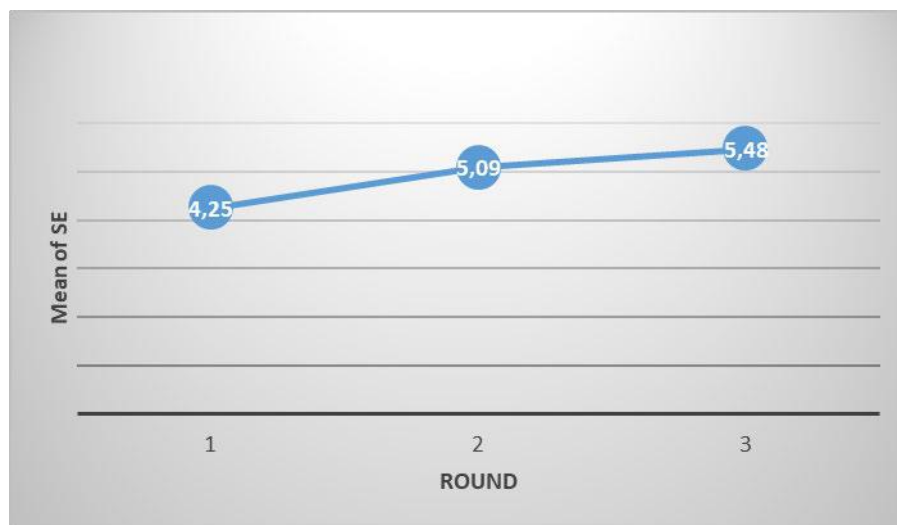


Figure 6.41 indicates that in Round 1, N = 57 with a median and standard deviation of 4.248 and 0.900 respectively. In Round 2, N = 50 with a median and standard deviation of 5.086 and 0.872 respectively and in Round 3, N = 52 with a median and standard deviation of 5.478 and 0.875 respectively. A harmonic sample size of 52.841 was used because the groups were of unequal sizes. The figure indicates a strong effect of entrepreneurship developmental training with the application of Theory U in a systemic action learning action research project (SHAPE). Figure 6.41 indicates that there was a significant difference in self-efficacy throughout the three rounds ($F(2,100) = 46.549, P < 0.001$). The three rounds of the learning saw the volunteer participants' progressive development from unknown to practical studentpreneurs. The training led to significant development of entrepreneurship self-efficacy and informed the transformation of individual entrepreneurial orientation through the application of the five stages of Theory U from Round 2 to Round 3 to develop the participants' ESE skills. It was revealed that classroom teaching was used as a foundation in the training programme affirming the nondualism of the system, hence the median choice of undecided, which was mostly recorded in the first round of all the constructs because the participants did not really know what entrepreneurship entailed as they had only been exposed to classroom teaching. The training developed and exposed the participants to different learning pedagogies in the hub during Rounds 2 and 3 and linked them with practicing entrepreneurs. The participants also had hands-on learning experience using traditional learning as the foundation to build their confidence to identify opportunities, relate with entrepreneurship stakeholders and the ecosystem, manage human and material resources and tolerate both internal and external challenges. This developed their proactive ability to take calculated risks in venture creation at

the earliest opportunity thereby achieving the participation motive. Figure 6.41 revealed Theory U as an ideal social transformative technology that developed the future leaders and supplied them with the necessary skills. At that phase of the training there was a clear indication that objectives one and two of the study and the research questions had been answered.

6.8 DESCRIPTIVE ANALYSIS OF IEO

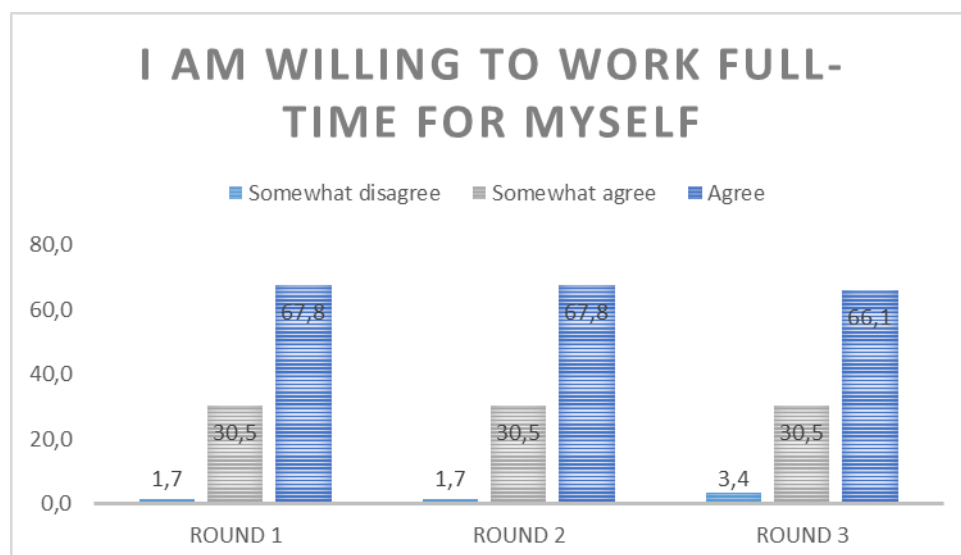
The relevant constructs of IEO are presented and analysed item by item in the following section in relation to the objectives of the study. Interpretation of the data is also linked to the discussion of the findings, which relates to the nature of the study (systemic action learning action research) to development phases of the project.

6.8.1 Risk-Taking IEO

All the items in the questionnaire presented in this section pertaining to risk focused on the reactive and generative stages of Theory U and its application to students' IEO development.

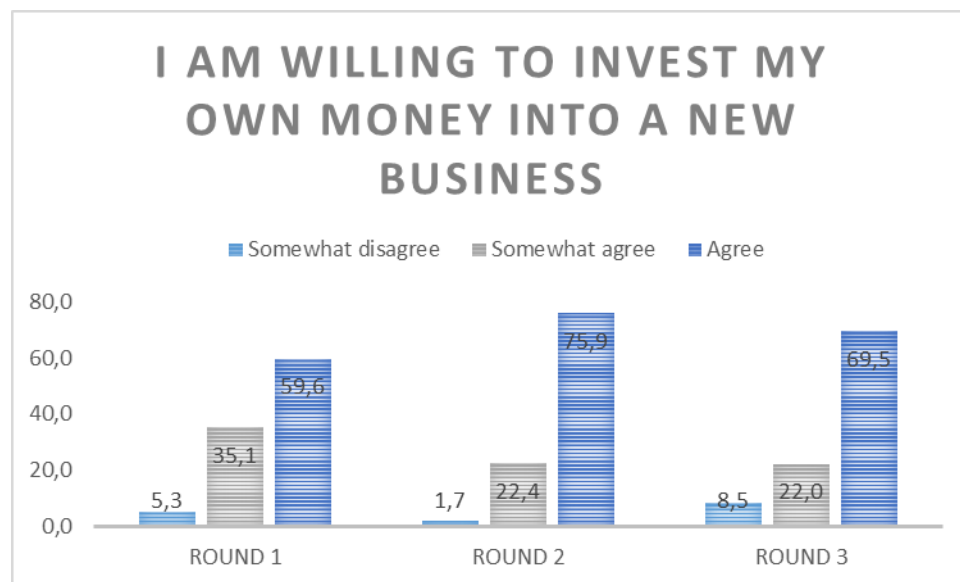
The first item pertaining to the effect of risk taking on the development of students' IEO was, *I am willing to work full-time for myself*. Figures 6.42 to 6.50 present the analysis and interpretation of the effects of risk taking on IEO development.

Figure 6.42: Risk-taking IEO Development



In the Figure 6.42, 1.7% (N = 59) of the respondents somewhat disagreed (median of 2) that *they are willing to work full-time for themselves*; 30.5% in Round 2 somewhat agreed (median of 3) and 67% agreed (median of 4) in Round 1. In Round 2, 1.7% of the respondents somewhat disagreed (median of 2), 30.5% somewhat agreed (median of 3) and 67.8% agreed (median 4). In the same vein, 3.4% of the respondents somewhat disagreed (median of 2), 30.5% somewhat agreed (median of 3) and 66.1% agreed (median of 4) in Round 3. The analysis presented in the figure indicates that a large percentage of the respondents agreed that they are willing to work fulltime for themselves. This is an indication that the training programme has developed and changed the participants' orientation to build future entrepreneurship leaders with passion for growing the entrepreneurship ecosystem. It also revealed the commitment exhibited by the participants, even when module's lectures clashed with the training sessions and also demonstrated their intention to venture in the near future. This implies that with the reactive stages of Theory U applied to the training, the participants were willing to take a risk for a better future and one can deduce that the ESE development positively affected their orientation with regard to their risk-taking propensity, as indicated by their level of agreement to work full time for themselves.

Figure 6.43: Risk-taking IEO Development



In Figure 6.43, 5.3%, 1.7% and 8.5% of the respondents somewhat disagreed (median of 2) that *they are willing to invest their own money into a new business* in Rounds 1, 2 and 3 respectively. 35.1%, 22.4% and 22.0% (N = 58) of the respondents somewhat agreed (median of 2) in Rounds 1, 2 and 3 respectively. 59.6%, 75.9% and 69.5% somewhat agreed (median

of 3) in Rounds 1, 2 and 3 respectively. The analysis presented in Figure 6.43 indicates that although the participants at the time of the training may not have had the personal financial means to start a business, an awareness was created of business finance and how to raise funds for a start-up. Sitharam and Hoque (2016) identified finance as a major obstacle for business start-ups in South Africa, which led to the government creating various agencies to support the potential entrepreneur with start-up challenges (Dzomonda & Fatoki, 2018). It also indicated that there was development in the participants' individual entrepreneurial orientation, which made most of them agree to take entrepreneurial action throughout the three rounds of the project at 59.6%, 75.9% and 69.5% respectively. It can therefore be deduced that the participants, having learnt entrepreneurship financial education, were ready to go the extra mile to secure funds, either from banks, friends, family or to seek support from the government to create their own business venture soon.

Figure 6.44: Risk taking-IEO Development



In Figure 6.44, 1.7% (N = 58) of the respondents disagreed (median of 1) that *they can handle a risky situation with confidence*, 24.1% somewhat disagreed (median of 2), 55.2% somewhat agreed (median of 3) and 19.0% agreed (median of 4) in Round 1. In Round 2, 6.8% (N = 59) somewhat disagreed (median of 2), 57.6% somewhat agreed (median of 3) and 35.6% agreed (median of 4). In Round 3, 8.6% (N = 58) of the respondents somewhat disagreed (median of 2), 41.4% somewhat agreed (median of 3) and 50.0% agreed (median of 4).

The data analysed in Figure 6.44 above indicated the importance of learning for entrepreneurship and venture creation. The analysis revealed the readiness of the participants to take calculated risks in business with commitment to act entrepreneurially; it also indicated that their initial fears before the SHAPE project had been allayed. The systemic action learning action research enabled the participants to understand what the result of calculated risk may be, and they indicated their willingness to embark on a venture despite the risks. They were also taught how the systems allow for collaboration and even the transfer of the risk to a third party (insurance companies). This this willingness to initiate a venture could be attributed to the training model that was developed and the content thereof, coupled with the experiences shared by various facilitators during the training.

Figure 6.45: Risk-taking IEO Development



In Figure 6.45, 12.1% (N = 58) of the respondents disagreed (median of 1) *that it is a safe career choice to work for an organisation that offers a good salary*, 27.6% of the respondents somewhat disagreed (median of 2), 43.1% somewhat agreed (median of 3) and 17.2% agreed (median of 4) in Round 1. In Round 2, 13.6% (N = 59) disagreed, 20.3% somewhat disagreed (median of 2), 45.8% somewhat agreed (median of 3) and 20.3% agreed (median of 4). In Round 3, 15.5% (N = 58) disagreed (median of 1), 24.1% somewhat disagreed (median of 2), 39.7% somewhat agreed (median of 3) and 20.7% agreed (median of 4).

The majority of the participants somewhat agreed in all three rounds of the project that it was a safe career choice to work for an organisation that offers a good salary. Shambare (2013) posits that students prefer the choice of working for an organisation that offers a good salary

but against the objectives of the study and the SHAPE training project which is to develop youth entrepreneurial mindset for intention and action. Considering the cost-to-benefit ratio and the participants' financial capabilities, this finding agrees with Zahra (2014) who argued that student entrepreneurs (SEs) will prefer to work for an organisation to augment their financial obligation (debt) and later venture into business when they have acquired sufficient capital, the required skills, and the practical experience to do so. This development, no doubt, might not be unconnected with need to transfer the risk to the third party (insurance company) or working for some time to augment accumulated debt incurred while schooling.

Figure 6.46: Risk-taking IEO Development

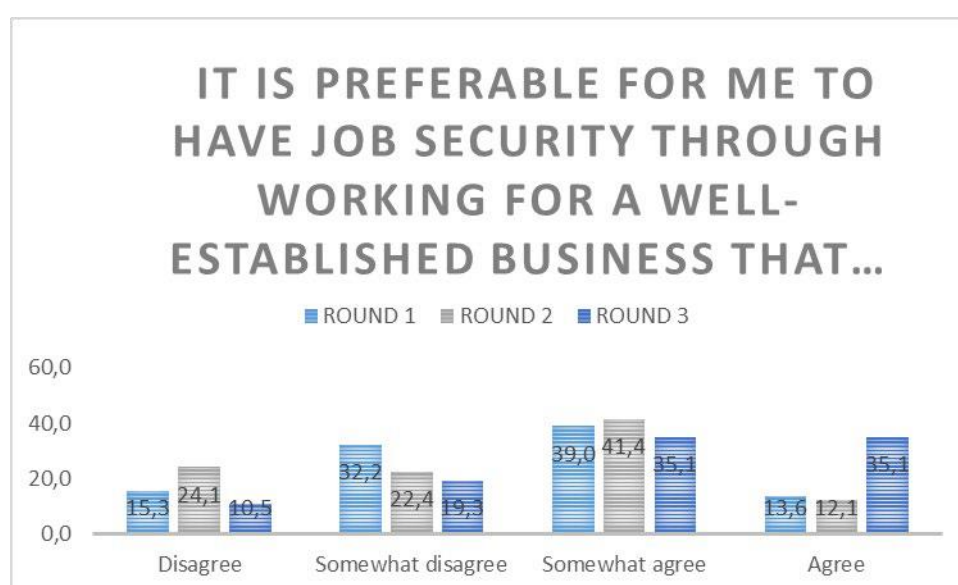


Figure 6.46 revealed that 15.3% (N = 59) of the respondents disagreed (median of 1) that it is preferable for them to have job security by working for a well-established business that offers a good salary, 32.2% somewhat disagreed (median of 2), 39.0% somewhat agreed (median of 3) and 13.6% agreed (median of 4). In Round 2, 24.1% (N = 58) disagreed, 22.4% somewhat disagreed (median of 2), 41.4% somewhat agreed (median of 3) and 12.1% agreed (median of 4). In Round 3, 10.5% (N = 57) disagreed (median of 1), 19.3% somewhat disagreed (median of 2), 35.1% somewhat agreed (median of 3) and 35.1% agreed (median of 4) that it is preferable to work for a well-established business than be an entrepreneur.

The analysis revealed that most of the participants somewhat agreed that they would prefer to be an intrapreneur to begin with and later create a venture on their own using the intervening time as a period of learning the risks associated with the business. This indicates their level of development and understanding of taking a risk. Shambare (2013) and Playfoot

and Hall (2009) posit that the South African youth have limited IEO and innovative skills, unlike their counterparts in developed countries. It also indicates that there is a crisis in the higher institutions of learning, as their curricula are mostly theoretical in nature and designed for certification (Senge, 2012). It must also be noted that the data collection instrument was Eurocentric in its formulation, which might be the reason for the participants disagreeing and maybe as a result of the systemic disconnect that this study sought to address.

Figure 6.47: Risk-taking IEO Development

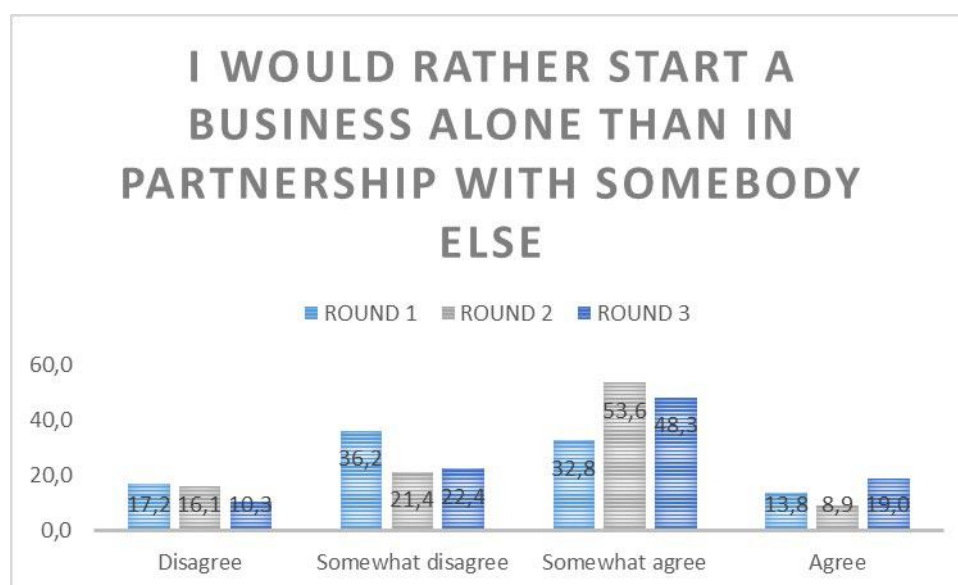
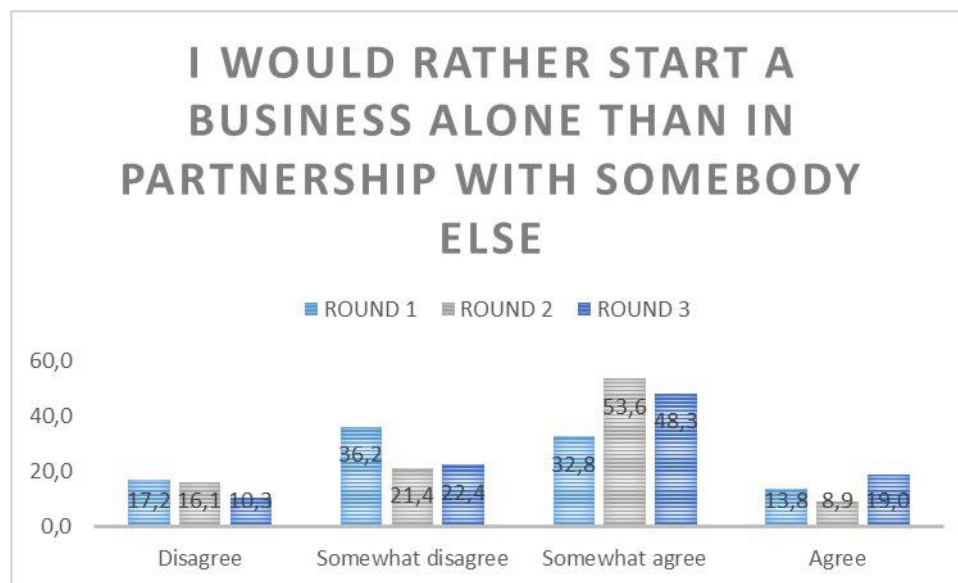


Figure 6.47 revealed that 17.2% (N = 58) of the respondents disagreed (median of 1) that they *would rather start a business alone than in partnership with somebody else*, 36.2% of the respondents somewhat disagreed (median of 2), 32.8% somewhat agreed (median of 3) and 13.8% agreed (median of 4) in Round 1. In Round 2, 16.1% (N = 56) disagreed (median of 1), 21.4% somewhat disagreed (median of 2), 53.6% somewhat agreed (median of 3) and 8.9% agreed (median of 4). In Round 3, 10.1% (N = 58) disagreed, 22.4% somewhat disagreed (median of 2), 48.3% somewhat agreed (median of 3) and 19.0% agreed (median of 4).

These responses were supported by scholars such as Bodhanya's (2014) 'Notion of nexus' and Dhliwayo's (2008) intermediaries' values in supporting SEs. The fact that there was a progressive development from Round 1 to Round 3 of the project with an increase in the somewhat agreed scale that the participants would rather start a business alone than in partnership with someone else is an indication that there was a transformation from traditional learning to action learning that teaches acceptance and the incorporation of entrepreneurship enablers.

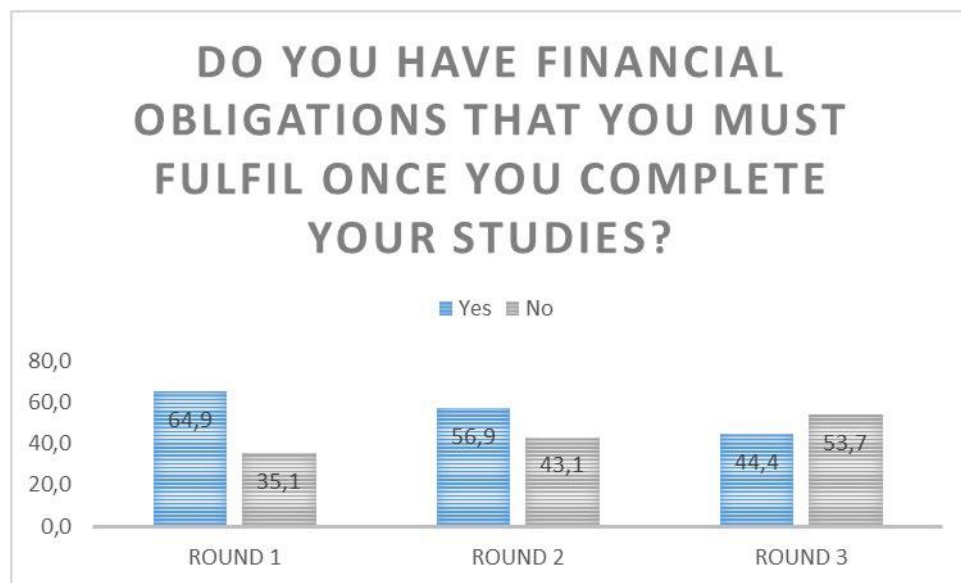
Figure 6.238: Risk-taking IEO



In Figure 6.48, 10.2% (N = 59) of the respondents disagreed (median of 1) that *they would prefer to start a business in partnership with an established business in the private sector*, 23.7% of the respondents somewhat disagreed (median of 2), 47.5% somewhat agreed (median of 3) and 18.6% agreed (median of 4) in Round 1. In Round 2, 5.2% (N = 58) of the respondents disagreed (median of 1), 29.3% somewhat disagreed (median of 2) 48.3% somewhat agreed (median of 3) and 17.2% agreed (median of 4). In Round 3, 5.2% (N = 58) of the respondents disagreed (median of 1), 19.0% somewhat disagreed (median of 2), 55.2% somewhat agreed (median of 3) and 20.7% agreed (median of 4).

Engaging in a partnership can assist an entrepreneur to move forward by creating a positive relationship to achieve collective goals in the ecosystem. This is what Pillay (2015a) described as an open mind, open will and open heart (U-process) to new possibilities (entrepreneurship enablers) within the whole in alignment with the nondualism philosophy adopted for the study. Starting with an established business in the private sector implies that they would have transferred a percentage of the associated risks and be more confident when they start an individual business in the future. The decision to begin with a partnership could be because a high percentage of nascent firms' collapse within the first few years after their establishment due to financial or business risks. This also relates to a category of partnership entrepreneurship whereby participants prefer to work as a team to guarantee the smooth management of the business, as learnt in the development of ESE, which affects their orientation for choosing a partnership.

Figure 6.239: Risk-taking IEO



In Figure 6.49, 64.9%, 56.9% and 44.4% (N = 57) of the respondents answered YES (median of 1) to having financial obligations that must be fulfilled once they have completed their studies in Rounds 1, 2 and 3 respectively. 35.1%, 43.1% and 53.7% (N = 58) of the respondents answered NO (median of 2) in Rounds 1, 2 and 3 respectively. The analysis presented in Figure 6.50 implies that some of the respondents that answered 'yes' will wish to work in paid employment to fulfil their financial obligations. This is consistent with the responses to earlier questions where some of the participants expressed their desire to work for an organisation with a satisfactory salary to pay off their debt while they are studying rather than starting a business. This finding agreed with Engelbrecht (2012) and Cronje (2013) who claimed that some youth lack savings, and this could be the reason for their pessimistic behaviour towards acting on their entrepreneurial intention in South Africa. Their commitment to self-development was demonstrated by them volunteering to develop themselves in preparation for entrepreneurial action.

Figure 6.50: Analysis of Variance and Overall Summary of RT-IEO

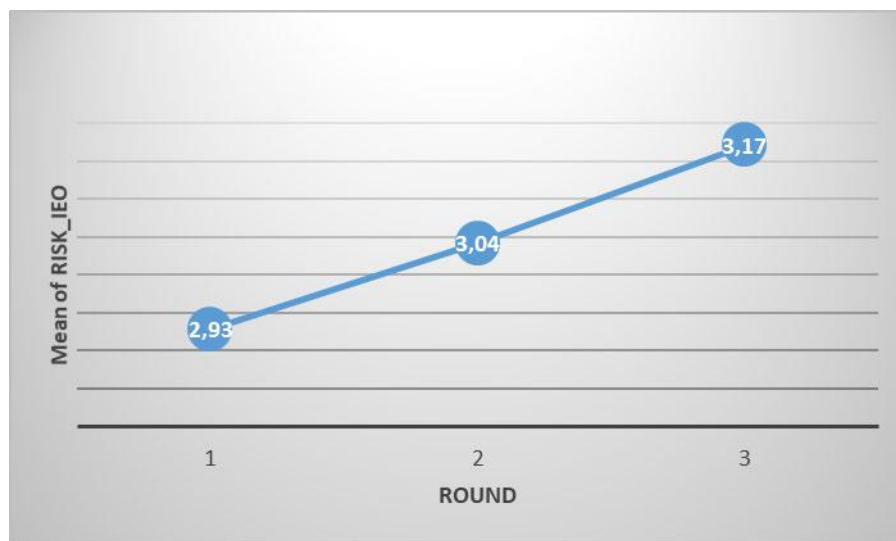


Figure 6.50 indicates the participants' development with regard to risk IEO. In Round 1, (N = 54) a median and standard deviation of 2.928 and 0.333 respectively were recorded. Round 2, (N = 55) recorded a median and standard deviation of 3.041 and 0.286 respectively, while in Round 3, (N = 57) a median and standard deviation of 3.170 and 0.498 respectively were recorded. Figure 6.51 indicates that there was a significant difference in risk IEO throughout all the rounds ($F(1.544, 74.102) = 7.217, P = 0.003$). This reflects the fact that the participants had limited understanding of the outcome of business risk. It was observed during the training that the fear of the unknown as well as a lack of understanding of the practice of transferring risk to a third party such as an insurance company led the participants to respond hesitantly or negatively to statements such as: *I am willing to invest my money; can handle risky situations with confidence; it is a safe career choice to work for an organisation that offers a good salary; prefer to have job security working for an established business and prefer to start a business in partnership with an established business in the private sector.*

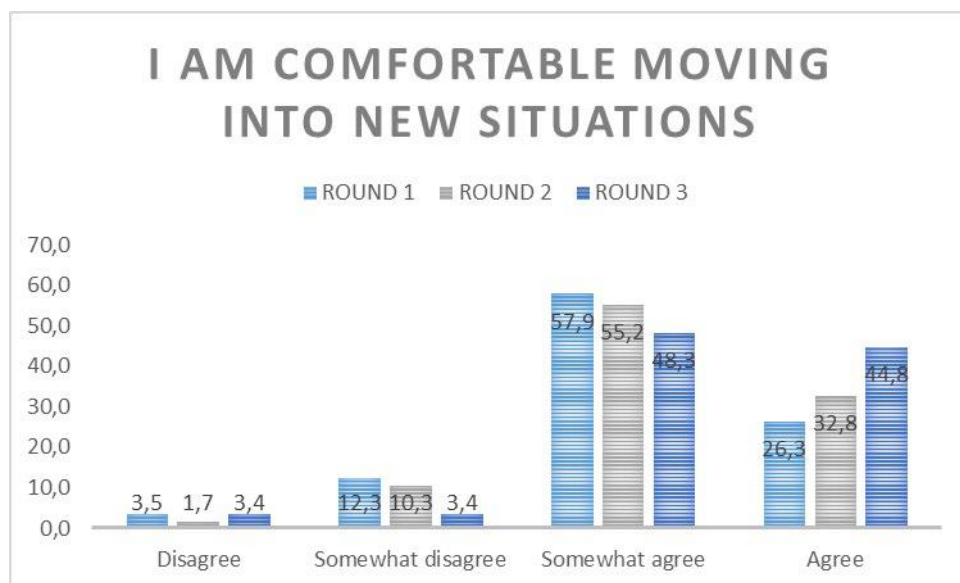
The choice of negative median of 2 connotes that the participants were not willing to take a risk and it is believed that this is one of the factors that puts nascent entrepreneurs out of business within a few years of establishment. This is consistent with the GEM SA (2020) report that revealed the increase in fear of failure at 49.8%, a significant increase from 2017 to 2001. It also indicates why some of the participants may not want to take business risk and borne on static movement between 2003 and 2019 (GEM SA Report, 2020). The participants' choice of working with a partner was in line with Theory U's stages of "co" that encourage the establishment of relationships with stakeholders and the choice of working with an organisation

or in partnership with entrepreneurship enablers. This implies that systemic action learning action research developed the participants to make the choice of transferring the risk to an organisation, third party or entrepreneurship enabler.

6.8.2 Innovation IEO

This section presents the data that were collected pertaining to innovation and individual entrepreneurial orientation (IEO).

Figure 6.51: Innovation IEO Development

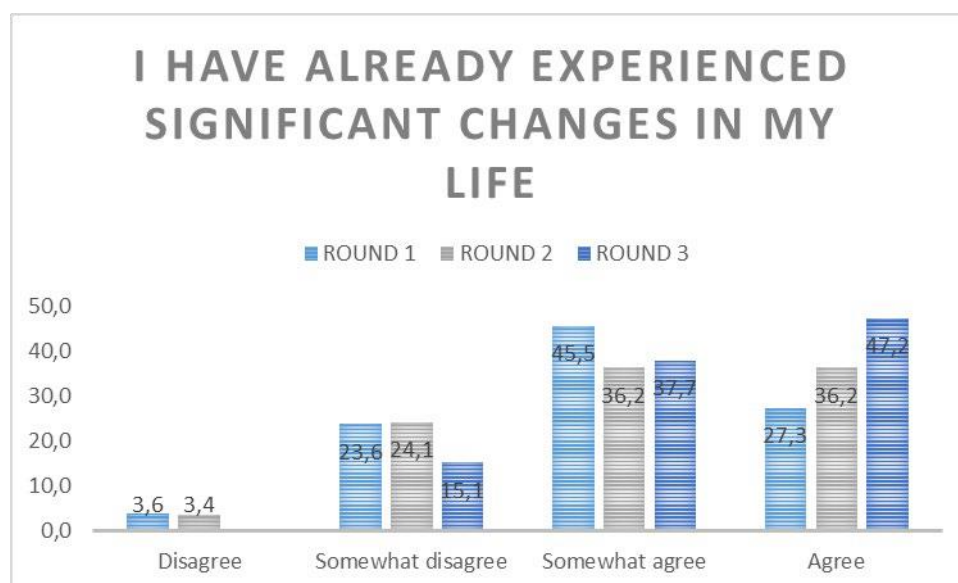


In figure 6.51, 3.5% (N = 57) of the respondents disagreed (median of 1) that *they are comfortable moving into new situations*, 12.3% of the respondents somewhat disagreed (median of 2), 57.9% somewhat agreed (median of 3) and 26.3% agreed (median of 4) in Round 1. In Round 2, 1.7% (N = 58) of the respondents disagreed (median of 1), 10.3% somewhat disagreed (median of 2), 55.2 somewhat agreed (median of 3) and 32.8% agreed (median of 4). In Round 3, 3.4%, 3.4%, 48.3% and 44.8% (N = 58) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively regarding this item.

The analysis presented in Figure 6.51 revealed that action learning developed the participants to attempt a new task that could provide them with an opportunity to move out of their comfort zone. It also indicated that they were willing with open heart, will and mind to face challenges as they emerged by being innovative and creating new ideas on how to proffer solutions to economic challenges that could lead to human satisfaction (Scharmer, 2009). The development

was made achievable through “co” in the reactive stages of Theory U where like minds, hearts and wills come together to initiate, sense and inspire themselves to either create or evolve products and services. This indicates that the development model content encouraged a gradual process of change at every stage to develop and motivate studentpreneurs or the youth to act on their entrepreneurial intentions.

Figure 6.52: Innovation IEO Development

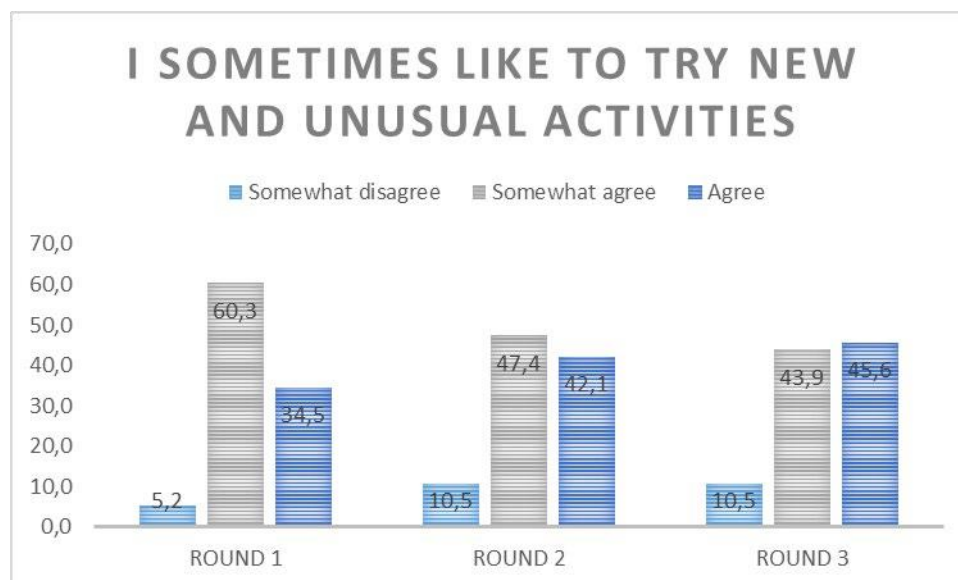


In Figure 6.52, 3.6% (N = 55) of the respondents disagreed (median of 1) *that they have already experienced significant changes in their lives*. 23.6% of the respondents somewhat disagreed (median of 2), 45.5% somewhat agreed (median of 3) and 27.3% agreed (median of 4) in Round 1. In Round 2, 3.4% (N = 58) of the respondents disagreed (median of 1), 24.1% somewhat disagreed (median of 2), 36.2% somewhat agreed (median of 3) and 36.2% agreed (median of 4). In Round 3, 15.1% (N = 53) of the respondents somewhat disagreed (median of 2), 37.7% somewhat agreed (median of 3) and 47.2% agreed (median of 4) with the statement.

The foregoing analysis confirms the importance of learning about entrepreneurship, venture creation, self-certification, and the expected transformation. This is consistent with similar studies conducted by Van der Westhuizen (2016) and Nyamuda (2018) who contend that systemic action learning action research develops youth for entrepreneurial activities and the sustaining thereof. The responses from the participants in the SHAPE 2017 project indicate their growth, development, and behavioural and orientation changes towards entrepreneurial action from week seven of the training in which they were asked to work on a business model canvas of their group choice of business with innovation. This was evident in the notable life

changes that the participants claimed they had experienced during the programme with regard to their creativity innovation.

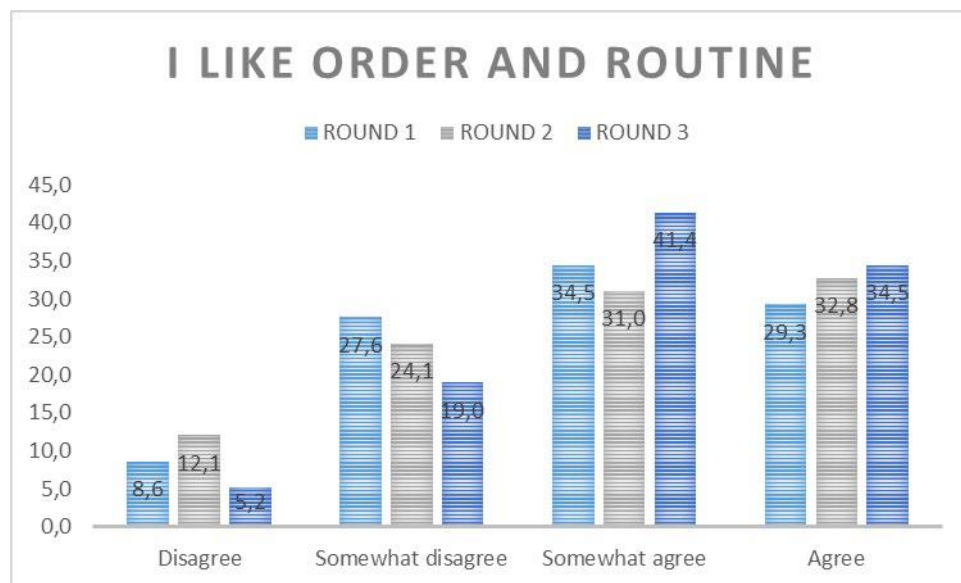
Figure 6.53: Innovation IEO Development



In Figure 6.53, 5.2% (N = 58) of the respondents somewhat disagreed (median of 2) that *they sometimes like to try new and unusual activities*; 60.3% of the respondents somewhat agreed (median of 3) and 34.5% agreed (median of 4) in Round 1. In Round 2, 10.5%, 47.4% and 42.1% (N = 57) of the respondents somewhat disagreed (median of 2); somewhat agreed (median of 3) and agreed (median of 4) respectively. Similarly, 10.5%, 43.9% and 45.6% (N = 57) of the respondents somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively in Round 3.

The data presented and analysed in the foregoing paragraph indicates that this project avails the participants the opportunity to develop through the systemic action learning action research method of learning employing Theory U, which serves as a pull factor for them to try new and unusual activities. This is consistent with the view of Pisano (2019) who opines that individual innovation is about the willingness of an individual to support creativity and experimentation through the process of introducing products and services. The reactive stages in the underpinning theory gave them the opportunity to try creative and innovative pre-conceived entrepreneurship ideas for entrepreneurship action. This was also consistent with the opinion of Vidic (2013), who observed that conceptualising one's own entrepreneurship future with new ideas for products and services is the solution to the challenge of economic development in African countries.

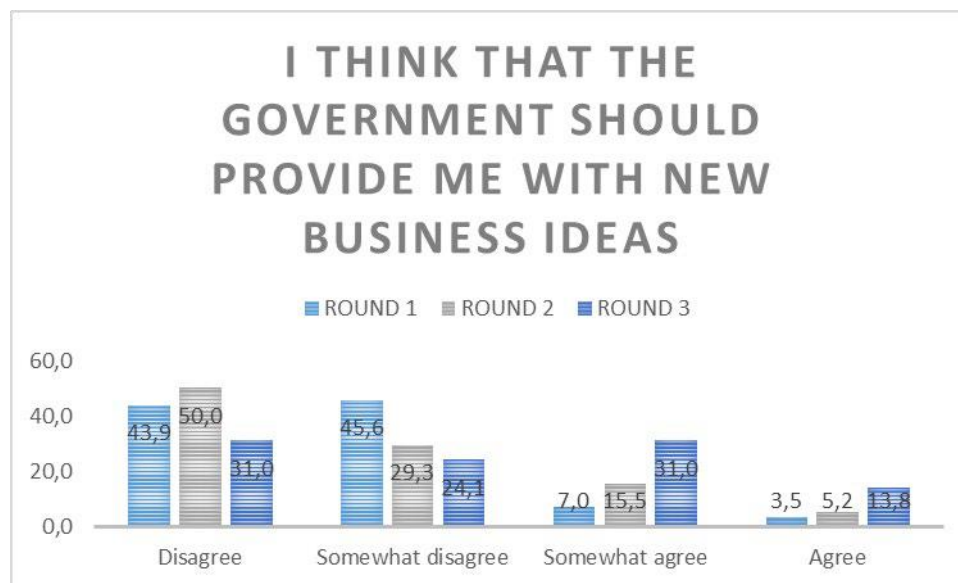
Figure 6.244: Innovation IEO



In Figure 6.54, 8.6% (N = 58) of the respondents disagreed (median of 1) that *they like order and routine*; 27.6% somewhat disagreed (median of 2), 34.5% somewhat agreed (median of 3) and 29.3% agreed (median of 4) in Round 1. In Round 2, 12.1% (N = 58) of the respondents disagreed (median of 1), 24.1% somewhat disagreed (median of 2), 31.0% somewhat agreed (median of 3) and 32.8% agreed (median of 4). 5.2%, 19.0%, 41.4% and 34.5% (N = 58) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively in Round 3.

The implication of the responses presented in Figure 6.54 is that some of the respondents are willing to work as intrapreneurs where they will be given orders. It also means that some of them will want to undergo apprenticeship in an organisation for further development of their skills and to gain more insight into entrepreneurship. The analysis also revealed that the participants experienced order and routine in the traditional learning before volunteering to take part in the development training project. Their participation in the project no doubt provided for more action learning that tends to be more impactful with the use of technology.

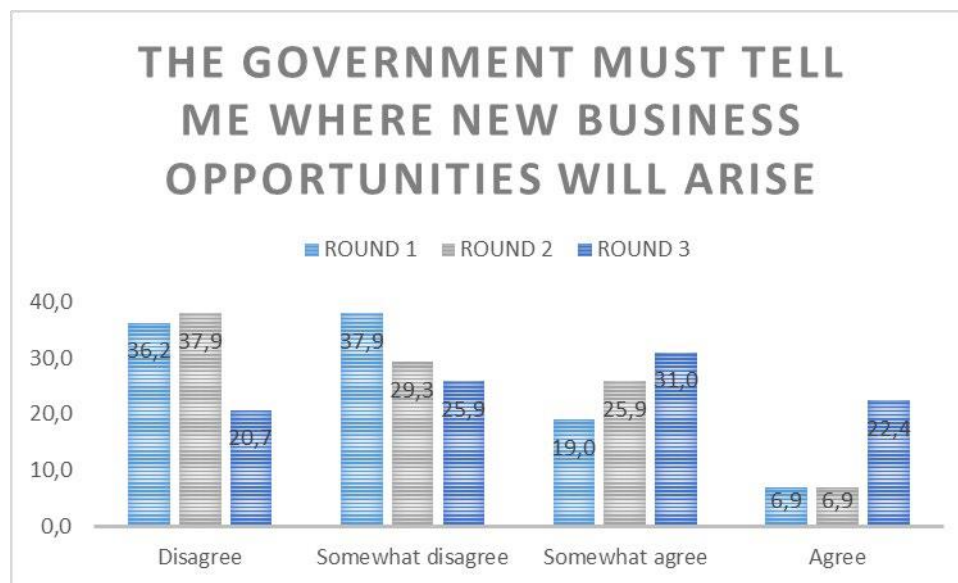
Figure 6.245: Innovation IEO



In Figure 6.55, 43.9% (N = 57) of the respondents disagreed (median of 1) that *they think that the government should provide them with new business ideas*; 45.6% of the respondents somewhat disagreed (median of 2), 7.0% somewhat agreed (median of 3) and 3.5% agreed (median of 4) in Round 1. In Round 2, 50.0% (N = 58) of the respondents disagreed, 29.3% somewhat disagreed (median of 2), 15.5% somewhat agreed (median of 3) and 5.2% agreed (median of 4). Similarly, 31.0%, 24.1%, 31.0% and 13.8% (N = 58) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively in Round 3 with the item in the questionnaire.

The foregoing analysis indicated that at the second round of the training, the participants experienced a change of orientation in that they were able to identify the opportunities that abound in the economy in consonance with a major construct of ESE pertaining to the ability to create a venture (Barbosa, 2007). This development experienced by the participants changed their behaviour such that they were able to acquire knowledge on how to write business ideas, differentiate that from a business plan, innovate and act proactively by co-creating for the evolvement of a service or product.

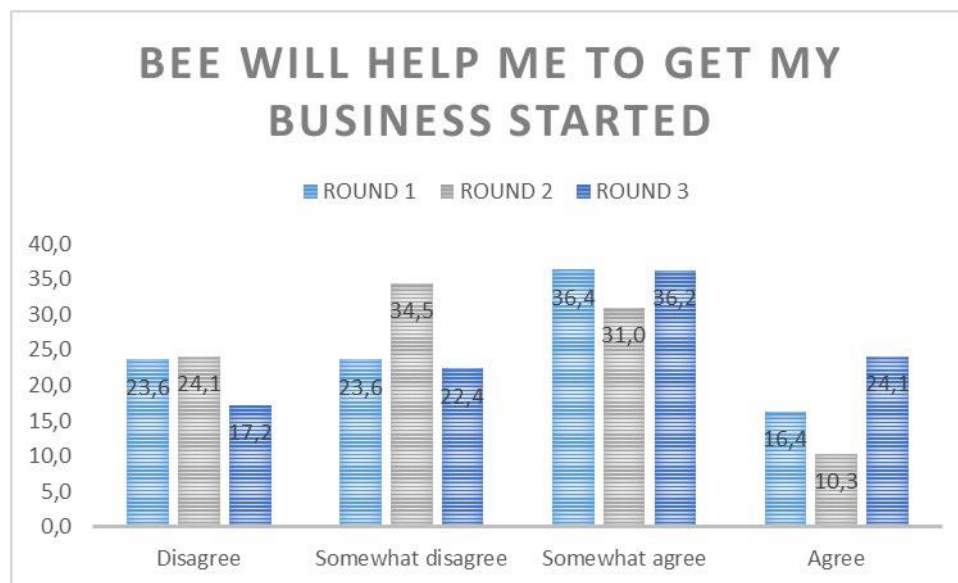
Figure 6.246: Innovation IEO



In Figure 6.56, 36.2% (N = 58) of the respondents disagreed (median of 1) that *the government must tell them where new business opportunities will arise*; 37.9% somewhat disagreed (median of 2), 19.0% somewhat agreed (median of 3) and 6.9% agreed (median of 4) in Round 1. In Round 2, 37.9% (N = 58) of the respondents disagreed (median of 1), 29.3% somewhat disagreed (median of 2), 25.9% somewhat agreed (median of 3) and 6.9% agreed (median of 4). Similarly, 20.7%, 25.9%, 31.0% and 22.4% (N = 58) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) in Round 3 respectively regarding the item in the questionnaire.

The foregoing responses indicate that the participants have the efficacy to search the entrepreneurial ecosystem for opportunities because of the interaction with the project facilitators and government intermediaries. The reactive stages through which they acquired skills and knowledge developed their ESE to influence their entrepreneurial decisions. Duijn (2018) attributed learning behaviour to individual innovation and reflection on opportunity identification and idea development. It must be emphasised that the introduction of government support systems for the development and promotion of entrepreneurship does not mean identifying gaps but rather encouraging participants to search, innovate, create and be self-sufficient, hence the disagreement scale that the government should tell the participants or potential entrepreneurs where new opportunities will arise.

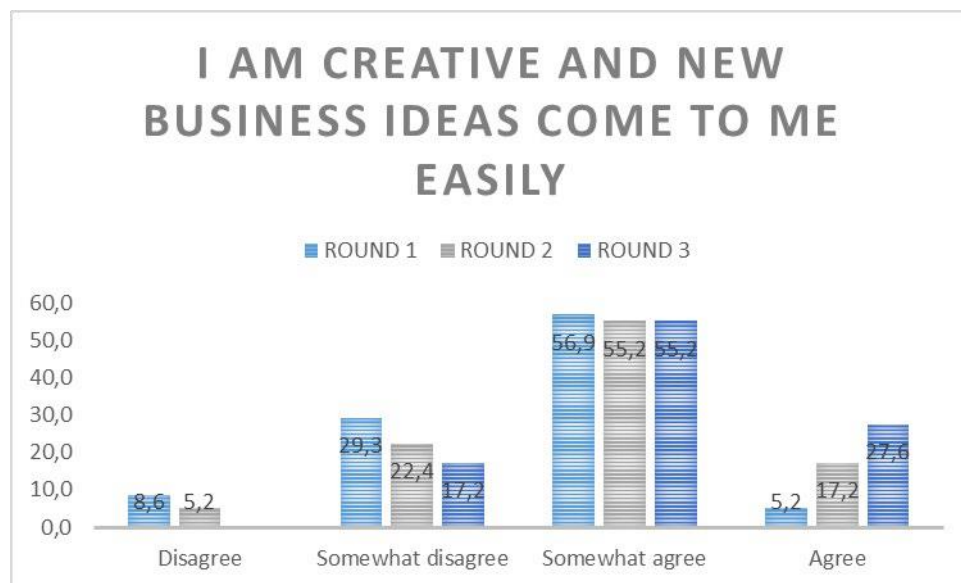
Figure 6.247: Innovation IEO



In Figure 6.57, 23.6% (N = 55) of the respondents disagreed (median of 1) that black entrepreneurship empowerment *BEE will help them get their business started*; 23.6% somewhat disagreed (median of 2), 36.4% somewhat agreed (median of 3) and 16.4% agreed (median of 4) in Round 1. In Round 2, 24.1% (N = 58) of the respondents disagreed (median of 1), 34.5% somewhat disagreed (median of 2), 31.0% somewhat agreed (median of 3) and 10.3% agreed (median of 4). In Round 3, 17.2% (N = 58) of the respondents disagreed 22.4% somewhat disagreed (median of 2), 36.2% somewhat agreed (median of 3) and 24.1% agreed (median of 4).

The foregoing analysis indicated that the participants understood BEE as an institution in the entrepreneurship sector in the country's reconstruction and development programme. BEE and affirmative action cannot be relied upon as the only support systems for business start-ups (Naude, 2013) and this explains the participants' belief in self-empowerment and development that activated their voluntarily participation in the SHAPE project. Mueller and Goic (2003) posit that university students lack the efficacy to gather entrepreneurship resources in Croatia and the United States of America. The response here meant that the participants developed themselves around BEE objectives as entrepreneurship enablers to empower the black indigents economically, as the black participants in the project were higher than others. According to Cloete (2014), this could be because of the environmental factor where the black enrolment in the university under investigation is higher than that of other races.

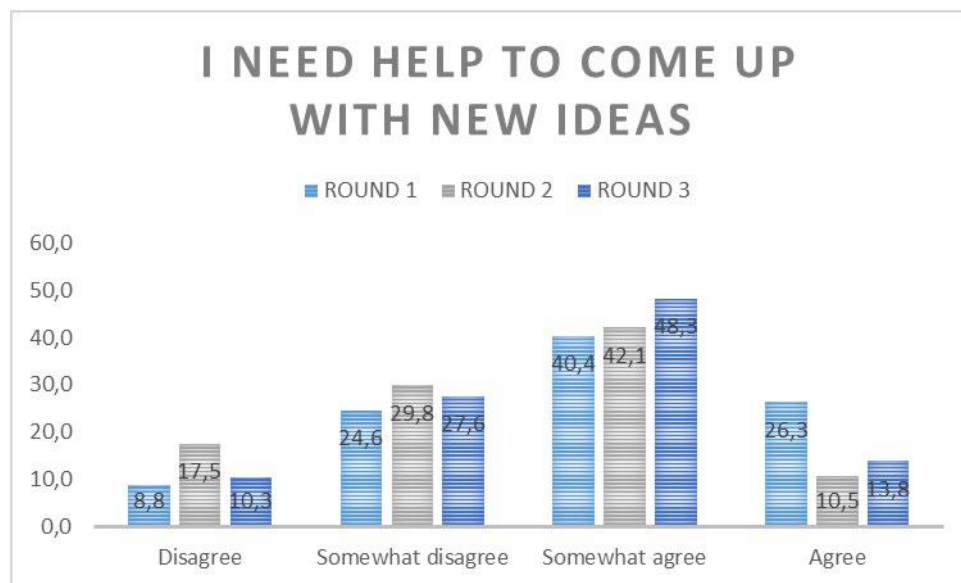
Figure 6.248: Innovation IEO



In Figure 6.58, 8.6% (N = 58) of the respondents disagreed (median of 1) *that they are creative and new business ideas come to them easily*; 29.3% of the respondents somewhat disagreed (median of 2), 56.9% somewhat agreed (median of 3) and 5.2% agreed (median of 4) in Round 1. In Round 2, 5.2% (N = 58) of the respondents disagreed (median of 1), 22.4% somewhat disagreed (median of 2), 55.2% somewhat agreed (median of 3) and 17.2% agreed (median of 4). In Round 3, 17.2%, 55.2% and 27.6% (N = 58) of the respondents somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively about this item.

In the second round of the project, the participants were focused on being able to develop self-idea and were becoming more innovative and creative. This was made possible with the application of the systemic action learning action research model applying Theory U, which focused solely on the transformation of individual entrepreneurial orientation to become self-reliant from week six to week eleven of the training. With the collaboration efforts in “co”, participants were able to develop ideas, innovate and create to fruition. Van der Westhuizen (2016) posits that this indicates skills development and value added to the degrees earned by the participants.

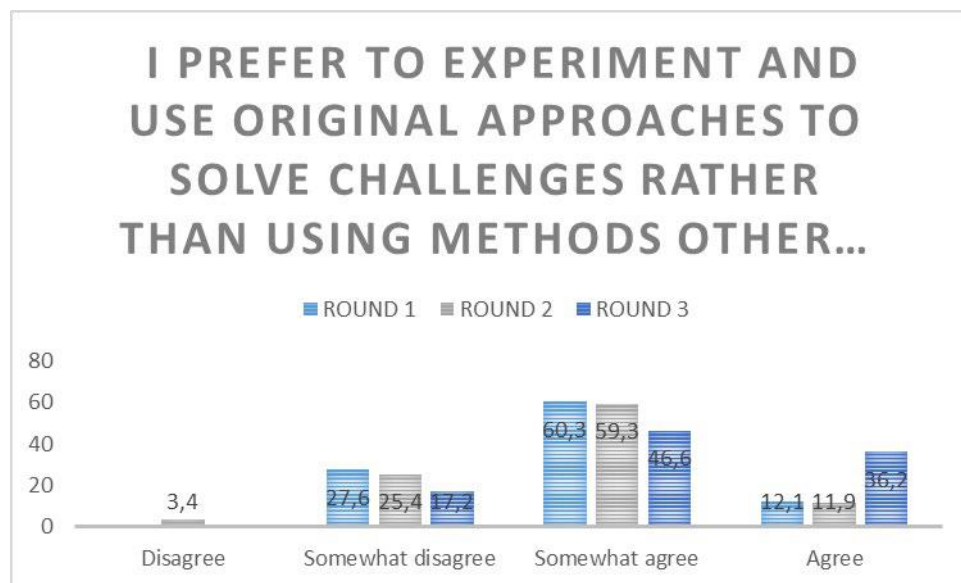
Figure 6.249: Innovation IEO



In Figure 6.59, 8.8% (N = 57) of the respondents disagreed that *they need help to come up with new ideas*; 24.6% somewhat disagreed (median of 2), 40.4% somewhat agreed (median of 3) and 26.3% agreed (median of 4) in Round 1. In Round 2, 17.5% (N = 58) of the respondents disagreed (median of 1), 29.8% somewhat disagreed (median of 2), 42.1% somewhat agreed (median of 3) and 10.5% agreed (median of 4). In Round 3, 10.3%, 27.6%, 48.3% and 13.8% (N = 58) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively regarding this item in the questionnaire.

The analysis in Figure 6.59 indicates that the participants believed in the co-initiating as collaboration effort that could assist them to work together in partnership with business intermediaries or enablers to expand their knowledge and to come up with new ideas. The participants subscribed to the idea that they would require assistance in entrepreneurship development so as to be able to harness opportunities such as training, incubation, finance and other areas with new ideas to take over the ecosystem. Dzomonda and Fatoki (2018) posit that the government established various agencies to assist, educate, train and finance potential entrepreneurs.

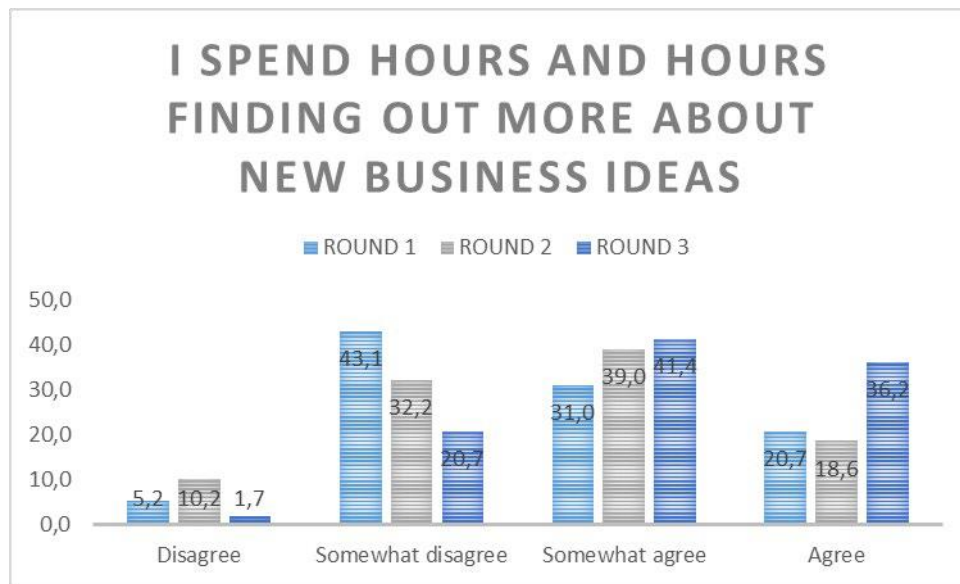
Figure 6.250: Innovation IEO



In Figure 6.60, 27.6% (N = 58) of the respondents somewhat disagreed (median of 1) *that they prefer to experiment and use original approaches to solve challenges rather than using methods others generally apply*; 60.3% somewhat agreed (median of 3) and 12.1% agreed (median of 4) in Round 1. In Round 2, 3.4% (N = 59) of the respondents disagreed (median of 1), 25.4% somewhat disagreed (median of 2), 59.3% somewhat agreed (median of 3) and 11.9% agreed (median of 4). In Round 3, 17.2% (N = 58) of the respondents somewhat disagreed (median of 2), 46.6% somewhat agreed (median of 3) and 36.2% agreed (median of 4) with this statement. This indicates that utilising the skills that have been acquired builds self-confidence (Drapeau, 2014).

At various intervals in the training, the participants engaged in writing innovative ideas, plans and business model canvases in line with ESE's task-specific model that increased the participants' creativity. This represented an emancipation from the old self to the new self (bigger picture) that Hays (2015) referred to as reflection of openness and acceptance that oneself can and should change.

Figure 6.251: Innovation IEO



In Figure 6.61, 5.2% (N = 58) of the respondents disagreed (median of 1) that *they spend hours and hours finding out more about new business ideas*; 43.1% of the respondents somewhat disagreed (median of 2), 31.0% somewhat agreed (median of 3) and 20.7% agreed (median of 4) in Round 1. In Round 2, 10.2% (N = 59) of the respondents disagreed (median of 1), 32.2% somewhat disagreed (median of 2), 39.0% somewhat agreed (median of 3) and 18.6% agreed (median of 4). In Round 3, 1.7%, 20.7%, 41.4% and 36.2% (N = 58) of the respondents disagreed (median 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively with this item in the questionnaire.

Initially, in the first round, it was revealed that the participants had until then experienced only classroom learning and thus had low levels of IEO that could lead to entrepreneurship action. However, during and after the project it was discovered that the learning pedagogy and methods that were adopted had a positive impact on the participants in the project and this enabled them to identify and develop business ideas. This is consistent with the view of Adams (2013) that the education system and teaching style (classroom teaching) significantly affect students' ability and experience to execute independent research.

Figure 6.62: Analysis of variance and overall summary of INN_IEO

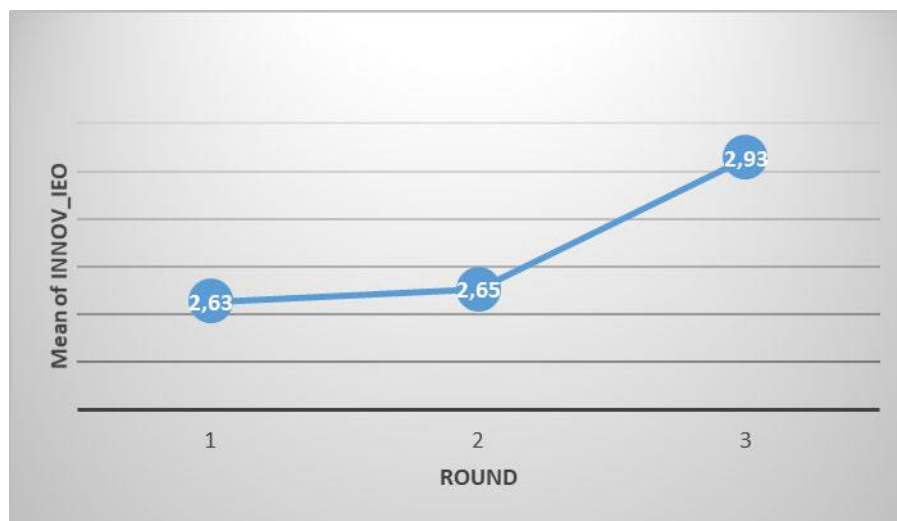
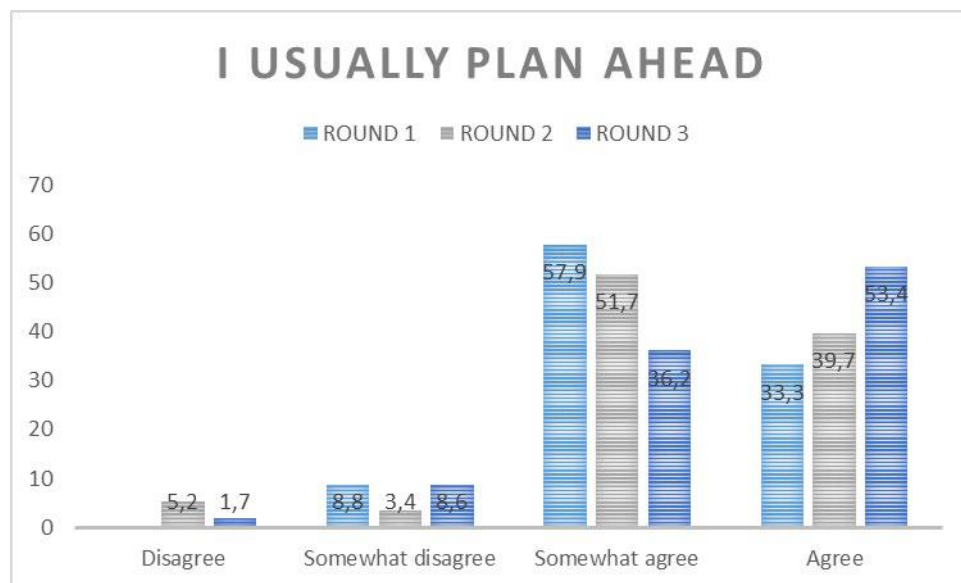


Figure 6.62 presents the IEO innovation construct's effect on the participants' development at the systemic action learning action research project from Round 1 (N = 50) with a median and standard deviation of 2.625 and 0.397 respectively. In Round 2, (N = 55) with a median and standard deviation of 2.651 and 0.372 respectively and in Round 3, (N = 52) with a median and standard deviation of 2.928 and 0.425 respectively. These results indicate that there was a significant difference in innovation IEO in Rounds 2 and 3 of the project ($F(2, 86) = 15.361, p < 0.001$). This is an indication that the project developed the participants' skills about the innovation items of IEO in the study because the overall median was 'somewhat agreed' and 'agreed'. This is an indication that the participants' ESE developed and changed their creativity and innovativeness by experimenting and employing original approaches to solve challenges and investigate new business ideas. Figure 6.62 indicates that there was insignificant development from Round 1 to Round 2 and then significant development from Round 2 to Round 3. The implication was that the training developed the participants' ESE to be innovative and creative in relation to IEO. The training project from the first to the twelfth week was full of different creative thinking and development that spurred personal and product innovation, brand development, business model canvas and looking inward into the economic sector and the entrepreneurship ecosystem in South Africa to make it attractive to do business. This was viewed as both a push and a pull factor for the students and the investors to enter business partnerships.

6.8.3 Proactivity IEO

Proactivity is an essential tool for new entrants to the practice of entrepreneurship. This section presents the data analysis pertaining to proactivity individual entrepreneurial orientation development. Figures 6.63 to 6.70 present the data analysis regarding proactivity IEO

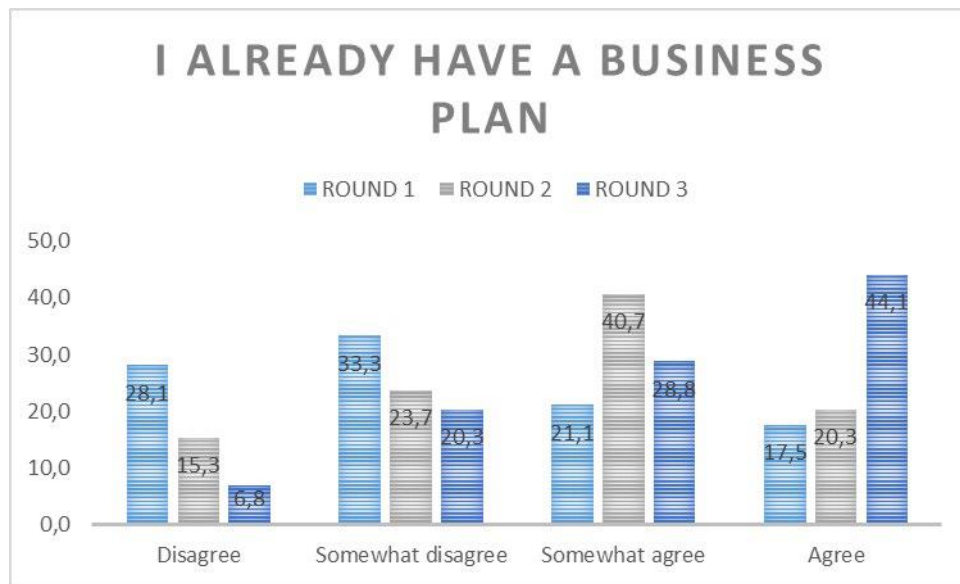
Figure 6.63: Proactivity IEO Development



In Figure 6.63, 8.8% (N = 57) of the respondents somewhat disagreed (median of 2) that *they usually plan ahead*; 57.9% of the respondents somewhat agreed (median of 3) and 33.3% agreed (median of 4) in Round 1. In Round 2, 5.2% (N = 58) disagreed (median of 1), 3.4% somewhat disagreed (median of 2), 51.7% somewhat agreed (median of 3) and 39.7% agreed (median of 4). In Round 3, 1.7% (N = 58) of the respondents disagreed (median of 1), 8.6% somewhat disagreed (median of 2), 36.2% somewhat agreed (median 3) and 53.4% agreed (median of 4) with this item.

The analysis revealed that in the first round of the project, the participants lacked adequate knowledge of business plans, which is one of the reasons that motivated them to participate in the project to build their career and plan for the future. However, during Rounds 2 and 3 of the project, planning was emphasised as one of the entrepreneurship management skills that can build courage and confidence to sustain their venture and act proactively in taking calculated risks as leaders.

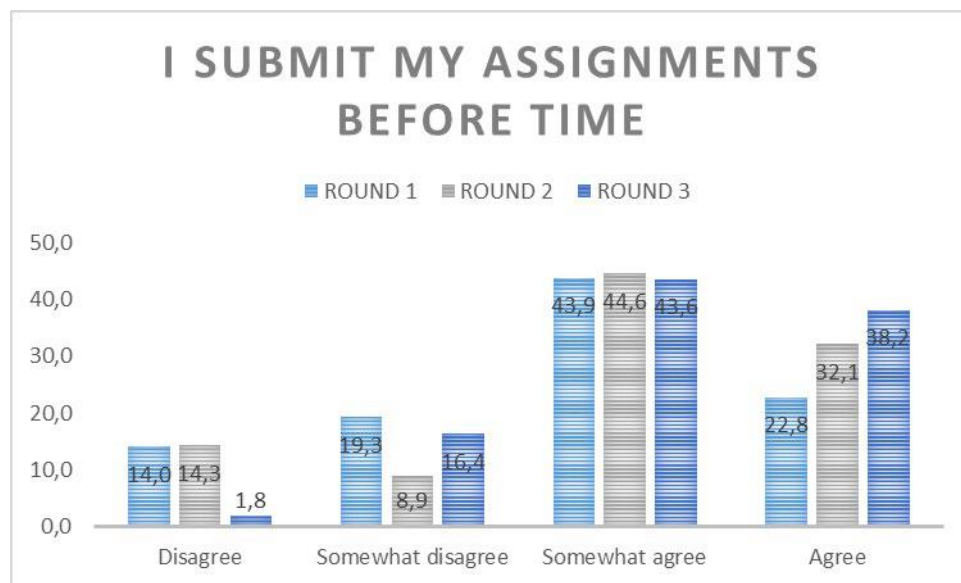
Figure 6.254: Proactivity IEO



In Figure 6.64, 28.1% (N = 57) of the respondents disagreed (median of 1) that *they already have a business plan*; 33.3% of the respondents somewhat disagreed (median of 2), 21.1% somewhat agreed (median of 3) and 17.5% agreed (median of 4) in Round 1. In Round 2, 15.3% (N = 59) of the respondents disagreed (median of 1), 23.7% somewhat disagreed (median of 2), 40.7% somewhat agreed (median of 3) and 20.3% agreed (median of 4). In Round 3, 6.8%, 20.3%, 28.8% and 44.1% (N = 59) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median 4) respectively with the item in the questionnaire.

The foregoing analysis revealed that initially, the participants thought they had skills to develop a business plan based on their theoretical knowledge from the classroom but as the project progressed, their orientation changed because of the knowledge acquired during the SALAR training project. It was obvious that the training model and the social technology employed for the training facilitated a progressive transformation. The training project afforded them the opportunity to learn how to write and develop business plans by means of the business model canvas. Their transformation enabled them to develop a prototype from what was learnt in the training and their interaction with the business friends and practitioners.

Figure 6.255: Proactivity IEO



In Figure 6.65, 14.1% (N = 57) of the respondents disagreed (median of 1) that *they submitted their assignments before time*; 19.3% of the respondents somewhat disagreed (median of 2), 43.9% somewhat agreed (median of 3) and 22.8% agreed (median of 4) in Round 1. In Round 2, 14.3% (N = 56) of the respondents disagreed (median of 1), 8.9% somewhat disagreed (median of 2), 44.6% somewhat agreed (median of 3) and 32.1% agreed (median of 4). In Round 3, 1.8%, 16.4%, 43.6% and 38.2% (N = 55) of the respondents disagreed (median of 1), somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively with the statement in the questionnaire.

The analysis presented in the foregoing paragraph indicates that various skills were learnt during the project that set the participants on their career path and taught them time management skills, which are key factors of strategic performance. The analysis further revealed that some participants were able to manage their time judiciously when the training programme clashed with their lecture timetable. Zahra and Nambisan (2012) described time management as a key factor in entrepreneurship growth and ability to outsmart the competitors strategically in the market.

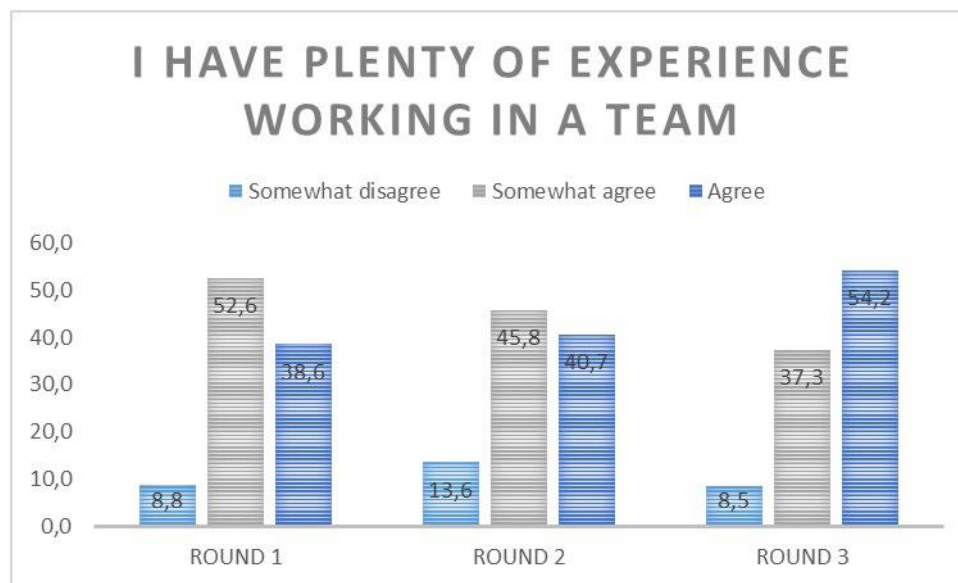
Figure 6.256: Proactivity IEO



In Figure 6.66, 10.5% (N = 57) of the respondents somewhat disagreed (median of 2) that *when working in a team, they find themselves doing more work than others just to get the work done on time*; 57.9% of the respondents somewhat agreed (median of 3) and 31.6% agreed (median of 4) in Round 1. In Round 2, 3.4% (N = 59) of the respondents disagreed (median of 1), 25.4% somewhat disagreed (median of 2), 40.7% somewhat agreed (median of 3) and 30.5% agreed (median of 4). In Round 3, 3.4%, 11.9%, 39.0%, and 45.8% (N = 59) of the respondents disagreed (median of 1) somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively with the statement.

This indicated that there was a significant difference in the development of students' ESE and IEO propensities in the systemic action learning action research project, which resulted in meeting targets of entrepreneurial intention as an expected outcome after the project. The item revealed the incorporation of the spirit of "UBUNTU" (togetherness) unto the participants that they all work together as a team with focus and fulfilment, which inspired them to be creative and willing to evolve either individually or in partnership.

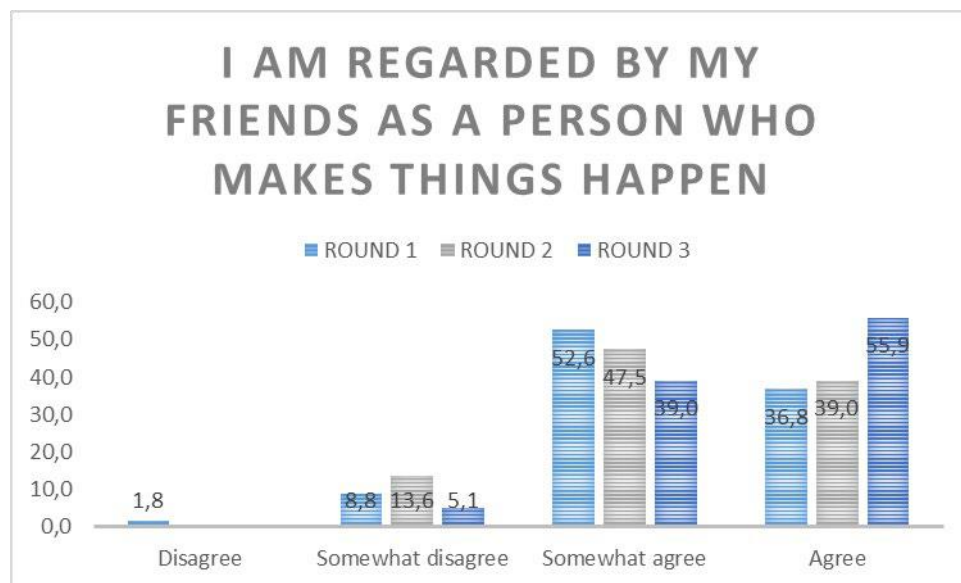
Figure 6.257: Proactivity IEO



In Figure 6.67, 8.8% (N = 57) of the respondents somewhat disagreed (median of 2) that *they have plenty of experience working in a team*; 52.6% of the respondents somewhat agreed (median of 3) and 38.6% agreed (median of 4) in Round 1. In Round 2, 13.6% (N = 59) of the respondents somewhat disagreed (median of 2), 45.8% somewhat agreed (median of 3), and 40.7% agreed (median of 4). In Round 3, 8.5%, 37.3% and 54.2% (N = 59) of the respondents somewhat disagreed (median of 2), somewhat agreed (median of 3) and agreed (median of 4) respectively with the statement.

The response indicated that numerous skills had been acquired and mastered for career development as a result of their proactiveness in collaboration and fulfilling the goals of attending the SALAR training. This was demonstrated in weeks 6, 9 and 10 of the training sessions. This translated to human capital development and indicated that the participants were able to add value to their degree or certificate during the project. This distinguished them from their peers in that they were enabled to either become employers of labour or intrapreneurs in the future. This development occurred during the second and third rounds of the project, meaning that the traditional teaching did not influence them to gain the requisite experience apart from learning to pass and obtain a degree or certificate.

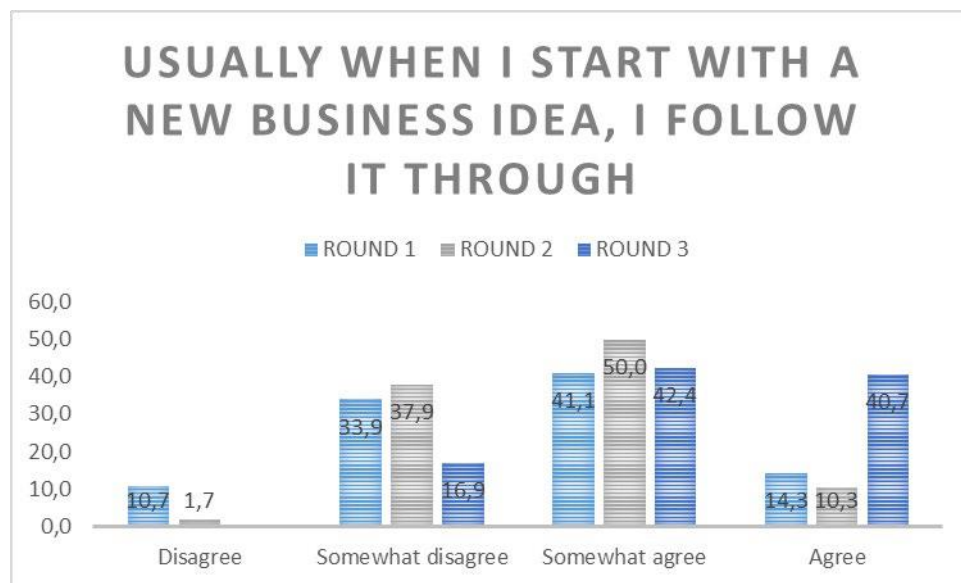
Figure 6.258: Proactivity IEO



In Figure 6.68, 1.8% (N = 57) of the respondents disagreed (median of 1) *that they are regarded by friends as a person who makes things happen*; 8.8% of the respondents somewhat disagreed (median of 2), 52.6% somewhat agreed (median of 3) and 36.8% agreed (median of 4) in Round 1. In Round 2, 13.6% (N = 59) of the respondents somewhat disagreed (median of 2), 47.5% somewhat agreed (median of 3) and 39.0% agreed (median of 4). In Round 3, 5.1% (N = 59) of the participants somewhat disagreed (median of 2), 39.0% somewhat agreed (median of 3) and 55.9% agreed (median of 4) with the item as stated in the questionnaire.

The analysis presented in Figure 6.68 indicated that the potential embedded in an individual can be revealed when learning content is structured around development and there is an avenue and material for creativity. It indicated that the participants had developed managerial skills in terms of managing performance and meeting goals with proactiveness. This identification of potential in an individual may also inform enabler engagement and lead to business partnerships. The skills developed here indicated that the participants may in the future be leaders and suitable partners for venture creation and other entrepreneurial activities.

Figure 6.259: Proactivity IEO



In Figure 6.69, 10.7% (N = 56) of the respondents disagreed (median of 1) *that usually when they start with a new business idea, they follow it through*. 33.9% of the respondents somewhat disagreed (median of 2), 41.1% somewhat agreed (median of 3) and 14.3% agreed (median of 4) in Round 1. In Round 2, 1.7% (N = 58) of the respondents disagreed (median of 1), 37.9% somewhat disagreed (median of 2), 50.0% somewhat agreed (median of 3) and 10.3% agreed (median of 4) with the statement. In Round 3, 16.9% (N = 59) of the respondents somewhat disagreed (median of 2), 42.4% somewhat agreed (median of 3) and 40.7% agreed (median of 4) with this statement.

The application of Theory U motivated the participants to focus on the learning and they were inspired to follow the process through in Round 2. 50% of the respondents ‘somewhat agreed’ at this stage, which was an indication that learning, and development took place. At the completion of the project after Round 3, the participants revealed that they followed the learning through. This development allowed the participants to proactively create an abstract market to exhibit their potential as the outcome of their participation. Thus, seventy-three from the overall registered participants, including the consistent participants, signified their intention to create a venture either immediately or soon. The identified potential studentpreneurs who had intention were handed over to the incubator directorate to monitor them to fruition in fulfilment of the project’s objective.

Figure 6.70: Analysis of Variance and Overall Summary of PROACT-IEO

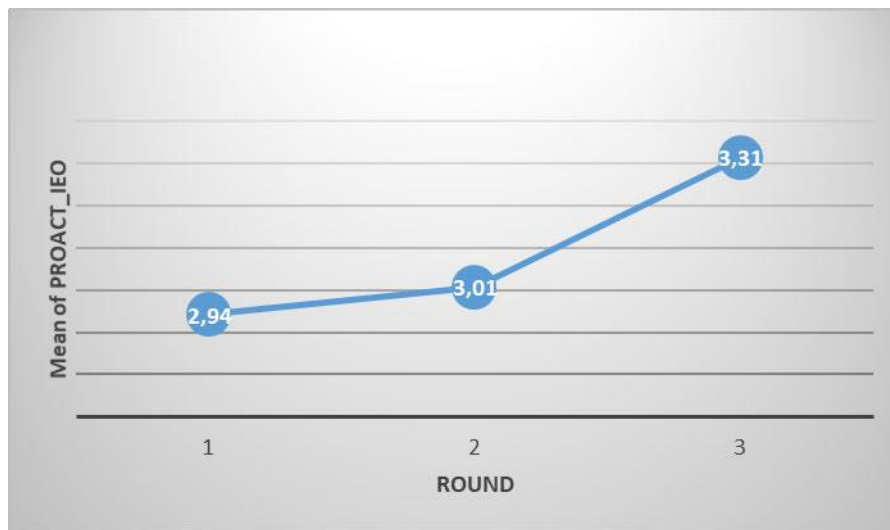


Figure 6.70 indicated the impact of proactivity IEO development on the participants of the systemic action learning action research project that applied Theory U for student development. In Round 1, $N = 56$ and a median and standard deviation of 2.941 and 0.470 were obtained respectively. In Round 2, $N = 55$ and the median and standard deviation were 3.005 and 0.484 respectively and in Round 3, $N = 54$ and a median and standard deviation of 3.312 and 0.528 were obtained respectively. This indicated that there was a significant difference in proactive IEO throughout the three rounds ($F(2, 94) = 17.539, p < 0.001$). Figure 6.70 indicated that there was a gradual development from Round 1 to 2 and significant development from Round 2 to Round 3. This analysis revealed that there was a progressive development from Rounds 1 to 3 in the participants' individual entrepreneurial development. It also indicated an individual entrepreneurial orientation change in the level of the participants' proactivity, which implies that learning had taken place. The participants were consistently on the median of 3, 'somewhat agree', on all the items of proactivity IEO. This indicated that it is not enough to identify an opportunity to be creative, but one must also can act upon the intention or idea proactively. This is an important factor in value creation. The development on this construct had a significant influence on the participants while registering for participation and at the entrepreneurship training programme. It was observed that many participants developed their skills and acted proactively in response to the project's call or advertisement, absented themselves from the module lecture and travelled a distance from other campuses of the institution to attend the programme.

Figure 6.71: Analysis of Variance and Overall Summary of IEO development

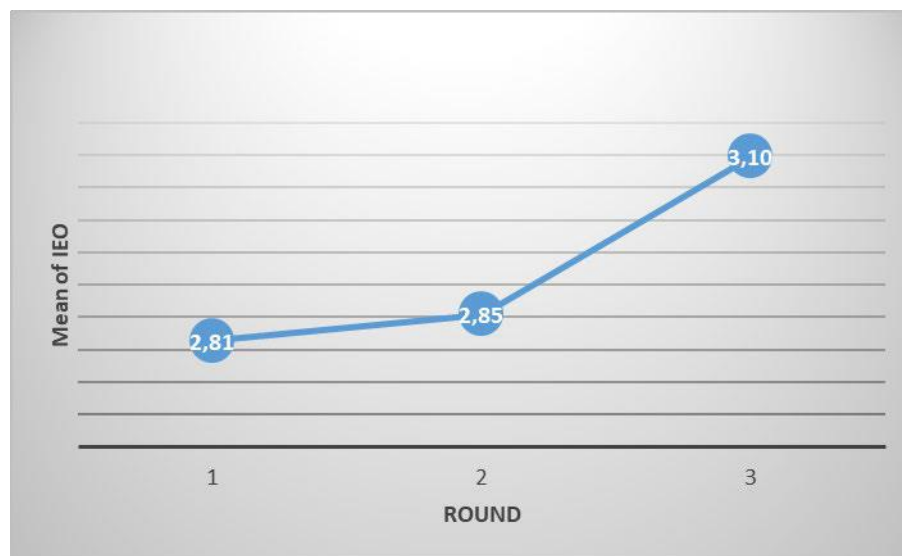


Figure 6.71 indicates the participants' overall development with regard to the IEO constructs in the systemic action learning action research that applied Theory U as a driver for the development. In Round 1 of the project, $N = 46$ and a median and standard deviation of 2.813 and 0.303 respectively were recorded. In Round 2, $N = 49$ and a median and standard deviation of 2.853 and 0.276 respectively were recorded. In Round 3, $N = 48$ and a median and standard deviation of 3.098 and 0.340 were recorded respectively. A harmonic sample size of 47.634 was used because the groups were of unequal size. The figure indicates that there was a significant difference in IEO throughout the three rounds ($F(2, 68) = 23.145, P < 0.001$). Figure 6.71 indicates that entrepreneurship developmental training with the application of Theory U in the systemic action learning action research project (SHAPE) had a significant effect on the participants' development. The results also revealed that the participants responded to the training by volunteering to participate in the project and this aided their learning behaviour to develop the self and change their initial orientation towards entrepreneurship development. The median choice of 'disagreed' with most of the items pertaining to IEO during the first round of the programme indicates that there was a significant development. At the initial stage, the participants only had classroom knowledge of entrepreneurship, which was insufficient to develop the participants' venture creation path. In Round 2 learning took place, which developed the participants and changed their initial orientation, as revealed by the median response of 'somewhat agreed' and 'agreed' depicted in Figure 6.71. This confirmed that the learning that had taken place developed the participants. Although the participants were not willing to take a business risk individually, they were inclined to engage in partnership business

and proactively work on their innovative and creative abilities in relation to opportunity identification ESE. Different entrepreneurship skills were learnt that developed the participants from the first to the thirteenth week of the project, as discussed in Chapter 4 of this study. The development indicated that the research objectives and research questions 3 and 4 that were formulated for this study were met and answered respectively. Thus, the entrepreneurship intention of the participants was proactively activated throughout the project and it was consequently observed that seventy-three of the participants had the intention of venture creation immediately or soon after their studies.

6.9 ANALYSIS OF DATA USING INFERENTIAL STATISTICS

This section presents an analysis of the research questions that were formulated for the purpose of statistical inferences using Pearson's product-moment correlation coefficient and regression analysis. Pearson's product-moment correlation coefficient (PPMC) was employed to examine the level of the relationships among the variables and the influence of the underpinning theory. The analyses are presented in relation to the three rounds and relevant to each research objective according to the nature of the training project employed in the study.

6.9.1 Research Hypotheses

The hypotheses listed hereunder were formulated and empirically tested

- H1:** There is significant relationship between opportunity identification entrepreneurial self-efficacy and individual entrepreneurial orientation
- H2:** There is significant association between relationship entrepreneurial self-efficacy and individual entrepreneurial orientation
- H3:** There is significant relationship between managerial entrepreneurial self-efficacy and individual entrepreneurial orientation
- H4:** There is significant relationship between tolerance entrepreneurial self-efficacy and individual entrepreneurial orientation
- H5:** There is significant relationship between entrepreneurial self-efficacy propensities and individual entrepreneurial orientation.

6.10.2.1 *RQ 1 - Influence of opportunity identification entrepreneurial self-efficacy on the training participants' Individual Entrepreneurial Orientation.*

Research Question 1 addressed the influence of opportunity identification self-efficacy on the participants' individual entrepreneurial orientation's progressive development in a systemic action learning action research training project. The scales pertaining to opportunity identification self-efficacy, risk taking, innovation and proactivity IEOs were considered relevant to examine the influence of opportunity identification self-efficacy and IEO on the training participants. Table 6:19 presents the outcome of the PPMCC, mean and standard deviation of OI_ESE and IEO propensities analysis.

Table 6:19: Pearson's correlation coefficient regarding OI_ESE and IEO

	Mean	Std Deviation	Rounds		
CONSTRUCT			1	2	3
OI_ESE	3.5956	0.06459	-	-	-
	4.1084	0.77847			
	4.5510	0.83674			
RT_IEO	2.9286	0.33388	0.053	0.077	0.136
	3.0416	0.28660			
	3.1704	0.49813			
INN_IEO	2.6255	0.39760	.303*	.328*	.293*
	2.6512	0.37227			
	2.9283	0.42539			
PROACT_IEO	2.9413	0.47088	.530**	.418	.623**
	3.0052	0.48403			
	3.3122	0.52805			

** Correlation is significant at the 0.001 level (2-tailed).

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

Table 6.19 presents the Pearson's product-moment correlation coefficient of the constructs' relationship between opportunity identification ESE and IEO propensities in the three rounds of the training programme, thus: OI_ESE and RT_IEO, $r = 0.053$, $N = 54$, $p > 0.05$; $r = 0.077$, $N = 54$, $p > 0.05$; $r = 0.136$, $N = 54$, $p > 0.05$; OI_ESE and INN_IEO, $r = .303$, $N = 50$, $p < 0.05$; $r = .328$, $N = 54$, $p < 0.05$; $r = .293$, $N = 51$, $p < 0.05$ and OI_ESE and PROACT_IEO, $r = .530$, $N = 56$, $p < 0.05$; $r = .418$, $N = 54$, $p < 0.05$; $r = .623$, $N = 52$, $P < 0.000$. The results depicted in Table 6.19 imply that there was no significant influence between opportunity identification and risk taking in the three rounds. There was a significant relationship between OI_ESE and INN_IEO; and OI_ESE and PROACT_IEO progressively. The result might be due to the fear of taking a business risk at that point in time rather than the participants showing commitment for innovation, creativity and proactiveness as a result of the systemic action learning action research that was employed. The results reflect that innovation, creativity and proactivity developed together concurrently at the reactive and generative stages in relation to the nondualism philosophy that was utilised for the study. It is instructive to note that proactiveness is related to reactivity and the generative minds of those individuals who sought for opportunities to succeed (Ramkissor & Cassim, 2013). This might be the reason

why their mindset was geared proactively to opportunity identification and change to their orientation. Therefore, Research Question 1, which sought to examine the influence of OI_ESE on individual entrepreneurial orientation propensities of the participants was answered.

6.10.2.2 RQ 2 - Effect of relationship entrepreneurial self-efficacy on the training participants' Individual Entrepreneurial Orientation.

Research Question 2 was based on the effect of relationship self-efficacy on the participants' individual entrepreneurial orientation's progressive development in the systemic action learning action research training project. The research questions were used to measure the effects of relationship self-efficacy on the training participants' IEO propensities. Table 6:20 presents the outcome of the PPMCC, mean and standard deviation of REL_ESE and IEO propensities analyses.

Table 6:20: Pearson correlation coefficient

	Mean	Std Deviation	Rounds		
CONSTRUCT			1	2	3
REL_ESE	4.6130 5.2270 5.5876	1.31868 1.09121 1.04467	-	-	-
RT_IEO	2.9286 3.0416 3.1704	0.33388 0.28660 0.49813	0.165	0.032	-0.059
INN_IEO	2.6255 2.6512 2.9283	0.39760 0.37227 0.42539	.342*	0,236	0.136
PROACT_IEO	2.9413 3.0052 3.3122	0.47088 0.48403 0.52805	.406**	.545**	.706**

** Correlation is significant at the 0.001 level (2-tailed).

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

Table 6.20 presents the results of the Pearson correlation coefficients for the data pertaining to relationship self-efficacy that were analysed. The analyses presented were based on the three rounds of the training project, as depicted in Table 6.20 of the correlation between REL_ESE and IEO propensities and revealed a correlation coefficient REL_ESE and RT_IEO at $r =$

0.165, $N = 54$, $p < 0.05$; $r = 0.032$, $N = 54$, $p > 0.05$; $r = -0.059$, $N = 57$, $p > 0.05$; REL_ESE and INN_IEO at $r = .342$, $N = 50$, $p < 0.05$; $r = 0.236$, $N = 55$, $p > 0.05$ and $r = 0.136$, $N = 52$, $p > 0.05$; and REL-ESE and PROACT_IEO at $r = .406$, $N = 56$, $p < 0.05$; $r = .545$, $N = 54$, $p < 0.001$ and $r = .706$, $N = 54$, $p < 0.001$. The analysis indicated that REL_ESE had no significant effect on RT_IEO in all three rounds. It revealed that REL_ESE had a significant effect on INN_IEO in round one only, while REL_ESE had a significant effect on PROACT_IEO in all three rounds. The results of the data analysis showed that the participants were unable to make judicious use of the opportunity to meet with the practitioners to relate and network to change their IEO for entrepreneurial action. This might be due to their limited understanding of risk-taking decisions that must be made with regard to business strategies in mutual relationships with partners and stakeholders in the business ecosystem. This implied that the participants might be lacking public and entrepreneurship relationship skills to relate with the entrepreneurship stakeholders that served as facilitators in the training project with regard to risk taking. It is instructive to note that the lack of quality relationships amongst the stakeholders may negatively affect venture creation and sustainability, as this is a strong entrepreneurship momentum factor. The results imply that, except for risk taking, REL_ESE had a significant effect on INN_IEO and PROACT_IEO, thus answering Research Question 2.

6.10.2.3 RQ 3 - Influence of managerial entrepreneurial self-efficacy on the training participants' Individual Entrepreneurial Orientation.

Research Question 3 examined the influence of managerial self-efficacy on the participants' individual entrepreneurial orientation's progressive development in an action learning action research training project. A Likert scale was used to measure the influence of managerial self-efficacy on the training participants' IEO propensities. Table 6:21 presents the outcome of the PPMC, mean and standard deviation of MNG_ESE and IEO propensities.

Table 6:21: Pearson correlation coefficient

	Mean	Std Deviation	Rounds		
CONSTRUCT			1	2	3
MNG_ESE	4.1881 4.0779 5.5260	1.05357 0.96543 0.97816	-	-	-
RT_IEO	2.9286 3.0416 3.1704	0.33388 0.28660 0.49813	0.196	-0.001	0.056
INN_IEO	2.6255 2.6512 2.9283	0.39760 0.37227 0.42539	.367**	.359**	0.061
PROACT_IEO	2.9413 3.0052 3.3122	0.47088 0.48403 0.52805	.448**	.521**	.721**

** Correlation is significant at the 0.001 level (2-tailed).

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

Table 6.21 presents the correlation coefficient of the association between MNG_ESE and IEO in the three rounds of the project. It was revealed in Round 1 of the training that there was a significant association between MNG_ESE and IEO propensities, except risk taking IEO, which was not significant. The results were MNG_ESE and RT_IEO; $r = 0.196$, $N = 53$, $p < 0.05$; $r = -0.001$, $N = 52$, $p > 0.05$ and $r = 0.056$, $N = 54$, $p > 0.05$; MNG_ESE and INN_IEO; $r = .367$, $N = 49$, $p < 0.05$; $r = .359$, $N = 52$, $p < 0.05$; $r = 0.061$, $N = 49$, $p > 0.05$ and $r = .448$, $N = 55$, $p < 0.05$; $r = .521$, $N = 52$, $p < 0.001$; and $r = .721$, $N = 51$, $p < 0.001$. The results in Table 6.21 indicate that there was no association between MNG_ESE and RT_IEO; there was, however, a significant relationship between MNG_ESE and INN_IEO in Rounds 1 and 2 and a significant relationship between MNG_ESE and PROACT_IEO in all three rounds. This empirical finding indicated that MNG_ESE activates and contributes to participants' individual entrepreneurial orientation. The result of this analysis indicated the degree of influence of the systemic action learning action research model's components in developing the ESE and IEO of the training participants by applying Theory U. This implied that the training developed the managerial self-efficacy of the participants and contributed to the growth, development and sustenance of their leadership abilities. Research Question 3 was answered.

6.10.2.4 RQ 4 - Influence of tolerance entrepreneurial self-efficacy on the training participants' Individual Entrepreneurial Orientation

Research Question 4 examined the influence of tolerance self-efficacy on the participants' individual entrepreneurial orientation progressive development in the systemic action learning action research training project. A Likert scale was employed to measure the influence of tolerance self-efficacy on the training participants' IEO. Table 6:22 presents the outcome of the PPMC analysis and the means and standard deviations of TOL_ESE and IEO propensities.

Table 6:22: Pearson correlation coefficient

	Mean	Std Deviation	Rounds		
CONSTRUCT			1	2	3
TOL_ESE	4.0819 5.0525 5.5146	0.94893 0.98005 0.86690	-	-	-
RT_IEO	2.6255 2.6512 2.9283	0.39760 0.37227 0.42539	0.087	0.224	0.228
INN_IEO	2.9413 3.0052 3.3122	0.47088 0.48403 0.52805	.318*	.299*	.281*
PROACT_IEO	2.9286 3.0416 3.1704	0.33388 0.28660 0.49813	.302*	.495**	.723**

** Correlation is significant at the 0.001 level (2-tailed).

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

Table 6.22 presents the result of the data that were analysed using Pearson's product-moment correlation coefficient. The analysis showed that TOL_ESE and RT_IEO at $r = 0.087$, $N = 53$, $p > 0.05$; $r = 0.224$, $N = 51$, $p < 0.05$; $r = 0.228$, $N = 55$, $p > 0.05$; TOL_ESE and INN_IEO at $r = .318$, $N = 49$, $p < 0.05$; $r = .229$, $N = 50$, $p < 0.05$ and $r = .281$, $N = 51$, $p < 0.05$ and TOL_ESE and PROACT_IEO at $r = .302$, $N = 55$, $p < 0.05$; $r = .495$, $N = 50$, $p < 0.001$ and $r = .723$, $N = 53$, $p < 0.001$. The result of the data analyses indicated that there was a significant relationship between TOL_ESE and INN_IEO and a significant relationship between TOL_ESE and PROACT_IEO. This implied that tolerance self-efficacy contributed

significantly to the participants' entrepreneurship development and activating their orientation and could also promote entrepreneurship growth. This indicates the effects of the reactive and generative stages of Theory U on the development of the participants' ESE and IEO to become leaders in the sector. Also, it instils tolerance self-efficacy in the participants to tolerate various business challenges and risks. In essence, the results explained the acceptance of tolerance self-efficacy by the participants as a strong factor for entrepreneurship growth in relation to other entrepreneurship factors to act and to sustain entrepreneurship activities. Research Question 4 was answered.

6.10.2.5 RQ 5 - Effects of entrepreneurial self-efficacy on the training participants' Individual Entrepreneurial Orientation.

Research Question 5 examined the effects of entrepreneurial self-efficacy on the participants' individual entrepreneurial orientation's progressive development in the systemic action learning action research training project. A Likert scale was employed to examine the influence of entrepreneurial self-efficacy on the progressive development of the training participants' IEO. Table 6.23 presents the outcome of the PPMC analysis, the means, and standard deviations on ESE and IEO propensities.

Table 6.23: Pearson correlation coefficient

	Mean	Std Deviation	Rounds		
CONSTRUCT			1	2	3
ESE	4.2489 5.0865 5.4782	0.90094 0.87218 0.87580	-	-	-
IEO	2.8130 2.8539 3.0983	0.30300 0.27695 0.34001	.583**	.519**	.505**

** Correlation is significant at the 0.001 level (2-tailed).

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

The illustration in Table 6.23 presents the result of the Pearson correlation coefficient between ESE and IEO according to the different rounds of the training project. It was revealed that there was a significant relationship between ESE and IEO at $r = 0.583$, $n = 44$, $p < 0.001$; $r = .519$, $n = 42$, $p < 0.001$; $r = .505$, $n = 43$, $p < 0.001$ respectively in the three rounds of the analysis. The empirical finding indicated that entrepreneurship self-efficacy contributed to the training

participants' individual entrepreneurial orientation development. The result also indicated the degree of effectiveness of ESE on the participants' IEO as a result of the training model and Theory U applied to the systemic action learning action research training project. In other words, the participants were able to harness their entrepreneurship momentum by developing their entrepreneurial self-efficacy to activate their individual entrepreneurial orientation for entrepreneurship action. It is instructive to note that from the correlation coefficient in Table 6.23, it can be seen that ESE is a contributing factor that predicts individual entrepreneurial orientation behavioural change, development and venture creation judging from the value of the correlation. Based on this result, Research Question 5 was answered.

The finding here revealed that ESE is important in entrepreneurship research, practice and development. This is consistent with the views of Boyd and Vozikis (1994), who opine that ESE is a task-specific construct that assesses individual ability pertaining to internal and external constraints and possibilities concerning entrepreneurial action. According to Santos and Liguori (2020), ESE is a predictor of intention to initiate a business and it is also described by Alhlin, Drnovsek and Hisrich (2014) as a factor of nascent entrepreneurship's growth and success. ESE remains only a predictor of all dimensions of entrepreneurial variables employed to study entrepreneurial outcomes (Drnovsek, Wincent & Cardon, 2010). In these authors' opinion, it is unclear whether ESE is about self-confidence or having ability and this is an impending challenge for entrepreneurship growth because of the lack of agreement about what it encompasses and the conceptualisation and measurement thereof.

6.10 INSTRUMENT REFINEMENT PROCESS FOR IMPROVED RELIABILITY (A 2-YEAR AD HOC POST-TEST)

6.10.1 Instrument refinement process for improved reliability: further data collection through actioning a 2-year ad hoc post-test.

Based on the statistical analysis and the results that were obtained, it was necessary to refine the ESE and IEO constructs under investigation to improve the factor loadings associated with ESE and IEO. This was in line with the aim of this study, which was "to develop entrepreneurial self-efficacy: activating students' individual entrepreneurial orientation". Scholars have carried out studies on the refinement of IEO instruments and validated the instruments based on the cultural and social backgrounds of where they were applied (Van der Westhuizen, 2016; Bolton & Lane, 2012). The inconsistency in the instrument's measurements of risk taking indicated

the need for a validated measure for ESE and IEO, which is perceived as important to assess individuals' orientation towards making entrepreneurship decisions and taking action. In the preliminary testing with the entrepreneurial students at the University of KwaZulu-Natal in 2017, several items were modified to suit the context of the study and some were dropped because they lacked discriminant validity. Items that were related to students' nascent entrepreneurial orientation were included, which at the end indicated convergent and discriminant validity. The students' perceptions of their behaviour regarding their willingness to take risks, innovate and be proactive may have been an indication of their eventual level of success as entrepreneurs (Bolton & Lane, 2012). The researcher observed that there was a lack of information in the training participants' longitudinal data pertaining to after the training period and wished to compare the participants' current entrepreneurship activities to where they were in 2017 before the training. This would revalidate the instrument among the same study population and assess their behavioural changes regarding risk taking.

6.10.2 Method

The refined instrument was configured into a google mail questionnaire in line with UKZN's ethical standards of research and the rules applicable during the Covid-19 global pandemic period. Renewed ethical clearance was requested and granted for the purpose of refining the study's data collection instrument. The google mail questionnaire was sent to the initial respondents' email addresses provided during the training. The principal component analysis of the data that were analysed were considered with a rotated component matrix on the risk-taking factor in Rounds 1 and 2, aligning cyclical data collection procedures with Theory U where the participants co-initiated, co-sensed and co-inspired. The participants' responses at this stage were negative because they were still in a continuum of evolving, with potential new stages and phases of the U-loop introduced to their lives during the SHAPE training. The content and the context of the training were aligned with Bolton and Lane's (2012) assertion that the IEO instrument needs continuous refinement based on its infancy and context of application, which might affect the reliability on the factor. To advance and build on the previous study, it is important to refine the instrument to revalidate it and evaluate the effectiveness of the training on the participants, the changes effected in their IEO risk-taking perception and the progressive development of their entrepreneurial self-efficacy and action after their graduation. This would also validate the method that was applied and the models and theory that were utilised for the training and research and contribute to theory and practice.

This was a mechanism to address the inconsistency described in the main analysis through the participants' entrepreneurship growth and development and propose suitable ESE and IEO instruments for future research. As with other research endeavours, the instrument's refinement was subject to a number of limitations. Limited access to a suitable number of respondents resulted in a low response rate. A substantial number of the participants were no longer on campus and it was difficult to access qualified people to evaluate their entrepreneurship behaviour and development through email. Several attempts were made to reach the respondents by telephone but some of the telephone numbers were no longer in use. Attempts were also made to send the google mail questionnaire to the respondents' "WhatsApp" accounts and follow up with calls to request that they participate in the study. During the phone and WhatsApp calls, the respondents were reminded of the SHAPE 2017 training in which they had participated and informed of the importance of this post-study data collection. An informed consent form was attached to the google questionnaire. Some of the participants that were contacted agreed to respond and others declined, hence the low response rate.

Data collected through the google mail questionnaire were analysed using IBM SPSS version 27. A pre-test for the validation of the instrument was performed before administering it to the respondents and exploratory factor analysis for data groupings and reduction, maximum likelihood and a promax rotation method were applied for self-reporting data analysis. KMO and Bartlett's test of sphericity were carried out, Eigenvalues and total variance explained were also reported. The results are discussed in the ensuing section with the aid of reliability tables.

6.10.3 Factor Analysis

Factor analysis is a method chosen by researchers to interpret self-reporting questionnaires (Byrant, Yarnold & Michelson, 1999). It is a multivariate statistical procedure that can be used in various ways (Tabachnick & Fidell, 2007); for the reduction of a large number of factors into a smaller set and to establish underlying dimensions between the observed variables, thus allowing for refinement and the formation of theory, thereby presenting evidence of self-reporting scales of construct validity (Thompson, 2004). Factor analysis is a technique that requires a large sample based on the correlation matrix of the variables involved and the correlations usually need a large sample before they stabilise. Tabachnick and Fidell (2007; 2001:588) cite Comrey and Lee's (1992) advice regarding sample size that: 50 cases is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good and 1000 or more is excellent. As a general rule, a minimum of 10 observations per variable is necessary to avoid computational

difficulties. The result implies a non-positive definite, meaning that no further analysis can be carried out because of the low response rate and sample size.

For the refinement of the instrument for future endeavours, a sample based EFA method was used and Cronbach's alpha was calculated to confirm the reliability of the composite measure for each factor as a pre-test. Based on the "ubuntu" spirit of unison, working as a team to co-initiate and co-sense with like minds, hearts and wills exhibited in the training, the ESE and IEO constructs were refined by developing and creating new factor solutions and more attention was given to the risk-taking item, which was split into two factors; a) risk-taking attitude and b) risk-taking job security, thus making 4 IEO propensities (proactivity, innovation, risk-taking attitude and risk-taking job security). Tables 6.24 and 6.25 present the preliminary or pre-test of the refined instrument factor analysis to confirm the reliability and validity before the instrument was administered to the participants.

6.10.4 Exploratory Factor Analysis Pre-test

6.10.4.1 Exploratory Factor Analysis ESE

The exploratory factor analysis that was employed established that there was a need for the ESE construct as regards the development of entrepreneurship momentum and to develop the existing method and theory to improve its robustness. Factor solutions for the variable (ESE) measurements were formulated and refined and some items that were duplicated in the initial instrument were deleted, namely items 7, 24 and 35.

The results from the ESE's four construct analyses revealed that the MNG_ESE and TOL_ESE constructs split into two. A grouping of the instruments was considered from each of the four constructs to ascertain the overall structure of the variable. This informed the deletion of some items from the instrument as a result of low loading to the factor they measured and high cross loading. For the extraction method, maximum likelihood using promax rotation was employed.

Extraction method: maximum likelihood

Rotation: promax (Kappa = 2)

KMO: .882

Bartlett's p value: <.0005

% variance extracted: 71.08%

Table 6.24: ESE Component Matrix**Pattern Matrix^a**

		Factor			
		1	2	3	4
Cronbach's alpha		.928	.896	.918	.914
TSE30	When I am confronted with a problem, I can usually find several solutions	.803			
TSE29	I can remain calm when facing difficulties because I can rely on my coping abilities	.745			
TSE32	I can always manage to solve difficult tasks if I try hard enough	.674			
TSE31	I am able to solve problems	.642			
TSE37	I can usually handle whatever comes my way	.577			
TSE36	If I am in trouble, I can always think of a solution	.549			
OSE5	I can see new market opportunities for new products and services		.917		
OSE4	I can originate new ideas and products		.694		
OSE3	I can develop a working environment that encourages people to try something new		.635		
OSE1	I can recognise a good opportunity when I see it		.540		
OSE6	I can identify potential sources of funding for investment		.485		
RSE10	I can motivate others to work together			.816	
RSE11	I can form a partnership or alliance with others			.789	
RSE12	I can develop and maintain favourable relationships with potential investors			.513	
RSE9	I can work on collaborative projects as a member of a team			.502	
RSE13	I can get people to agree with me			.484	
MSE20	I can make sound decisions				.642
MSE19	I am a leader				.621
MSE21	It is easy for me to stick to my aims and accomplish my goals				.554
MSE18	I am creative				.477
MSE23	I can recruit and train key team members				.363

Extraction Method: maximum likelihood

Rotation Method: promax with Kaiser normalisation.

- a. Rotation converged in 7 iterations.

Removing items from the questionnaire that were not part of the final solution and renumbering the items that remained.

Table 6.24 presents the refined instrument in support of the literature and theory discussed earlier in this study pertaining to ESE (Barbosa et al., 2007; Van der Westhuizen, 2016).

6.10.4.2 *Exploratory Factor Analysis IEO*

Conducting exploratory factor analysis for the refined instruments of IEO shows that there was a need to improve its uniqueness in measuring what it was meant to measure. Therefore, four factor solutions for IEO items were created. For the purpose of developing an instrument to be used in future with other data sets, a sample-based exploratory factor analysis method such as maximum likelihood was advisable (when analysing a set of data to identify factors). The principal components' analyses were not applicable in either case.

In refining the instrument, IEO factors were structured into four factor solutions whereby the risk-taking construct was split into two, namely a) risk-taking attitude and b) risk-taking job security. This is a new contribution to knowledge in the creation of the IEO instrument as earlier scholars such as Bolton and Lane (2012) and Van der Westhuizen (2016) adopted and applied a three-factor solution in their studies, as relating to IEO and its factors.

Extraction Method: maximum likelihood

Rotation: promax (Kappa = 2)

KMO: .639

Bartlett's p value: < .0005

% of variance extracted: 61.06%

Table 6.25: IEO Component Matrix**Pattern Matrix^a**

	Factor			
	1	2	3	4
Cronbach's alpha	.817	.735	.751	.804
PRO6 I am regarded by my friends as a person who makes things happen	.858			
PRO1 I usually plan ahead	.707			
PRO5 I have plenty of experience working in a team	.599			
PRO4 When working in a team, I find myself doing more work than others just to get the work done on time	.585			
PRO2 I already have a business plan	.524			
PRO7 Usually when I start with a new business idea, I follow it through	.437			
PRO3 I submit my assignments before time	.410			
INN3 I sometimes like to try new and unusual activities		.684		
INN2 I have already experienced significant changes in my life		.657		
INN1 I am comfortable moving into new situations		.633		
INN8 I am creative and new business ideas come easily to me		.543		
INN10 I prefer to experiment and use original approaches to solve challenges rather than using methods others generally apply		.478		
RT5 It is preferable for me to have job security by working for a well-established business that offers a good salary			.938	
RT4 It is a safe career choice to work for an organisation that offers a good salary			.713	
RT7 I prefer to start a business in partnership with an established business in the private sector			.563	
RT6 I would rather start a business alone than in partnership with somebody else			.491	
RT2 I am willing to invest my own money in a new business				.941
RT3 I can handle risky situations with confidence				.622
RT1 I am willing to work full-time for myself				.513

Extraction Method: maximum likelihood.

Rotation Method: promax (Kappa = 2) with Kaiser normalisation.

a. Rotation converged in 5 iterations.

6.10.4.3 Exploratory Factor Analysis IEO Post-test

Exploratory factor analysis was conducted on the instrument using a correlation matrix to confirm the relationships between the individual variables. This was to revalidate and confirm the consistency and reliability with the same training participants for the refined instrument to ascertain the implication of the training on their entrepreneurial action, behaviour, growth and development after graduation. The process was guided by statistical and theoretical principles beginning with the Kaiser-Meyer-Olkin (KMO) sampling adequacy and Bartlett's test of sphericity that were utilised to assess the suitability of the respondents' data for the factor analysis. Table 6.26 presents the KMO and Bartlett's test level of significance, which according to the rule of thumb, should be significant at $p < .05$ for factor analysis and extraction suitability.

Table 6.26: Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity (SPSS Output)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.649
Bartlett's Test of Sphericity	Approx. Chi-Square	397.818
	df	171
	Sig.	.000

Table 6.26 presents for scale unidimensionality and to simplify the factor solution methods, Kaiser's criteria (eigenvalue > 1), cumulative percentage of variance extracted, and sums of squared loadings were employed for extraction. The KMO sampling of adequacy was $KMO = .649$, which was deemed adequate and greater than the recommended $KMO > 0.05$. The Bartlett's test of sphericity was significant at $((171) = 397.818)$. The cumulative percentage of variance and eigenvalue explored should be as low as 50-60%. Commonly in humanities, as demonstrated below in Table 6.27, revealed a cumulative percentage of variance of 33.6% and a total of 19 components (factors) having an eigenvalue > 1 .

Table 6.27: IEO Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	6.385	33.607	33.607				
2	2.796	14.713	48.320				
3	1.851	9.743	58.063				
4	1.652	8.697	66.760				
5	1.283	6.754	73.515				
6	.837	4.404	77.919				
7	.751	3.953	81.871				
8	.631	3.322	85.193	3.373	17.753	17.753	4.631
9	.559	2.940	88.133	4.566	24.033	41.786	4.464
10	.450	2.368	90.501	2.013	10.594	52.381	3.271
11	.395	2.079	92.580	1.225	6.447	58.827	2.319
12	.350	1.843	94.423				
13	.285	1.500	95.922				
14	.219	1.155	97.078				
15	.181	.950	98.028				
16	.147	.776	98.804				
17	.104	.549	99.353				
18	.071	.371	99.724				
19	.052	.276	100.000				

Extraction Method: maximum likelihood.

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

The extraction method shows that an attempt was made to select a rotation method suitable to decide the number of factors that would be suitable for analysis and how the variables were related to maximise or minimise high and low item loading respectively to produce more interpretable and simplified solutions. Oblique olbimin/promax rotation was applied and evaluated to produce correlated factors and more accurate results because of the human behaviours under investigation to meet a priori assumptions. Table 6.28 indicates the pattern matrix method of extraction with the variable attributed to the factors.

Table 6.28: IEO Pattern Matrix

Pattern Matrix				
	Factor			
	1	2	3	4
IEO_RTA2 I can handle risky situations with confidence	.767			
IEO_P1 I am regarded by my friends as a person who makes things happen	.764			
IEO_P3 I have plenty of experience working in a team	.686			
IEO_P2 I usually plan ahead	.557			
IEO_RTA3 I am willing to work full-time for myself	.531			
IEO_P4 When working in a team, I find myself doing more work just to get the work done on time	.517			
IEO_RTA1 I am willing to invest my own money in a new business	.464			
IEO_I1 I sometimes like to try new and unusual activities		.783		
IEO_I3 I have already experienced significant changes in my life		.733		
IEO_I2 I am comfortable moving into new situations		.690		
IEO_I5 I prefer to experiment and use original approaches to solve challenges rather than using methods others generally apply		.649		
IEO_I4 I am creative and new business ideas come easily to me		.637		
IEO_P5 I already have a business plan			.941	
IEO_P6 Usually when I start with a new business idea, I follow it through			.736	
IEO_RTJS1 It is preferable for me to have job security by working for a well-established business that offers a good salary				.960
IEO_RTJS2 It is a safe career choice to work for an organisation that offers a good salary				.781
IEO_RTJS3 I prefer to start a business in partnership with an established business in the private sector				
IEO_RTJS4 I would rather start a business alone than in partnership with somebody else				.512
				.476

Table 6. 28 shows the reorganisation of the various factors based on the name or theme given. For Factor 1, all items loaded well except item 7, which loaded too low and was discarded, for Factor 3 IEO innovation, item 14 cross loaded with the options of discarding or leaving it but because it grouped correctly, it was retained, likewise item 4 on IEO job security - it could also be discarded or retained based on better grouping. The table shows a good result of pattern matrix following the rule of thumb that at least two or three items must load on a factor so that it can provide a meaningful interpretation (Henson & Roberts, 2006). The factors can be further operationalised and descriptively labelled to reflect the theoretical and conceptual intent.

6.10.4.4 Exploratory Factor Analysis ESE

Table 6.29: Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity (SPSS Output)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.786
Bartlett's Test of Sphericity	Approx. Chi-Square	664.675
	df	120
	Sig.	.000

Table 6.29 presents the KMO of sampling adequacy that was .786 and deemed adequate as it was greater than the recommended $KMO > 0.05$. The Bartlett's test of sphericity was significant at $(120) = 664.675$. The cumulative percentage of variance and eigenvalue explored should be as low as 50-60%. Table 6.30 reveals a cumulative percentage of variance of 59.2% and a total of 11 components (factors) having an eigenvalue > 1 .

Table 6. 30: ESE Total Variance explained

Total Variance Explained

Factor	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	9.479	59.242	59.242	9.124	57.027	57.027	7.249
2	2.454	15.340	74.581	2.044	12.773	69.800	6.434
3	1.345	8.408	82.989	1.570	9.809	79.610	6.982
4	.687	4.294	87.283				
5	.439	2.744	90.027				
6	.345	2.155	92.182				
7	.321	2.004	94.186				
8	.251	1.567	95.753				
9	.188	1.177	96.930				
10	.144	.897	97.828				
11	.107	.671	98.499				
12	.085	.529	99.027				
13	.062	.386	99.414				
14	.047	.296	99.709				
15	.028	.175	99.884				
16	.019	.116	100.000				

Extraction Method: maximum likelihood.

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

The pattern matrix in Table 6.31 shows the second stage of extraction. In the first stage, the variables' loading was muddled, and cross loaded into five different factors that they were not initially set to measure, items such as MSE 4; OISE 4; TSE 3; RELSE 5; OISE5 and OISE 3 indicated relationships that exist between the items and the factors with eigenvalues greater than 1 but they were discarded because they did not measure what they were supposed to measure. Further extraction was conducted on the variable, which left ESE with three validated and reliable factors and instruments, as shown in Table 6.31. This supports the views expressed by Chetty and Datt (2017/2015) that the higher the absolute value the more it contributes to the factor.

Table 6.31: ESE Pattern Matrix

Pattern Matrix^a

	Factor		
	1	2	3
TSE5 I am able to solve problems	1.068		
TSE1 When I am confronted with a problem, I can usually find several solutions	.900		
TSE3 I can always manage to solve difficult tasks if I try hard enough	.841		
TSE6 I can usually handle whatever comes my way	.811		
TSE7 If I am in trouble, I can always think of a solution	.694		
TSE2 I can remain calm when facing difficulties because I can rely on my coping abilities	.539		.328
MSE1 I can make sound decisions		.951	
MSE3 It is easy for me to stick to my aims and accomplish my goals		.923	
MSE2 I am a leader		.880	
MSE5 I can recruit and train key team members		.875	
MSE4 I am creative		.760	
RSE2 I can form a partnership or alliance with others			1.004
RSE1 I can motivate others to work together			.982
RSE3 I can develop and maintain favourable relationships with potential investors			.757
RSE4 I can work on collaborative projects as a member of a team			.556
RSE5 I can get people to agree with me			.477

Table 6.31 shows the pattern matrix extraction adopted to determine the factor structure of the refined measurement for validation of the initial instrument in the study. A pattern matrix was employed to extract the factors from the observed variables that were constantly moving together through the extraction (Hadi, Abdullah & Sentosa, 2016). The table shows two cross loadings of TSE 2 and RSE 5, both cross loaded but could be retained. The extraction shows the grouping of the factors to three variables after the extraction, which presents a new

dimension for entrepreneurial self-efficacy measurement and can be tested and validated in future research to validate the fit.

6.10.5 Reliability of the Instruments

The statistical software employed for the refined instrument analysis was assessed using Cronbach's alpha coefficient via IBM SPSS version 27. It is used whenever there are multiple items, especially when using a Likert scale in a questionnaire (Bonett & Wright, 2015). Cronbach's alpha was therefore used to calculate the reliability of the data collection instruments in phases of the multi-dimensional scale (opportunity identification self-efficacy (OI_SE), relationship self-efficacy (REL_SE), managerial self-efficacy (MNG_SE) and tolerance self-efficacy (TOL_SE); risk taking individual entrepreneurial orientation (RT_attitude and RT_job security), innovation individual entrepreneurial orientation (INN_IEO) and proactive individual entrepreneurial orientation (PROACT_IEO). Each item's Cronbach's alpha was calculated, as well as for the elements of entrepreneurial self-efficacy (ESE) and individual entrepreneurial orientation (IEO). The reliability report is presented in the Table 6.32.

Table 6.32: Refined Instrument's Internal Consistency

SCALES		
VARIABLES	NO. OF ITEMS	CRONBACH'S ALPHA
Tolerance Self-efficacy	6	0.89
Opportunity Identification	5	0.89
Relationship Self-efficacy	5	0.94
Managerial Self-efficacy	5	0.94
Proactivity	7	0.79
Innovation	5	0.83
Risk-taking Attitude	3	0.76
Risk-taking Job Security	4	0.75

Table 6.32 above is the reliability statistics table that presents the value for Cronbach's alpha, which for refined instruments is above the threshold 0.7, indicating acceptable internal consistency of the refined instrument. This is consistent with Taber's (2018) assertion that an acceptable Cronbach's alpha value implies that the instrument can be repeated successfully. It has to do with the issues of measuring the concept in relation to uniformity (Drost, 2011). Reliability refers to the consistency of the findings and whether or not the measures that

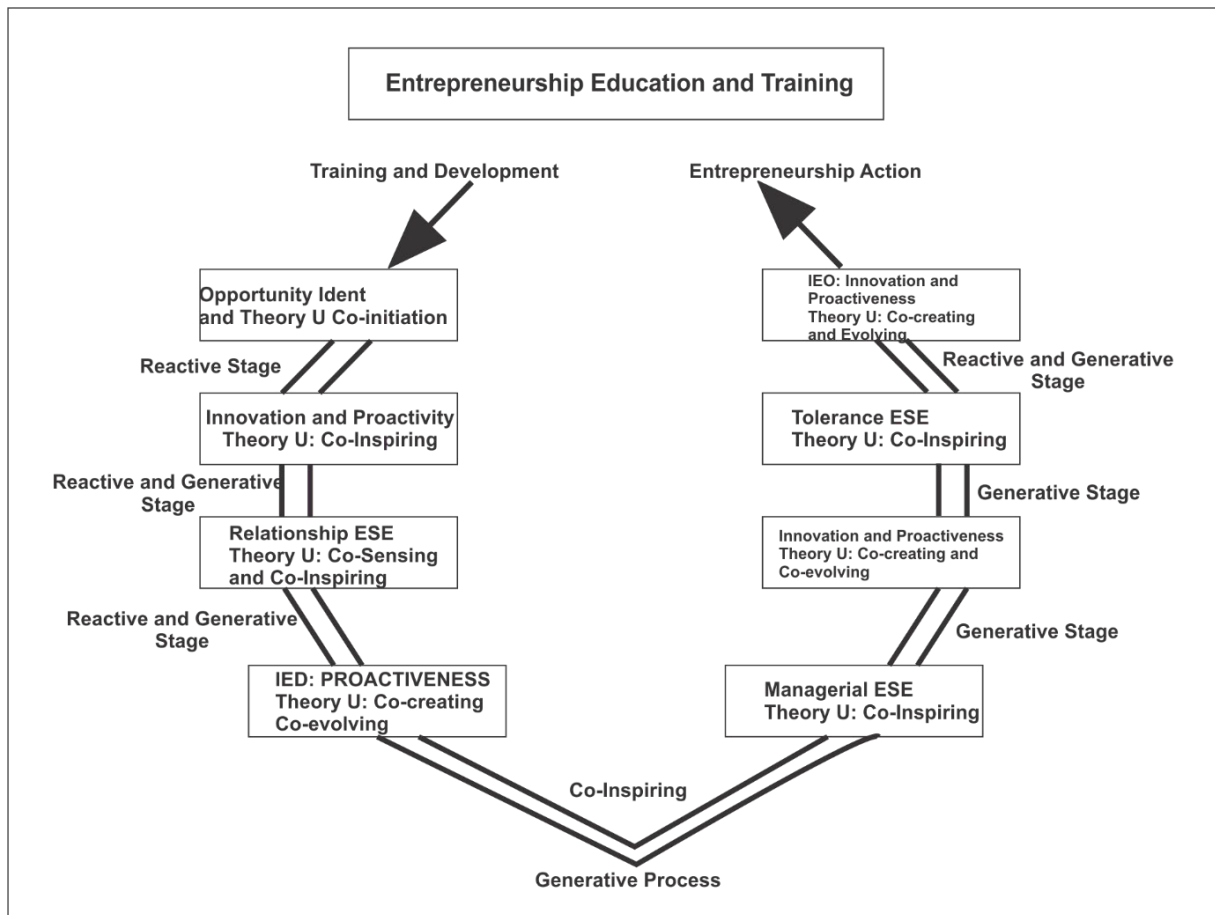
were refined for the concept were consistent (Taber, 2018). The refined instrument was found to be reliable, valid and trustworthy, as it measured what it was designed to measure (Sekaran & Bougie, 2016), as indicated in Table 6.26. The results indicated a good level of internal consistency for both ESE and IEO above the threshold of 0.7. This implied that all the items' measurements were reliable when compared to the main instrument for the study. The Cronbach's alpha coefficient was employed to confirm the reliability of the variables in the measurement and to determine the internal consistency or average correlation of the items in the survey instrument to check for reliability (Taber 2018). The newly refined instrument can be utilised for further study, for validation and contribution to theory.

Based on the analysis and the results generated by the refined instrument, it was deduced that the instrument met the purpose of the exercise through the creation of factor solutions for ESE and IEO that were repeatedly tested for consistency and reliability. This refined instrument is good in the sense that its extraction method assisted in regrouping the instrument that split the risk taking IEO construct into two new factors and regrouped the ESE into three. This contribution to the extant body of knowledge could be utilised in future research. It can be used to develop ESE and entrepreneurship momentum in developed and developing countries based on the context of its use, as posited by Bolton and Lane (2012) and van der Westhuizen (2016).

6.11 INTERRELATIONSHIP BETWEEN ESE, IEO PROPENSITIES AND THEORY U

The findings of the study revealed that various factors can predict students' entrepreneurship development in higher institutions. These factors can be classified into learning pedagogy, learning hub, facilitators and participants' 'will' as it drives potential development. Under learning pedagogy is the curriculum for training, concept and content, types of methods or styles of teaching as well as mode of disseminating information to learners. Learning hub includes the technology available for hands-on learning, materials, model canvas materials and a conducive learning environment. The facilitators are the academics, practitioners, mentors, and successful entrepreneurs who shared their wealth of experience with the participants. These afore-mentioned factors inform the correlations between the constructs of ESE and IEO as enhanced by the application of the Theory U that underpinned the study, as illustrated in Figure 6.72.

Figure 6:72: Interrelationship between ESE, IEO and Theory U.



Source: Author's compilation.

Figure 6.72 illustrates the interrelationships between Theory U, ESE and IEO propensities. Figure 6.72 revealed that development and transformation of the youth entrepreneurship mind and outsets changes at the micro systemic level, which performs a germane role in entrepreneurial activities. The figure indicates progressive development that was influenced by the training model, where the variables' development was revealed in stages concurrently with the participants showing a flair for learning and development. This is an indication that changing learners' entrepreneurial orientation has to do with developing certain skills embedded in ESE. These cannot be developed in isolation, but they change the potential entrepreneurs' entrepreneurial behaviour, as implied in the nondualism philosophy. The model indicated different stages of progressive development; through reactive and generative stages, which indicated that different skills were inspired and developed intermittently and spiral dynamically. Thus, for expected development and transformation to take place based on the nondualism philosophy, there must be an integration of the various systems (learning pedagogy, model, theory, environment, academia, practitioners and the learners) to aid

entrepreneurship cognitive thinking and reasoning that involves teamwork or a process of collaboration (“co” in Theory U). This implies that entrepreneurship education and training is a foundation for entrepreneurship development with the application of social transformative technology (Theory U), which plays a pivotal role in the development of ESE propensities (opportunity identification, relationship, managerial and tolerance entrepreneurial self-efficacies) as predictors of IEO. It follows logically that a combination of the two variables in a development process will spur entrepreneurship intention and action, as indicated in Figure 6.72.

The relationship between the two variables measured in the study and Theory U indicated that the participants’ entrepreneurial behaviour was affected positively, as indicated in the correlation coefficient analysis. It indicated that there was a relationship between the social technology theory applied and the participants’ ESE and IEO development in different stages of the learning, as depicted in Figure 6.72.

The figure indicates that opportunity identification ESE and Theory U (co-initiation) in the training implies that the participants were transformed from students to youth entrepreneurs with eagerness to learn and innovate, which developed their proactiveness to decide to become an entrepreneur through the SALAR method. This was inspired in the third and fourth weeks of the training and revealed in the correlation analysis regarding Research Question 1 in Table 6.19 and the profile plots in Figure 6.73 that indicate the progressive development from Round 1 to Round 3 at 4.2, 4.89 and 5.31 respectively. This implied that opportunity identification and co-initiation can predict IEO innovation and proactivity showing that they are related to each other in the process of entrepreneurship development (Van der Westhuizen, 2018; Ramkissor & Cassim, 2013). This is perceived to be a response to external stimuli.

Relationship self-efficacy and Theory U (co-sensing and co-inspiring) indicate the collectivism of the learner to explore into the future to see the bigger picture through the reactive stages of Theory U that build their relationship ESE. Pillay (2015) posits that Theory U’s co-sensing can build and shape relationships with relevant stakeholders to understand the entrepreneurial ecosystem as an undivided reality. This provided the learners the opportunity to relate together to inspire themselves about innovation and creativity in which they were motivated to prototype what was learnt for future evolving in the entrepreneurship ecosystem. Theory U’s co-sensing and co-inspiring serve as drivers to work as a team of like-minded, like-hearted and

like-willed individuals. Their coming together indicated that no one can be an island in entrepreneurship; there must be interconnectivity and integratedness of the one and whole for action. Table 6.20 revealed a correlation between REL_ESE and IEO propensities (innovation and proactivity) that enabled the participants to develop their proactivity after having learnt how to relate with the outside world. Figure 6.74 indicated the profile plots from Rounds 1 to 3 with progressive development at 4.62, 5.23 and 5.58, which indicated that REL-ESE can predict IEO even though the participants were unable to effectively seize the opportunity to relate with the stakeholders during the training.

Managerial self-efficacy and Theory U (co-inspiring). This revealed that from stage 1 to the end of the training, managerial skill was learnt during every session to build future leaders in entrepreneurship. The participants developed their relationships, innovation and proactivity to be able to create, evolve and manage for sustainability. This stage could be perceived as first mover of advantage in the pursuit of new opportunities to act in anticipation of a new future emerging (Zellweger & Sieger, 2012). This indicated that Theory U develops future leaders in different stages of its application, as depicted in Figure 6.72 above, hence the decision by some of the participants to venture immediately after the training. This was an indication that learning had taken place, the participants were transformed and were ready to act on their intentions. This implies that the generative stages of Theory U's effect on the participants' transformation indicated a correlation between MNG_ESE and IEO propensities (innovation and proactivity). Table 6.21 and the profile plot in Figure 6.73 indicated progressive development at 4.16, 5.01 and 5.53 from Rounds 1 to 3 respectively. The indication was that MNG_ESE can predict IEO for entrepreneurship action.

Tolerance self-efficacy and Theory U (co-inspiring). This established that a relationship existed between the ESE constructs and the theory that developed the participants' proactivity and innovation in a bid to create and evolve. This was learnt during the SALAR training in weeks 7 to 13 in which the prototype was exhibited for incubate to identify potential youth entrepreneurs to be supported and nurtured to fruition. This is an indication of how the relationship and the theory affect learning and contribute to entrepreneurship in theory and in practice.

It is instructive to note that the participants' entrepreneurial development occurred at every stage of the training, which was revealed in Figures 6.72 and 6.73 (at 4.17, 5.12 and 5.59) as the progressive development was shown in spiral dynamic form; meaning that no stages of the learning could be left out because of its nondualism development philosophy.

6.12 TEST OF HYPOTHESES AND RESEARCH OBJECTIVES

Five hypotheses were formulated and tested in a way that ensured the research objectives were met using regression analysis.

6.12.1 Hypothesis One (H1)

H1 was formulated to examine the relationship between opportunity identification self-efficacy and the participants' individual entrepreneurial orientation during the SHAPE training project at the University of KwaZulu-Natal. To test this hypothesis, the OI_ESE and IEO scales were adapted to measure the two constructs. The hypothesis was tested based on the three rounds of the project and in line with Research Objective 1.

H1: There is a significant relationship between opportunity identification entrepreneurial self-efficacy and the participants' individual entrepreneurial orientation propensities.

Table 6.33: Hypothesis 1, regression analysis for OI_ESE (Rounds 1-3)

Variables	ROUNDS	R	R SQUARE	ADJUSTED R SQUARE	F	BETA	T	P
CONSTANT	ROUND 1	0.594a	0.353	0.287	5.321		10.747	0.177b
OI_ESE						0.293	1.374	0.177
CONSTANT	ROUND 2	0.528 a	0.279	0.201	3.571		7.980	0.427 b
OI_ESE						0.155	0.803	0.112
CONSTANT	ROUND 3	0.699 a	0.488	0.434	9.062		6.861	0.010 b
OI_ESE						0.542	2.706	0.314

Table 6.33 presents the regression model. In Round 1, OI_ESE indicates an R square of 0.353 and adjusted R square of 0.287. This means that the model (opportunity identification) predicted 28.7% of the variations in the participants' IEO in the SHAPE training project. There was a significant relationship at $p > 0.05$ between the construct of OI_ESE's independent variable and IEO propensities in Round 1. In Round 2, an R square of 0.279 and adjusted R square of 0.201 indicated that the model predicted 20.1% of the variation in the participants' IEO in the training project. This indicated that there was a significant relationship at $p < 0.05$ between the constructs in Round 2. In Round 3, an R square of 0.488 and adjusted R square of 0.434 indicated that the model predicted 43.4% of the variation in the participants' IEO in the training project. This indicated that there was a significant relationship at $p < 0.05$ between the constructs in Round 3.

The results obtained in the three rounds of the project supported the hypothesis that there was a relationship between opportunity identification and the participants' IEO propensities for development, but this relationship was not significant in Round 2. The standardised Beta and corresponding P values for opportunity identification and IEO propensities in the three rounds were: $\beta = 0.293$, $p > 0.05$; $\beta = 0.155$, $p > 0.05$ and $\beta = 0.542$, $p < 0.05$ respectively and were positively associated with the training model. With these results, one could conclude that OI_ESE served as a predictor of IEO development in the participants and was able to inform intention and action. Considering the significance of each round of the independent variable that was utilised, the results revealed ($t = 1.374$, $p > 0.05$; $t = 0.803$, $p > 0.05$ and $t = 2.706$, $p > 0.05$) (t-statistics) that the participants' ESE to search for or identify opportunities for venture creation upon graduation had no significant effect on their individual entrepreneurial orientation preference for venture creation in the three rounds. This finding corresponded with that of Nyamuda (2018), who observed that critical reflection increased the opportunity identification self-efficacy of students in a similar training project. Based on this result, H1, which stated that there is a significant relationship between opportunity identification entrepreneurial self-efficacy and individual entrepreneurial orientation, is rejected.

6.12.2 Hypothesis Two (H2)

H2 was formulated to investigate whether there is a significant association between relationship entrepreneurial self-efficacy and the participants' individual entrepreneurial orientation during the SHAPE training project at the University of KwaZulu-Natal. To test this hypothesis, the REL_ESE and IEO scales were adapted to measure the two constructs. The

hypothesis was tested using the data gathered in the three rounds of the project in line with the Research Objective 2.

H2: There is a significant association between relationship entrepreneurial self-efficacy and individual entrepreneurial orientation propensities.

Table 6.34: Hypothesis 2, regression analysis for REL_ESE (Rounds 1-3)

Variables	ROUNDS	R	R SQUARE	ADJUSTED R SQUARE	F	BETA	T	P
CONSTANT	ROUND 1	0.594a	0.353	0.287	5.321		10.747	0.076b
REL_ESE						0.115	0.593	0.557
CONSTANT	ROUND 2	0.528 a	0.279	0.201	3.571		7.980	-0.018 b
REL_ESE						-0.031	-0.127	0.899
CONSTANT	ROUND 3	0.699 a	0.488	0.434	9.062		6.861	-0.043 b
REL_ESE						-0.128	-0.368	0.715

Table 6.34 presents the regression model of REL_ESE, which indicates an R square of 0.353 and adjusted R square of 0.287 in Round 1. This indicates that the model (relationship self-efficacy) predicted 28.7% of the variations in the participants' IEO in the SHAPE training project. It therefore indicated that there was no significant relationship at $p > 0.05$ between the constructs of REL_ESE and IEO. In Round 2, an R square of 0.279 and adjusted R square of 0.201 indicated that the model predicted 20.1% of the variation in the participants' IEO during the training project. This indicated that there was no significant relationship $p > 0.05$ between the constructs in Round 2. In Round 3, an R square of 0.488 and adjusted R square of 0.434 indicated that the model predicted 43.4% of the variation in the participants' IEO during the training project. It therefore revealed that there was no significant relationship at $p > 0.05$ between the constructs in Round 3. The results from the three rounds support the Pearson product-moment correlation coefficient conducted earlier, which indicated that there was an insignificant relationship between REL_ESE and IEO development propensities. The standardised Beta and corresponding P values for relationship self-efficacy and IEO in the three rounds were $\beta = 0.115$, $p > 0.05$; $\beta = -0.031$, $p > 0.05$ and $\beta = -0.128$, $p < 0.05$ respectively.

Considering the significance of each round of the independent variable used, the result revealed t-statistics assumption that participants' efficacy to relate with the stakeholders could change their orientation for venture creation upon graduation. Relationship self-efficacy had no significant effect on their individual entrepreneurial orientation preference for entrepreneurial intention or action ($t = 10.747, p > 0.05$; $t = 7.980, p > 0.05$ and $t = 6.861, p > 0.05$) in the three rounds of the training programme respectively. This result was consistent with the view of Fayomi (2017) who submitted that students' internship can improve their chances for employment upon graduation with effect on the preference for a government or private job rather than venture creation. One can conclude from the three rounds of results that REL_ESE was not a predictor of participants' IEO development; therefore, the research objective which sought to investigate the association of REL_ESE and IEO of the training participants was achieved.

6.12.3 Hypothesis Three (H3)

H3 was formulated to ascertain if there was a significant relationship between managerial entrepreneurial self-efficacy and the participants' individual entrepreneurial orientation in the SHAPE training project at the University of KwaZulu-Natal. To test the hypothesis, the MNG_ESE and IEO scales were adapted to measure the two constructs. The hypothesis was tested using the data obtained in the three rounds of the project in line with the third objective of the study.

H3: There is a significant relationship between managerial entrepreneurial self-efficacy and individual entrepreneurial orientation

Table 6.35: Hypothesis 3, regression analysis for MNG_ESE (Rounds 1-3)

Variables	ROUNDS	R	R SQUARE	ADJUSTED R SQUARE	F	BETA	T	P
CONSTANT	ROUND 1	0.594a	0.353	0.287	5.321		10.747	0.130b
MNG_ESE						0.204	1.008	0.320
CONSTANT	ROUND 2	0.528 a	0.279	0.201	3.571		7.980	0.072 b
MNG_ESE						0.185	0.512	0.612
CONSTANT	ROUND 3	0.699 a	0.488	0.434	9.062		6.861	-0.203 b
MNG_ESE						-0.690	-0.748	0.089

Table 6.36 presents the regression model of MNG_ESE, which indicates an R square of 0.353 and adjusted R square of 0.287. This indicated that the model (managerial self-efficacy) predicted 28.7% of the variations in the participants' IEO in the SHAPE training project. There was no significant relationship at $p > 0.05$ between the constructs of MNG_ESE and IEO. In Round 2, an R square of 0.279 and adjusted R square of 0.201 meant that the model predicted 20.1% of the variation in the participants' IEO during the training project. The table indicated that there was no significant relationship between the constructs at $p > 0.05$. In Round 3, the R square of 0.488 and adjusted R square of 0.434 meant that the model predicted 43.4% of the variation in the participants' IEO during the training project. The table indicated that there was no significant relationship between the constructs at $p > 0.05$ in Round 3. The results in the three rounds support the hypothesis that there was an insignificant relationship between MNG_ESE and IEO development. The standardised Beta and corresponding P values for MNG_ESE in the three rounds were $\beta = 0.204$, $p > 0.05$; $\beta = 0.185$, $p > 0.05$ and $\beta = -0.690$, $p < 0.001$ respectively, which made a positive contribution to the model. With these results, one could conclude that MNG_ESE could not serve as a predictor of IEO development in participants, therefore, the hypothesis also affirms the objectives set in chapter one.

Given the significance of the relationship of the independent variable that was revealed in each of the rounds, the result revealed the following t-statistics - $t = 1.008$, $p > 0.05$; $t = 0.512$, $p > 0.05$ and $t = -0.748$, $p > 0.05$ that leadership charisma and efficacy of the participants to manage and grow a business that can influence their orientation for venture creation and management upon graduation had no significant effect on their individual entrepreneurial orientation. The

finding here supports the view of Moldoveanu and Narayandas (2019), who suggested that strategy is essential to enhance leadership perception to advance maximum output levels in any business or venture management. The result was that the research objective that aimed to ascertain if there was a significant relationship between managerial entrepreneurial self-efficacy and individual entrepreneurial orientation was achieved.

6.12.4 Hypothesis Four (H4)

H4 was formulated to investigate whether there was a significant relationship between tolerance entrepreneurial self-efficacy and the individual entrepreneurial orientation of the participants in the SHAPE training project at the University of KwaZulu-Natal. To test the hypothesis, the TOL_ESE and IEO scales were adapted to measure the two constructs. The hypothesis was tested using the data obtained in the three rounds of the project in line with the fourth objective of the study.

H4: There is a significant relationship between tolerance entrepreneurial self-efficacy and individual entrepreneurial orientation

Table 6.36: Hypothesis 4, regression analysis for TOL_ESE (Rounds 1-3)

Variables	ROUNDS	R	R SQUARE	ADJUSTED R SQUARE	F	BETA	T	P
CONSTANT	ROUND 1	0.594a	0.353	0.287	5.321		10.747	0.051b
TOL_ESE						0.077	0.393	0.696
CONSTANT	ROUND 2	0.528 a	0.279	0.201	3.571		7.980	0.153 b
TOL_ESE						0.282	1.099	0.279
CONSTANT	ROUND 3	0.699 a	0.488	0.434	9.062		6.861	-0.471 b
TOL_ESE						0.890	4.055	0.000

Table 6.38 presents the regression model and in Round 1, TOL_ESE indicated an R square of 0.353 and adjusted R square of 0.287. This revealed that the model (tolerance self-efficacy) predicted 28.7% of the variations in the participants' IEO in the SHAPE training project. There was no significant relationship at $p > 0.05$ between the constructs of the TOL_ESE independent variable and IEO. In Round 2, an R square of 0.279 and adjusted R square of 0.201 meant that

the model predicted 20.1% of the variation in the participants' IEO during the training project and that there was no significant relationship between the constructs at $p > 0.05$. In Round3, the R square of 0.488 and adjusted R square of 0.434 indicated that the model predicted 43.4% of the variation in the participants' IEO during the training project and that there was a significant relationship between the constructs at $p < 0.001$. The results obtained in the three rounds of the project revealed that there was a progressive development from Round 1 to Round 3 in support of the hypothesis that there was a relationship between TOL_ESE and IEO development in Round 1 and 2 (although not very significant), while there was a positive significant relationship in Round 3. The standardised Beta and corresponding P values for tolerance ESE and IEO in the three rounds were $\beta = 0.077$, $p > 0.05$; $\beta = 0.282$, $p > 0.05$ and $\beta = 0.890$, $p < 0.001$ respectively. This shows a significant relationship between the social technology applied contributing to the training model that affect participants progressive development.

Given the significance of each round of the independent variable used, the result revealed t-statistics at $t = 0.393$, $p > 0.05$; $t = 1.099$, $p > 0.05$ and $t = 4.055$, $p < 0.001$. This indicated that the tolerance ability to become a manager in any situation for the business sustenance and growth that can influence their entrepreneurial momentum had a significant effect on their individual entrepreneurial orientation in the third round of the training. The result of the regression model was consistent with the outcome of the correlation conducted earlier, which indicated a correlation coefficient between tolerance and IEO constructs in the participants in the training project. This implied that TOL_ESE served as a predictor of IEO development in the participants. The result was that the research objective, which aimed to investigate if there was a significant relationship between tolerance entrepreneurial self-efficacy and individual entrepreneurial orientation was achieved.

6.12.5 Hypothesis Five (H 5)

H5 was formulated to determine if there was a significant relationship between the entrepreneurial self-efficacy and individual entrepreneurial orientation of the participants in the training project at the University of KwaZulu-Natal. To test the hypothesis, the ESE and IEO scales were adapted to measure the two variables. The hypothesis was tested using the data obtained in the three rounds of the project in line with the fifth objective of the study.

H5: There is a significant relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation

Table 6.37: Hypothesis 5, regression analysis for ESE and IEO (Rounds 1-3)

Variables	ROUNDS	R	R SQUARE	ADJUSTED R SQUARE	F	BETA	T	P
CONSTANT	ROUND 1	.583a	0.340	0.325	21.664		11.214	0.583b
ESE						0.583	4.654	0.000
CONSTANT	ROUND 2	0.519a	0.269	0.251	14.732		9.263	0.519 b
ESE						0.519	3.838	0.000
CONSTANT	ROUND 3	.505a	0.255	0.237	14.045		7.435	0.505 b
ESE						0.505	3.748	0.001

Table 6.39 presents the regression model and in Round 1, ESE indicated an R square of 0.340 and adjusted R square of 0.325. This indicated that the model (entrepreneurial self-efficacy) predicted 32.5% of the variations in the participants' IEO in the training project. There was a significant relationship (at $p < 0.001$) between the ESE and IEO. In Round 2, an R square of 0.269 and adjusted R square of 0.251 obtained indicated that the model predicted 25.1% of the variation in the participants' IEO during the training project and also indicated that there was a significant relationship between the constructs at $p < 0.001$. Round 3 indicated an R square of 0.255 with adjusted R square of 0.237, which indicated that the model predicted 23.7% of the variation in the participants' IEO in the training project and that there was a significant relationship between the constructs at $p < 0.001$. The results obtained in the three rounds revealed that there was progressive development from Round 1 to Round 3 of the project in support of the hypothesis that there was a significant relationship between ESE and IEO development in Round 1 to 3. The standardised Beta and corresponding P values for ESE and IEO in the three rounds were $\beta = 0.583$, $p < 0.001$; $\beta = 0.519$, $p < 0.001$ and $\beta = 0.505$, $p < 0.001$ respectively. This made a positive contribution to the training model.

Given the significance of each round of the independent variable used, the result revealed t-statistics at $t = 4.654$, $p < 0.001$; $t = 3.838$, $p < 0.001$ and $t = 3.748$, $p < 0.001$. This indicated that entrepreneurial self-efficacy as a variable positively affected the participants' individual entrepreneurship momentum to be innovative, creative, launch a business and grow and sustain that business upon graduation. The research objective that aimed to ascertain whether or not there was a significant relationship between entrepreneurial self-efficacy and individual entrepreneurial orientation was achieved. The result of the regression model was consistent

with the outcome of the correlation coefficient conducted earlier in which it was revealed that there was a correlation between ESE and IEO constructs in the participants in the training project. On this basis, it could be concluded that ESE served as a predictor of IEO development in the participants.

6.14 MULTIVARIATE TESTING OF THE CONSTRUCTS

6.14.1 OI_ESE Multivariate Test (H^1)

H1: There was a significant relationship between opportunity identification entrepreneurial self-efficacy and individual entrepreneurial orientation following participants' attendance of the SALAR programme.

After the hypothesis testing, multivariate tests to evaluate the significance of the development were run. The results are presented in Table 6:30.

Table 6.38: Multivariate tests - OI_ESE (Rounds 1-3)

Effect		Value	F	Hypothesis df	Error df	Sig	Partial Eta Squared	Noncent Parameter	Observed Power
OI-ESE	Pillai's Trace	0.451	21.742b	2.000	53.000	0.000	0.451	43.485	1.000
	Wilks' Lambda	0.549	21.742b	2.000	53.000	0.000	0.451	43.485	1.000
	Hotelling's Trace	0.820	21.742b	2.000	53.000	0.000	0.451	43.485	1.000
	Roy's Largest root	0.820	21.742b	2.000	53.000	0.000	0.451	43.485	1.000

- a. Design: Intercept
- b. Exact statistic
- c. Computed using alpha = .05

Table 6.40 presents the multivariate test result pertaining to OI_ESE. There was a statistically significant increase in progressive development and orientation due to opportunity identification entrepreneurial self-efficacy after the SHAPE action learning training project. After conducting multivariate tests to evaluate the significance of the change, the result was presented in Table 6.40 Wilk's $\Lambda = 0.549$, $F(2,53.0) = 21.742$, $p < 0.05$, partial $\eta^2 = 0.451$.

Mauchly's test of Sphericity is run if the Wilk's Lambda and other multivariate tests were significant to evaluate if the variance of differences of all pairs of groups are equal (Grande, 2016). Table 6.41 presents the results.

Table 6.39: Mauchly's Test of Sphericity-OI_ESE (Rounds 1-3)

Within Subjects Effect	Mauchly's W	Approx Chi-Square	dif	Sig	Epsilon		
					Greehouse-Geisser	Huynh-Feldt	Lower-bound
OI_ESE	0.978	1.191	2	0.551	0.978	1.000	0.500

Table 6.41 presents Mauchly test of Sphericity, which indicated that the assumption of Sphericity had not been violated ($\chi^2(2) = 0.978$, $p = 0.551$) and the test of within subjects' effects were therefore performed and the results are presented in Table 6.42.

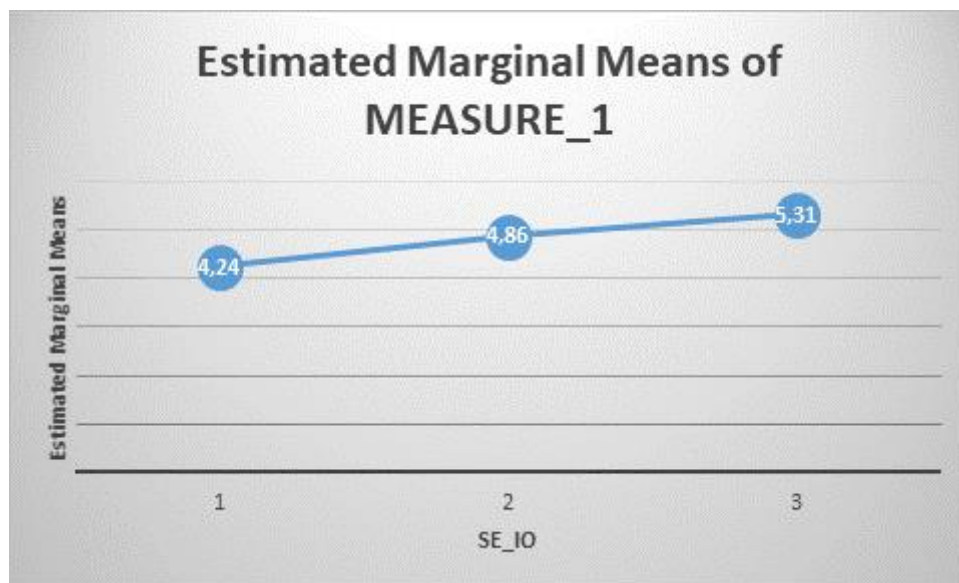
Table 6.40: Test of between Subjects' Effects OI_ESE (Rounds 1-3)

Source	Sum of squares	dif	Mean Square	F	Sig	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	3808.460	1	3808.460	2136.001	0.000	0.451	2136.001	1.000
Error	96.281	54	1.783					

a. Computed using alpha = .05

Table 6.42 presented the results of the test of between subjects' effects on OI_ESE. There were significant relationships between subjects' effect of opportunity self-efficacy on progressive development and orientation scores overall, $F(1, 54) = 3808.460$, $p < 0.05$, $\eta^2 = 0.451$). This is explained further by the profile plots in Figure 6.73 hereunder.

Figure 6.73: Profile Plots – OI _ESE (Rounds 1-3)



The profile plots depicted in Figure 6.73 indicated that the mean for ESE’s progressive development improved due to the skills learnt in the course of the training from Round 1 to Round 3.

6.14.2 Relationship ESE Multivariate Test

H2: There is a significant association between relationship entrepreneurial self-efficacy and individual entrepreneurial orientation propensities.

After conducting multivariate tests to evaluate the significance of the association between the variables, the results are presented in Table 6.43.

Table 6.41: Multivariate tests REL_ESE (Rounds 1-3)

Effect		Value	F	Hypothesis df	Error df	Sig	Partial Eta Squared	Noncent Parameter	Observed Power
REL-ESE	Pillai's Trace	0.378	17.032b	2.000	56.000	0.000	0.378	34.064	1.000
	Wilks' Lambda	0.622	17.032b	2.000	56.000	0.000	0.378	34.064	1.000
	Hotelling's Trace	0.608	17.032b	2.000	56.000	0.000	0.378	34.064	1.000
	Roy's Largest root	0.608	17.032b	2.000	56.000	0.000	0.378	34.064	1.000

- a. Design: Intercept
- b. Exact statistic
- c. Computed using alpha = .05

Table 6.43 presents the multivariate test results for relationship self-efficacy. The results reveal that there was a statistically significant increase in progressive development and orientation due to relationship entrepreneurial self-efficacy after the training programme, Wilk's $\Lambda = 0.622$, $F(2,56.0) = 17.032$, $p < 0.05$, partial $\eta^2 = 0.378$.

Mauchly's test of Sphericity could be run if the Wilk's Lambda and other multivariate test were significant to evaluate if the variance of differences of all pairs of groups are equal (Grande, 2016). Table 6.44 presents the results.

Table 6.42: Mauchly's Test of Sphericity-REL_ESE (Rounds 1-3)

Within Subjects Effect	Mauchly's W	Approx Chi-Square	Df	Sig	Epsilon		
					Greehouse-Geisser	Huynh-Feldt	Lower-bound
REL_ESE	0.912	5.143	2	0.076	0.919	0.949	0.500

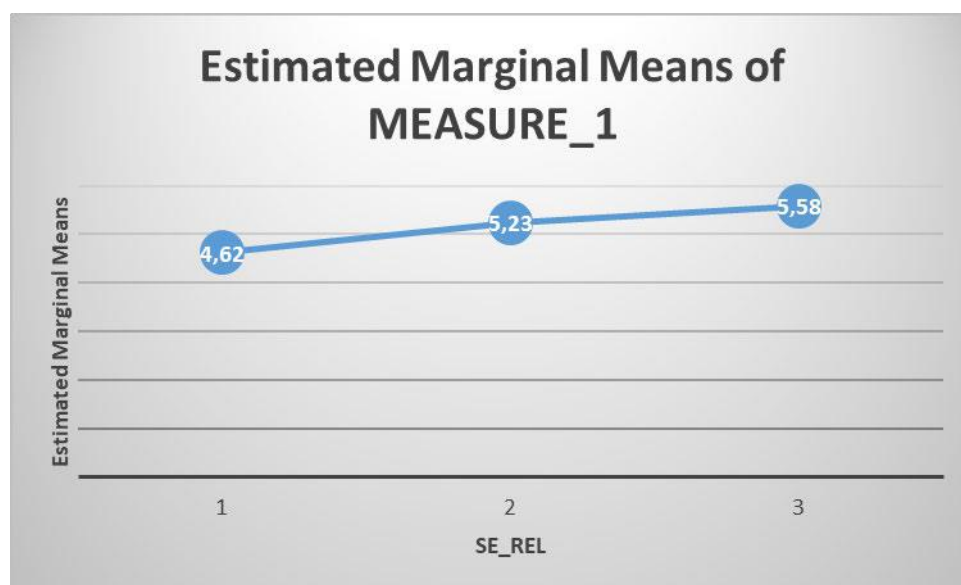
Table 6.44 presents Mauchly's test of Sphericity, which indicated that the assumption of Sphericity had not been violated ($\chi^2(2) = 0.912$, $p = 0.076$), therefore the test of within subjects' effects were performed to adjust the degrees of freedom and the result is presented in Table 6.45.

Table 6.43: Test of between Subjects' Effects REL_ESE (Rounds 1-3)

Source	Sum of squares	Df	Mean Square	F	Sig	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	4598.450	1	4598.450	1644.820	0.000	0.378	1644.820	1.000
Error	159.356	57	2.796					

a. Computed using alpha = .05

Table 6.45 presents the results of the test of between subjects' effects on REL_ESE. There was a significant relationship between subjects' effect of relationship self-efficacy on progressive development and orientation scores overall, $F(1, 57) = 4598.450$, $p < 0.05$, $\eta^2 = 0.378$). This is explained further with the profile plots in Figure 6.75.

Figure 6.74: Profile Plots- REL_ESE (Rounds 1-3)

The profile plots in Figure 6.74 indicate that the mean for progressive development improved due to REL_ESE from Round 1 to Round 3.

To evaluate the significance of the changes, the Bonferroni post hoc test results were examined and presented in the pairwise comparison in Table 6.46. The Bonferroni post hoc test is an alpha level to control for overall Type 1 error (Hair et al., 2014). These are presented in Table 6.46 for comparison.

Table 6.44: Pairwise Comparisons REL_ ESE (Rounds 1-3)

REL_ESE	Mean Difference	Std Error	95% Confidence Interval for Difference b	
			Lower Bound	Upper Bound
1	4.618	0.175	3. 4268	4.967
2	5.227	0.143	4.940	5.514
3	5.578	0.138	5.301	5.854

Based on the estimated marginal means

* The mean difference is significant at the .05 level

b. Adjusted for multiple comparisons: Bonferroni.

The post hoc comparison using Bonferroni correction indicated that the mean score from Round 1, (M = 4.613, SD = 1.318) was negatively different from Round 2 (M = 5.227, S D= 1.0912) and Round 3 (M = 5.587, SD = 1.0446). However, the mean for Round 2 was significantly different from that of Round 1

The figure indicated that learning took place progressively, the participants were developed, and this was explained through the participants' response median that indicated 'mostly confident' and 'completely confident' on the items of the construct. It also indicated the effectiveness of the training model, chosen pedagogy, technology, environment, and other learning factors that were employed for the development of youth entrepreneurship intention and action.

6.14.3 Managerial ESE Multivariate Test

H3: There is a significant relationship between managerial entrepreneurial self-efficacy and individual entrepreneurial orientation

After conducting multivariate tests to evaluate the significance of the relationship between managerial entrepreneurial self-efficacy and individual entrepreneurial orientation, the results are presented in Table 6.47.

Table 6.45: Multivariate MNG- ESE (Rounds 1-3)

Effect		Value	F	Hypothesis df	Error df	Sig	Partial Eta Squared	Noncent Parameter	Observed Power
REL-ESE	Pillai's Trace	0.601	37.681b	2.000	50.000	0.000	0.601	75.363	1.000
	Wilks' Lambda	0.399	37.681b	2.000	50.000	0.000	0.601	75.363	1.000
	Hotelling's Trace	1.507	37.681b	2.000	50.000	0.000	0.601	75.363	1.000
	Roy's Largest root	1.507	37.681b	2.000	50.000	0.000	0.601	75.363	1.000

- a. Design: Intercept
- b. Exact statistic
- c. Computed using alpha = .05

Table 6.47 presents the multivariate test result for MNG_ESE. There was a statistically significant increase in progressive development and orientation due to relationship entrepreneurial self-efficacy after the SHAPE action learning training project, Wilk's $\Lambda = 0.399$, $F(2, 50.0) = 37.681$, $p < 0.05$, partial $\eta^2 = 0.601$.

Mauchly's test of Sphericity could be run if the Wilk's Lambda and other multivariate tests were significant to evaluate whether the variance of differences of all pairs of groups are equal (Grande, 2016). Table 6.48 presents the results.

Table 6.46: Mauchly's Test of Sphericity-MNG_ESE (Rounds 1-3)

Within Subjects Effect	Mauchly's W	Approx Chi-Square	df	Sig	Epsilon		
					Greehouse-Geisser	Huynh-Feldt	Lower-bound
MNG_ESE	0.900	5.270	2	0.072	0.909	0.941	0.500

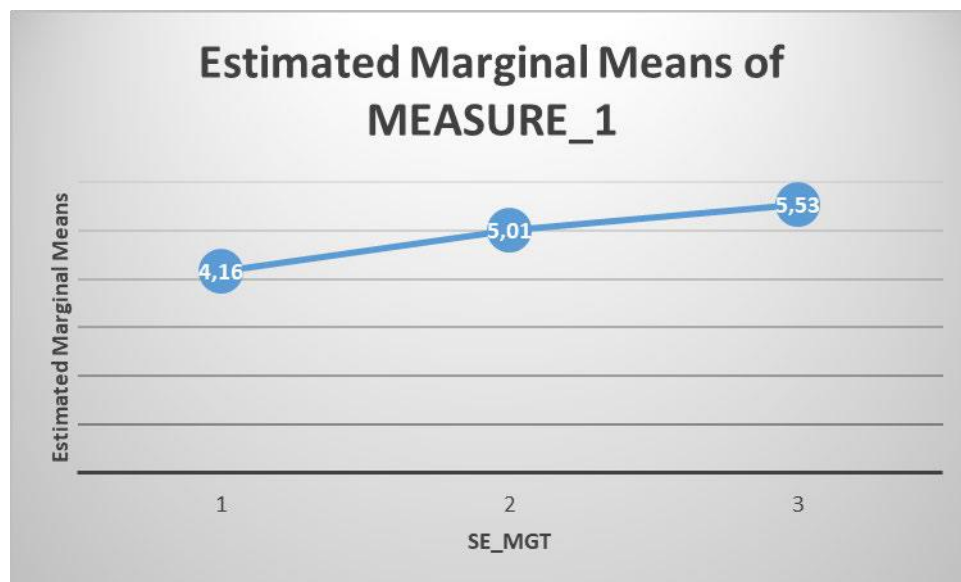
Table 6.48 presents Mauchly's test of Sphericity, which indicated that the assumption of Sphericity had not been violated ($\chi^2(2) = 0.900$, $p = 0.072$), therefore the test of within subjects' effects were performed and the result is presented in Table 6.49.

Table 6.47: Test of between Subjects' Effects on MNG_ESE (Rounds 1-3)

Source	Sum of squares	dif	Mean Square	F	Sig	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	3746.095	1	3746.095	2142.813	0.000	0.399	2142.813	1.000
Error	89,159	51	1.748					

a. Computed using alpha = .05

Table 6.49 presents the results of the test of between subjects' effects on MNG_ESE. There was a significant relationship between subjects' effect of managerial self-efficacy on progressive development and orientation scores overall, $F(1, 51) = 3746.095$, $p < 0.05$, $\eta^2 = 0.399$). This is explained further by the profile plots in Figure 6.76.

Figure 6.75: Profile Plots – MNG_ESE (Rounds 1-3)

The profile plots depicted in Figure 6.75 indicated that the mean for progressive development improved due to MNG_ESE from Round 1 to Round 3 as regards the model, SALAR and the theory that was applied indicating leadership development during the training.

To evaluate the significance of the changes, the Bonferroni post hoc test results were examined and presented in the pairwise comparison in Table 6.50.

Table 6.48: Pairwise Comparisons: MNG _ESE (Round 1-3)

MNG_ESE	Mean Difference (I-J)	Std Error	95% Confidence Interval for Difference b	
			Lower Bound	Upper Bound
1	4.161	0.131	3. 899	4.423
2	5.005	0.131	4.742	5.269
3	5.535	0.139	5.256	5.814

Based on estimated marginal means

* The mean difference is significant at the .05 level

b. Adjustment for multiple comparisons: Bonferroni.

Table 6.50 presents the post hoc comparison using Bonferroni correction, which indicated that the mean score from Round 1 ($M = 4.188$, $SD = 1.0535$) was significantly different from Round 2 ($M = 5.077$, $SD = 0.965$) and Round 3 ($M = 5.526$, $SD = 0.978$). It also revealed a significant difference in Rounds 2 to 3. This indicated that there was a significant difference in managerial self-efficacy throughout.

The participants' ESE increased progressively due to the various managerial skills that were learnt and that brought innovation in terms of products and services and the formation of business teams and business ideas in the first six weeks. This is expected to engender the development of entrepreneurship in South Africa. It could also be deduced that the application of Theory U to the learning pedagogy transformed and developed the participants from weeks 7 to 13 as shown in Figure 6.27. The participants were on the median of 'somewhat' and 'mostly confident', which indicated a high level of confidence on the part of the participants to perform well in any undertaking in line with the position taken by Bandura (2010) and Richardson (2019) in their definitions of ESE.

6.14.4 Tolerance ESE Multivariate Test

There was a significant relationship between tolerance entrepreneurial self-efficacy and individual entrepreneurial orientation following the participants' attendance in the training programme.

Multivariate tests were performed to evaluate the significance of the relationship and the results are presented in Table 6.41.

Table 6.49: Multivariate Tests TOL_ESE (Rounds 1-3)

Effect		Value	F	Hypothesis df	Error df	Sig	Partial Eta Squared	Noncent Parameter	Observed Power
TOL-ESE	Pillai's Trace	0.705	58.441b	2.000	49.000	0.000	0.295	116.882	1.000
	Wilks' Lambda	0.295	58.441b	2.000	49.000	0.000	0.295	116.882	1.000
	Hotelling's Trace	2.385	58.441b	2.000	49.000	0.000	0.295	116.882	1.000
	Roy's Largest root	2.385	58.441b	2.000	49.000	0.000	0.295	116.882	1.000

- a. Design: Intercept
- b. Exact statistic
- c. Computed using alpha = .05

Table 6.51 presents the results of the multivariate tests performed on TOL_ESE. There was a statistically significant increase in progressive development and orientation due to tolerance entrepreneurial self-efficacy after the SHAPE action learning action training project, Wilk's $\Lambda = 0.295$, $F(2, 49.0) = 58.441$, $p < 0.05$, partial $\eta^2 = 0.705$.

Mauchly's test of Sphericity could be run if the Wilk's Lambda and other multivariate tests were significant to evaluate whether the variance of differences of all pairs of groups are equal (Grande, 2016). Table 6.52 presents the results.

Table 6.50: Mauchly's Test of Sphericity - TOL_ESE (Rounds 1-3)

Within Subjects Effect	Mauchly's W	Approx Chi-Square	df	Sig	Epsilon		
					Greehouse-Geisser	Huynh-Feldt	Lower-bound
TOL_ESE	0.979	1.060	2	0.589	0.979	1.000	0.500

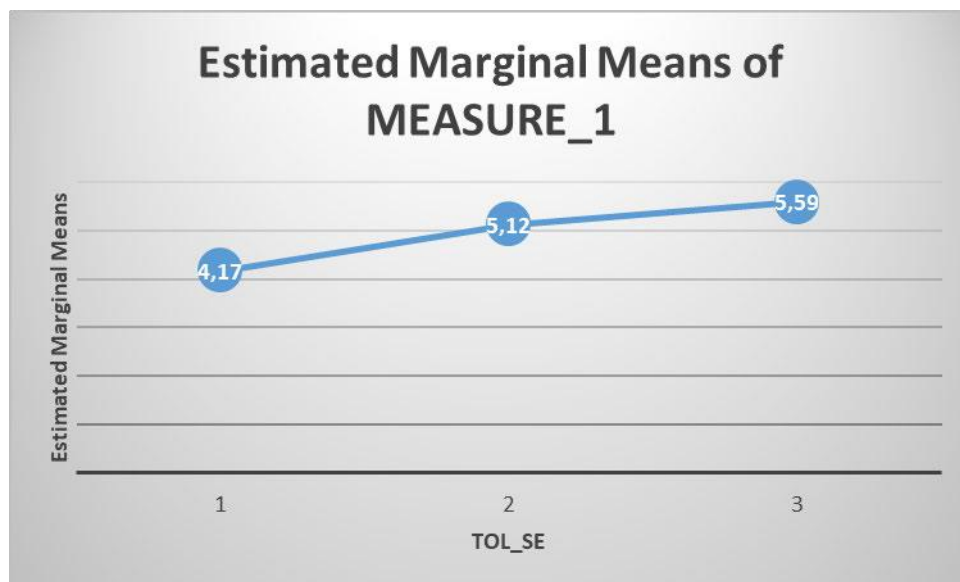
Table 6.52 presents Mauchly's test of Sphericity, which indicated that the assumption of Sphericity had not been violated ($\chi^2(2) = 0.979$, $p = 0.589$), therefore the test of within subjects' effects was performed and the result is presented in Table 6.53.

Table 6.51: Test of between Subjects' Effects TOL_ESE (Rounds 1-3)

Source	Sum of squares	dif	Mean Square	F	Sig	Partial Eta Squared	Noncent. Parameter	Observed Power
Intercept	3758.370	1	3758.370	2236.044	0.000	0.295	2236.044	1.000
Error	84.041	50	1.681					

a. Computed using alpha = .05

Table 6.53 presents the results of the test of between subjects' effects on TOL_ESE. There was a significant relationship between the subjects' effect of tolerance self-efficacy on progressive development and orientation scores overall, $F(1, 50) = 3758.370$, $p < 0.05$, $\eta^2 = 0.295$). This is explained further by the profile plots in Figure 6.77.

Figure 6.76: Profile Plots – TOL -ESE (Rounds 1-3)

The profile plots depicted in Figure 6.76 indicated that the mean for progressive development improved due to TOL_ESE development because of the confidence built in the participants by the facilitators and indicated the correlation coefficient from Round 1 to Round 3.

To evaluate the significance of the changes, the Bonferroni post hoc test results were examined and presented in the pairwise comparison in Table 6.54. The Bonferroni post hoc test is an alpha adjustment of the selected alpha level to control for overall Type 1 error (Hair et al., 2014).

Table 6.52: Pairwise Comparisons: TOL ESE (Rounds 1-3)

TOL_ESE	Mean Difference	Std Error	95% Confidence Interval for Difference b	
			Lower Bound	Upper Bound
1	4.166	0.130	3.906	4.426
2	5.116	0.137	4.840	5.392
3	5.587	0.123	5.341	5.833

Based on estimated marginal means

* The means difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 6.54 presents the post hoc comparison pairwise TOL_ESE using the Bonferroni correction to indicate the mean score. Round 1 ($M = 4.081$, $SD = 0.948$) was progressively significantly different in Rounds 2 and 3 at $M = 5.052$, $SD = 0.980$ and $M = 5.514$, $SD = 0.866$. This indicated that there was a significant difference in relationship self-efficacy throughout the three rounds. The participants were progressively developed through their participation in the training programme in Rounds 2 and 3. It was observed that the participants could relate, tolerate, persevere, and build their own business group, partner with like minds, hearts and wills as well as take calculated risks and embrace failure related to IEO development. This development may be attributed to the quality and wealth of experience of the facilitators, the entrepreneurial facilities that were available and the willingness of the participants to develop themselves.

6.14.5 ESE Multivariate Test

H5: There is a significant relationship between entrepreneurial self-efficacy and the individual entrepreneurial orientation of the participants following their attendance of the training programme.

After conducting multivariate tests to evaluate the significance of the relationship, the results are as presented in Table 6.55.

Table 6.53: Multivariate Tests ESE (Rounds 1-3)

Effect		Value	F	Hypothesis df	Error df	Sig	Noncent Parameter	Observed Power
ESE	Pillai's Trace	0.666	41.872b	2.000	42.000	0.000	83.744	1.000
	Wilks' Lambda	0.334	41.872b	2.000	42.000	0.000	83.744	1.000
	Hotelling's Trace	1.994	41.872b	2.000	42.000	0.000	83.744	1.000
	Roy's Largest root	1.994	41.872b	2.000	42.000	0.000	83.744	1.000

- a. Design: Intercept
- b. Exact statistic
- c. Computed using alpha = .05

Table 6.55 presents the results of the multivariate test on ESE. There was a statistically significant increase in progressive development and orientation due to the effects of entrepreneurial self-efficacy on participants in the SHAPE action learning project, Wilk's $\Lambda = 0.633$, $F(2, 46.0) = 13.343$ $p < 0.01$.

Mauchly's test of Sphericity could be run if the Wilk's Lambda and other multivariate tests were significant to evaluate whether the variance of differences of all pairs of groups are equal (Grande, 2016). Table 6.56 presents the results.

Table 6.54: Mauchly's Test of Sphericity - Entrepreneurial self-efficacy (Rounds 1-3)

Within Subjects Effect	Mauchly's W	Approx Chi-Square	dif	Sig	Epsilon		
					Greenhouse-Geisser	Huynh-Feldt	Lower-bound
ESE	0.948	2.228	2	0.328	0.951	0.994	0.500

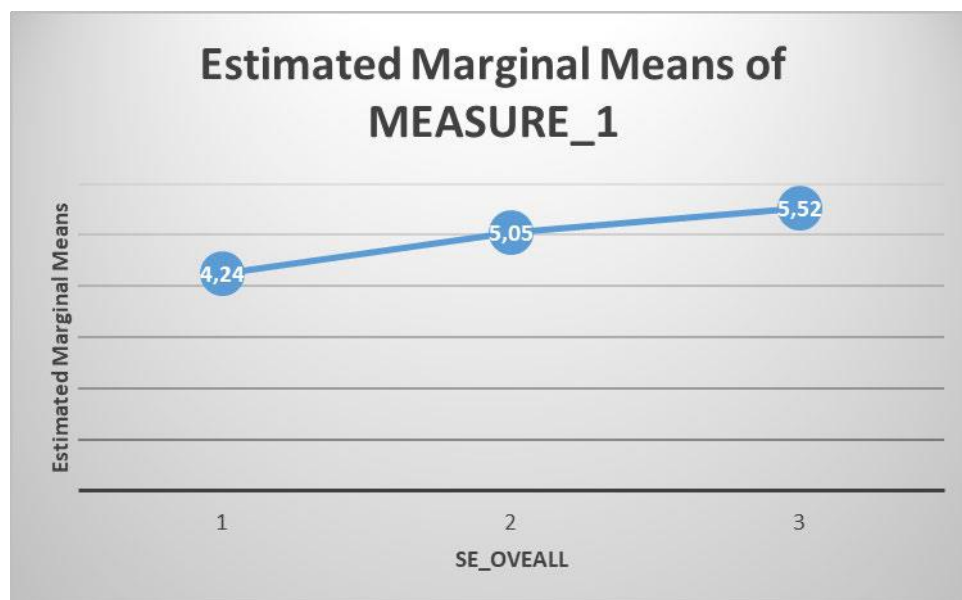
Table 6.56 presents the results of Mauchly's test of Sphericity, which indicated that the assumption of Sphericity had not been violated ($\chi^2(2) = 0.948$, $p = 0.328$). Therefore, the test of within subjects' effects was performed and the result is presented in Table 6.57.

Table 6.55: Test of between Subjects' Effects Entrepreneurial self-efficacy (Rounds 1-3)

Source	Sum of squares	dif	Mean Square	F	Sig	Noncent. Parameter	Observed Power
Intercept	3218.082	1	3218.082	2163.344	0.000	2163.344	1.000
Error	63.965	43	1.488				

a. Computed using alpha = .05

Table 6.57 presented the results of the test of between subjects' effects on entrepreneurial self-efficacy. There was a significant relationship between subjects' effect of entrepreneurial self-efficacy on progressive development and orientation scores overall, $F(1, 43) = 3218.082$, $p < 0.000$). This is explained further by the profile plots depicted in Figure 6.78.

Figure 6.77: Profile Plots – ESE (Rounds 1-3)

The profile plots depicted in Figure 6.77 indicated that the mean for progressive development improved due to entrepreneurial self-efficacy development as a predictor of entrepreneurship action due to behavioural change and individual personal traits to entrepreneurship from Round 1 to Round 3.

To evaluate the significance of the changes, the Bonferroni post hoc test results were examined and presented in the pairwise comparison in Table 6.58.

Table 6.56: Pairwise Comparisons: ESE (Rounds 1-3)

ESE	Mean	Std Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	4.244	0.126	3.991	4.498
2	5.047	0.127	4.790	5.304
3	5.521	0.140	5.238	5.804

Based on estimated marginal means

* The means difference is significant at the 0.5 level.

b. Adjustment for multiple comparisons: Bonferroni.

Table 6.58 presents the post hoc comparison ESE using the Bonferroni correction. This indicated the mean score with progressive development from Round 1 to 3 was at ($M = 4.248$, $SD = 0.900$), ($M = 5.086$, $SD = 0.872$) and ($M = 5.478$, $SD = 0.875$). The training indicated a significant development on entrepreneurship self-efficacy and informed the transformation of individual entrepreneurial orientation through the application of the five stages of Theory U from Round 2 to Round 3 to develop the participants' ESE skills. It revealed that classroom teaching was used as a foundation in the training programme affirming the nondualism of the system, hence the median choice of undecided, which was mostly recorded in the first round of all the constructs because the participant did not really know what entrepreneurship entailed after only being exposed to classroom teaching. The training developed and exposed the participants to different learning pedagogies in the hub from Round 2 to Round 3 and introduced them to practitioners in the entrepreneurship sector. Figure 6.42 revealed Theory U as an ideal social transformative technology that developed the future leaders and provided them with the necessary skills.

6.15 SUMMARY

This chapter presented the data analyses obtained from the SHAPE project participants in collaboration with this research. The presentation included descriptive analyses, analyses of variance and correlation analyses of the various factors' effects on students' entrepreneurial development. The results were interpreted, and the findings indicated that ESE had a significant influence on students' individual entrepreneurial orientation with the application of Theory U in a systemic action learning action research training project. The results indicated that application of Theory U and the systemic action learning action research model for skill

acquisition through various learning pedagogies is beneficial for youth entrepreneurial development in the South African context. The result in the first round of the project indicated that theoretical and abstract teaching in a classroom is usually employed to teach entrepreneurship courses rather than practical teaching, which affected the responses and participants' development before their participation in the project. This invariably influenced the graduates' choice of career after college to either be self-reliant or work for an established organisation.

An attempt was also made to compare the responses obtained in the three rounds of the project to determine the extent to which this had influenced the participants' individual entrepreneurial orientation, behavioural change, and development. The results obtained revealed that there was low or negative response to ESE and IEO factors in Round 1. Most of the respondents were 'somewhat' and 'mostly not confident' that they can identify opportunity, relate, tolerate or manage entrepreneurship activities and disagreed that they could take a risk but agreed to be innovative or proactive in trying new ideas or concepts. This implies that traditional classroom teaching did not have an entrepreneurship impact on the participants' IEO and most of them preferred to work for established organisations after completing their studies. In Rounds 2 and 3, it was discovered that there was a progressive development after some weeks of training, when the participants had come to terms with the reality of doing business. This change could be attributed to their contact with the learning pedagogy, learning environment, facilitators and equipment employed for the training that changed their IEO, behaviour and developed their career choice due to a combination of systems as part of the nondualism philosophy adopted for the study.

The results obtained from the data analysis revealed that the systemic action learning action research had significant effects on students' entrepreneurial development, contrary to the traditional teaching that served as a foundation for the progressive development. This implied that the application of the entrepreneurial education and training as a non-separated concept of entrepreneurship development in relation with nondualism had a significant effect on the participants' transformation. In the training, learning was combined with social transformative technology (Theory U) for skills acquisition and development that promoted "co" for teamwork and collaboration.

6.16 CONCLUSION

This chapter presented, analysed, and interpreted the data gathered from the longitudinal study via a structured questionnaire using descriptive statistics. The demographic data were presented and analysed using descriptive statistics such as percentages, graphs, multiple bar charts and analysis of variance while inferential statistics such as Pearson's product-moment correlation coefficient and regression analysis were used to provide answers to the research questions and test the relevant hypotheses. Also, multivariate analysis was employed to examine the progressive changes and development in the participants towards entrepreneurship intention and action. The reliability and validity of the instruments were tested using Cronbach's alpha and the results showed that the factors were reliable in all three rounds except the risk-taking construct of IEO that had a low Cronbach's alpha loading. Kolmogorov-Smirnov and Shapiro Wilk were also used for Normality tests, revealing that the data were normally distributed, which informed the adoption of a non-parametric test for further analysis. The questions loaded strongly to relevant ESE factors but somewhat low on IEO factors, as shown in appendix G. Significant progressive development was noted from Round 2 to Round 3 and, more statistically different on ESE than IEO. This can be attributed to the fear of taking risks, lack of funds to invest and 'hearsay' that nascent entrepreneurs go out of business due to a lack of entrepreneurship education. With the application of Theory U underpinning the study, it could be deduced that the SHAPE project achieved the objective of conducting the training because seventy-three (73) of the registered volunteer participants, including the consistent respondents whose data were analysed, expressed their entrepreneurial intention to act at the end of the project. This implies that the analysed participants with a few others were able to develop their career as entrepreneurs (Murray and O'Fallon, 2020).

The participants were optimistic that the application of the systemic action learning action research pedagogy had transformed their lives by means of the model that was developed, the nondualism philosophy, various types of learning content, activities, technology, facilitators, the environment and Theory U propensities that were employed for the training project. The Theory U application enhanced the participants' exploration of the future and allowed them to see the bigger picture of life if they developed their skills and knowledge and moved away from their fragmented perceptions to see the whole (Darso, 2013). It was observed from the response scale that most of the respondents opted for "somewhat confident" as a response to most questions, thus revealing their confidence level relevant to their entrepreneurship intention and action. The repeated measure applied in the study validated the consistence of the instrument and identified a low reliability on a risk-taking construct of IEO which was identified to be as a result of the fear of unknown of what the future of doing business holds. The positive transformation that was achieved contradicts some literature that entrepreneurship needs not be learnt and that South African youth lack the necessary acumen to engage in profitable venture creation, unlike

their counterparts in developed countries (Kelley, Singer & Herrington, 2015). The analyses in this study revealed that the youth in South Africa are now developing their ESE propensities to become entrepreneurial (Hulsink & Koek, 2014). This is similar to a study that revealed studentpreneurs progressive development of ESE and their intention to create ventures (Van der Westhuizen, 2016; Nyamuda, 2019).

CHAPTER SEVEN

DISCUSSION AND FRAMEWORK SYNTHESIS

7.1 INTRODUCTION

This research aimed to develop students' and youth's entrepreneurship self-efficacy and individual entrepreneurial orientation in a South African University. This chapter presents a discussion of the analyses of the research findings in relation to the quantitative data presented in Chapters 5 and 6. A strong pedagogical method was explored with the application of the developed training model and Theory U in a systemic action learning action research project "SHAPE" at the University of KwaZulu-Natal, South Africa. The primary aim of this chapter was to establish if the objectives that were formulated were achieved, if the research questions were answered and the stated hypotheses were confirmed using Pearson's product-moment correlation coefficients and regression analysis. It also explained the extent to which the findings of the study confirmed or refuted previous studies in the field of entrepreneurship.

The discussion of the findings focused on the role performed by the transformative social technology training method (SHAPE) in the context of developing ESE and students' entrepreneurial culture in the HEIs in a South African context. It also showed the effect of action learning action research (training) and the traditional method of learning (classroom teaching) on the behavioural change of the participants in the project towards entrepreneurship. The findings associated with the significance of the entrepreneurial self-efficacy and individual entrepreneurial orientation constructs in the context of developing participants' skills in the universities were also discussed. This chapter also provides insights into various discrepancies in the previous studies regarding the extent to which ESE and IEO affect entrepreneurial intention. The findings of this research provide contribution to knowledge in both theory and practice such as importance of the developed framework and training model for entrepreneurship training and development in higher educational institutions.

7.2 LESSONS FROM THE RESEARCH FINDINGS

The main objectives of the research were to examine the effect of entrepreneurial self-efficacy propensities on individual entrepreneurial orientation with the application of Theory U in a systemic action learning action research and the implication on the development of students' individual entrepreneurial orientation. This study's findings revealed that the present practice

and paradigm shift from traditional teaching to entrepreneurial training affected skills impartation, learning behaviour, development of an entrepreneurship career and the sector as a whole. The overview of the research variables synthesises with the research objectives as derived from the findings of this research is presented in Figure 7.1.

The interrelatedness of the variables as investigated in the study explained the synthesis of entrepreneurship training methods in the context of entrepreneurship development. The findings of the study revealed that individual entrepreneurial culture could be developed in an action learning action research training programme where minds, hearts and wills are open and cognitive methods are practiced. The results of the preliminary findings indicated significant influence when action learning action research and social transformative technology were applied. The learning hub, delivery strategies and interactions suggested an entrepreneurship development model for higher education institutions that proposed a paradigm shift in the approach to entrepreneurship at universities. Similarly, individual entrepreneurial orientation and intention was found to have a direct relationship with skill development obtainable through systemic action learning action research that involves “co”, building innovation, creativity, business model canvas, mentoring, role-play, business ideas and planning and prototyping.

The variables presented as a framework synthesis aligned with studies conducted by Van der Westhuizen (2016) and Nyamuda (2018), who posited that studentpreneur development could be accomplished through systemic action learning action research with the application of Theory U. The findings of the study also aligned with other studies such as those conducted by Anyebe (2014) and Costello (2016) who observed that experiential and hands-on learning are germane drivers for skills development, human capital development and socio-economic growth globally.

7.3 SUMMARY OF FINDINGS AND RECOMMENDATIONS

The literature review and theoretical framework chapters on the development of ESE and IEO indicated that extensive research has been conducted into entrepreneurship development but there is a dearth of research pertaining to the development of the two variables together across the globe, especially in higher institutions of learning and studying student entrepreneurship development by applying Theory U (Van der Westhuizen, 2018). This indicates that the impact of the Integrated Small Enterprises Development Strategy rolled out in 2005 by DTI was not felt in South Africa. The number of South Africans that have the requisite skills, knowledge

and experience to start businesses has begun to increase and was measured at 45.4% in 2017, up from 42.7% in 2013 and 23.5% in 2009 (Herrington & Kew, 2017). Despite these positive indicators, the figures have not translated into higher entrepreneurial intention and action, which sharply declined from 19.6% in 2010 to 10.9% in 2015 (GIBS, 2017). Therefore, the findings of this research as explained in Chapter 6 in relation to the research objectives, have extended the frontiers of knowledge, particularly with regard to the application of the training model and Theory U in the systemic action learning action research. This led to progressive development and understanding of the variations in the SHAPE project participants' behaviour towards ESE and IEO development in a South African University.

The data obtained for this study from the SHAPE project student participants pertaining to the development of ESE and IEO indicated that entrepreneurship development in South Africa is positively associated with student and youth training and development. This implies that restructuring of the higher institution curriculum and incorporation of entrepreneurship training into the university system across all disciplines will contribute, develop and integrate the university graduates into the entrepreneurship sector to grow the economy. More importantly, the study revealed how entrepreneurial self-efficacy and individual entrepreneurial orientation developed amongst South African undergraduates who participated in a longitudinal entrepreneurial action-oriented project. This was accomplished by answering the research questions and in so doing attaining the research objectives.

7.3.1 Research Question 1: To what extent does opportunity identification entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?

In line with RQ 1, it was found that there was progressive development of the participants' opportunity identification entrepreneurial self-efficacy due to co-initiating, co-sensing, and co-inspiring following participation in the SHAPE training project. This was viewed as a strong dimension of ESE for participants to gain confidence in performing opportunity identification, which in turn boosted their orientation to innovation and creativity to be involved in the emerging market. This was more conspicuous through the weeks of the learning as each learning session provided opportunities for innovation, creativity, and prototyping, as indicated in the training model for evolvement, growth, and development.

The findings revealed that the reactive stages of Theory U were positively associated with students' entrepreneurship skills development (identification of gaps or opportunities) in UKZN and increased progressively due to collaboration and teamwork from Round 1 to Round 3 of the project. However, it was observed that OI-ESE had an unequal relationship with entrepreneurial behaviour, thereby activating the participants' entrepreneurial orientation, desire and intention to start a new venture or engage in entrepreneurial activities (McGee, Peterson, Mueller & Sequeira, 2009).

Various studies have explored ESE as a driver of entrepreneurship momentum development in higher institutions but have failed to transform the students to act on their intention (Nyamuda, 2018). Due to the nature of the SHAPE project, it was discovered that the reactive stages of Theory U availed learners the opportunity to meet with successful entrepreneurs to develop themselves as future leaders. This implies that core values in entrepreneurship training and development were better learnt through systemic action learning action research, hands-on-learning and other pedagogical methods. This emerged as the paradigm shift or alternative route to entrepreneurship student development in higher institutions. This was consistent with the views of Mutanda et al. (2019) that the lack of entrepreneurship development in South African and sub-Saharan Africa is due to lack of qualified teachers and lack of internationalisation of skilled lecturers across borders into the entrepreneurship teaching universities, thereby producing graduates who do not have the experience and resources to be successful entrepreneurs (McGee et al., 2009).

7.3.2 Research Question 2: To what extent does relationship entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?

In line with RQ 2, it was found that there was a progressive development of participants' entrepreneurial relationship self-efficacy (REL_ESE) due to the application of co-initiation, co-sensing, co-inspiring, co-creating and co-evolving following participation in the SHAPE training project. This finding indicated that with repeated measures taken for analysis, students' entrepreneurship development was increased progressively due to being inspired about the emerging future. This finding also showed that learners' attitude and behaviour to learning in the entrepreneurship hub was positively associated with development and intention, which enhanced their relationships with colleagues and facilitators and taught them how to relate with the stakeholders in the entrepreneurship ecosystem. This was revealed in the sixth, ninth and thirteenth weeks of the training sessions, where participants were linked with the university's

incubator directorate for further development and monitoring. Relationship self-efficacy and IEO jointly enhanced individual entrepreneurial orientation to create a venture through new creativity and innovation. This was related to self-leadership development that encouraged the entrepreneurship enablers to be willing to invest because of their belief in the students and the quality relationships that had been formed. This implies that the training model employed for this study was concept-centred, action and research based, practical related to training and developing student participants with the involvement of experienced entrepreneurship stakeholders who imparted the requisite skills for ESE development. This was consistent with National Policy on Education (NPE, 2013), which advocates concept-centred and activity-based learning methods for entrepreneurship development and a paradigm shift from a highly content-based curriculum to a results-based curriculum that will impart relevant in-depth skills and knowledge to integrate learning entrepreneurship into the expected fit (Okojie, 2011).

Although the traditional and systemic action learning action research methods of learning have significant influence at certain stages of learning, these approaches cannot develop entrepreneurship without basic theoretical knowledge of entrepreneurship, hence the adoption of nondualism as a suitable philosophy for the research. The application of the nondualism approach enhanced the learning and participants' relationships and development. This was consistent with the view of Lynch, Kamovich, Longva and Steinert, (2019), who asserted that the ways in which (methods) learners are taught significantly influence their relationships and learning skills entrepreneurially.

Esmi et al. (2015) and Bagheri and Pihie (2014) agree that participation in post-studies entrepreneurial activities and efficacy to exhibit what has been learnt is highly influenced by the methods, equipment, and trainers and as a result, affect the establishment of relationships between the learners and the outside world. The results of this study provide valuable answers to RQ2 that sought to investigate the effect of relationship entrepreneurial self-efficacy on the individual entrepreneurial orientation of students over time.

7.3.3 Research Question 3: To what extent does managerial entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?

In line with RQ 3, the study revealed that there was progressive development of participants' managerial self-efficacy and individual entrepreneurial orientation after participation in the SHAPE training project. The study's findings indicated that the reactive stages of Theory U

were positively associated with the students' entrepreneurship managerial skills development in UKZN and increased progressively due to collaboration and teamwork from Round 2 to 3 of the project. This was evident in the participants' responses to the research questionnaire because they believed in their self-efficacy and their capability to accomplish a task (Bandura, 2007). As a result, they exhibited their managerial and leadership potential to engage in entrepreneurial action.

Various studies have explored IEO as an entrepreneurship momentum development driver in higher education institutions which failed to transform students to act on their intention due to a lack of practical or experiential learning (Van der Westhuizen, 2018). The facilitators' vast experience exhibited during the training project was a major factor that built self-leadership and efficacy in the participants to believe they can attain a strategic fit in their endeavours. This implies that mentoring and systemic action learning action research can develop the participants' managerial qualities and creative thinking potential for individual entrepreneurial intention. Fayomi (2017) posits that entrepreneurship success is influenced by entrepreneurship training and blended cognitive teaching.

The findings further revealed that progressive transformation occurred during and after the SHAPE programme (i.e. Rounds 2 and 3) and this development resulted in the participants' commitment to the task and teamwork. It also indicated that managerial self-efficacy is a continuous exercise that needs continuous development for entrepreneurship development and growth, which could be effected through the learning model for entrepreneurship training.

7.3.4 Research Question 4: To what extent does tolerance entrepreneurial self-efficacy affect students' individual entrepreneurial orientation over time?

In line with RQ 4, it was observed that there was progressive development of participants' tolerance entrepreneurial self-efficacy and individual entrepreneurial orientation due to the application of both the reactive and generative stages of Theory U in the SHAPE training project. The finding of this research indicated that the five stages of Theory U were positively associated with student entrepreneurship skill development in UKZN, and this increased the participants' TOL_ESE and IEO progressively due to collaboration and teamwork in an action learning action research. However, there was no significant development in Round 1 because practical training was not incorporated into traditional entrepreneurship teaching and most of the modules were mainly abstract and theoretical in nature. This position agrees with the view

of Lekang et al. (2017), who opined that extracurricular activities have a significant impact on entrepreneurial development. It is also consistent with the position of Valerio et al. (2014), who asserted that entrepreneurial orientation needs different teaching methodology, such as academic and stand-alone training activities to enable the trainers and learners to engage in diverse practical roles and learn new skill sets.

Moreover, systemic action learning action research, trainers, mentors and facilitators' vast experience and teaching prowess jointly influenced the participants TOL_ESE and IEO. This implies that TOL_ESE and IEO were greatly influenced by action learning, which was evident in the participants' tolerance in attending all the sessions of the training without minding about moving from other campuses whenever there were changes in the venue. This ensured that the participants understood what it takes to be a successful entrepreneur, to endure and persevere in every situation. For instance, the participants asserted in their responses to the research questions: *"I can work productively under continuous stress, pressure and conflict to achieve the set goals; I am confident that I could deal efficiently with unexpected events; Thanks to my resourcefulness, I know how to handle unforeseen situations; I can remain calm when facing difficulties because I can rely on my coping abilities."* The responses were "mostly confident" and "completely confident", which indicated the level at which the participants had learnt to tolerate and develop themselves and the ecosystem.

7.3.5 Research Question 5: What is the relationship between entrepreneurial self-efficacy propensities and students' individual entrepreneurial orientation over time?

In line with RQ 5, it was found that there was a progressive development of the participants' entrepreneurial self-efficacy and individual entrepreneurial orientation due to the application of both the reactive and generative stages of Theory U in the SHAPE training project.

This finding pertaining to entrepreneurship self-efficacy and individual entrepreneurial orientation revealed that action learning action research and studentpreneurs' skill development is positively associated, and that ESE is a predictor of IEO for venture creation because of the training. This is consistent with the views of McGee et al. (2009), who posit that individual ESE increased and developed through training, which equally resulted in an increase in entrepreneurial activities. This finding revealed that by collective measurement of the ESE constructs on IEO that is a necessity for entrepreneurship development and also

reaffirmed its dimensionality for entrepreneurship action. This finding was aided by the application of Theory U for the development rather than some type of theoretical model of entrepreneurship activity and task that did not translate to action. As the study examined development of entrepreneurial self-efficacy, activated individual entrepreneurial orientation and its effect on the university graduates' entrepreneurial intention through action learning, this would help to advance the theory and practice of entrepreneurship. The study also suggested the employment of a training model for action learning, experiential learning with the application of the right theory that will spur individuals to engage in entrepreneurial activities. Table 7.1 indicates the relationships between the constructs progressively, as discussed.

Table 7.1: Correlations between ESE and IEO factors

Factors	Before	After
Managerial and Relationship	$r = 0.583, n = 58, p < 0.001$	$r = 0.901, n = 56, p < 0.001$
Tolerance and Managerial	$r = 0.701, n = 57, p < 0.001$	$r = 0.833, n = 54, p < 0.001$
Managerial and Opportunity	$r = 0.650, n = 58, p < 0.001$	$r = 0.796, n = 53, p < 0.001$
Proactiveness and ESE	$r = 0.528, n = 54, p < 0.001$	$r = 0.753, n = 48, p < 0.002$
Proactiveness and Tolerance	$r = 0.409, n = 45, p < 0.001$	$r = 0.723, n = 53, P < 0.001$
Proactiveness and Opportunity	$r = 0.530, n = 56, p < 0.001$	$r = 0.623, n = 52, p < 0.001$
IEO and ESE	$r = 0.583, n = 44, p < 0.001$	$r = 0.505, n = 43, p < 0.001$

Source: Author's compilation

Table 7.1 shows the progressive development of the SHAPE training project affirming the objectives set in chapter one which indicates that learning is a gradual process and has influenced the participants' entrepreneurship momentum outcomes. This showed that ESE and IEO had a significant relationship with the training project that focused on youth entrepreneurship development. In this study, systemic action learning action research method was employed and its implication for entrepreneurship development was examined in the context of its importance and effect on the training participants. The development fit and result of this study was due to recognition that entrepreneurship training is a suitable intervention and alternative entrepreneurship learning pedagogy. Thus, the role played by the action learning action research in this project is related to various studies delivery design employed to impact participants' development.

7.4 THE RESEARCH ENDEAVOURS AND CONTRIBUTIONS

This endeavour was embarked upon having realised that the unemployment rate in South Africa and globally is growing exponentially (Herrington, Kew, Kew & Monitor, 2010) and universities in developing countries are not producing commensurate graduates to match the available jobs in the labour market. Also, the education system is not equipping graduates with the appropriate skills in entrepreneurship to become self-reliant. It was discovered that business administration as a course of study is receiving more attention and recognition than entrepreneurship education and training. This has created a gap in the production of entrepreneurship graduates who are able to create a venture or business. An important factor noticeable amongst HEIs in sub-Saharan African countries is the uniform learning system in the business and entrepreneurship teaching schools. This challenge informed the drive for entrepreneurship development in higher education in South Africa, where the stakeholders are charged with the responsibility of coming up with modalities for restructuring entrepreneurship training and development (Lekgotla, 2019). Entrepreneurship stakeholders' professional inputs in the entrepreneurship education and training system and contributions from the entrepreneurship discipline were lacking as business schools are recognised for business development instead of entrepreneurship studies.

A review of extant literature revealed that entrepreneurship development must be provided with the learning principles and practice in the context of motivation and learning pedagogy (Fayomi, 2017). The findings of this study suggest that various pedagogical methods for entrepreneurship education and training should be adopted to harness individual intention regarding the systemic action learning action research training model discussed earlier in chapter four.

7.4.1 Reflection on the aim of the research

This research was undertaken within the framework of Theory U to determine how entrepreneurial self-efficacy and individual entrepreneurial orientation develop among South African university students to harness their entrepreneurship intention. The research objectives were structured into seven main thematic areas for investigation. The objectives were to: examine the influence of opportunity identification entrepreneurial self-efficacy on individual entrepreneurial orientation; investigate the effect of relationship entrepreneurial self-efficacy on individual entrepreneurial orientation; examine the influence of managerial entrepreneurial

self-efficacy on individual entrepreneurial orientation; investigate the influence of tolerance entrepreneurial self-efficacy on individual entrepreneurial orientation; examine the effect of entrepreneurial self-efficacy propensities on individual entrepreneurial orientation; develop a conceptual framework to examine the relationship between entrepreneurship self-efficacy and individual entrepreneurial orientation development and finally, to develop a training model for South African and sub-Saharan African Universities' entrepreneurship development.

7.4.2 Perception of systemic action learning action research methods

In a bid to investigate the research objectives, the researcher began with understanding the extent to which systemic action learning action research as a form of learning pedagogy can develop entrepreneurial momentum to positively affect entrepreneurial intention among university students. Because learners have various perceptions of entrepreneurship development, their views were segregated along systemic action learning action research and experiential learning activities and the implication thereof on entrepreneurship momentum. It was revealed in the literature that the concept of entrepreneurship training is gradually gaining momentum and attention in higher education systems in sub-Sahara African countries to be more aligned to developed economies where its epistemology is well rooted and integrated into the education system. This study was able to establish that studies into systemic action learning action research with the application of Theory U and its implication on entrepreneurship development in African countries was non-existent till the last decade. As a result, the study based on the work of Van der Westhuizen (2016) in conducting an exploratory study to validate the concept of entrepreneurship momentum development through the application of social transformative technology. This research employed a nondualism approach in the SALAR project acknowledging the spiral dynamic movement of the reactive and generative stages of Theory U in an African context.

7.4.3 Understanding traditional learning strategies and systemic action learning action research

A paradigm shift from traditional teaching methods to entrepreneurship training through systemic action learning action research in the context of an entrepreneurship training project has gained momentum and is growing rapidly in the developed economies globally (Mason, 2019; Van der Westhuizen, 2016). There is no doubt that action learning action research in this context is still in its infancy in developing countries such as South Africa. The findings from

this study provided a perfect understanding and insight that participants' behaviour towards action learning delivery strategies employed in the training programme developed their orientation for entrepreneurship intention and action. The behaviour indicated that the participants had a high disposition to action learning action research aided by social transformative technology to support and drive individual entrepreneurial intention.

7.4.4 Implication of entrepreneurship training project (SHAPE)

The study also aimed at validating the employment of the entrepreneurship training project (SHAPE) as a drive for achieving the desired entrepreneurship development. The results of the survey findings indicated that quality training in entrepreneurship development could be achieved when individual entrepreneurship orientation is influenced by government and stakeholders' support. The SHAPE training project can be considered as a paradigm shift from traditional classroom teaching to systemic action learning, which this study categorised into three phases; Pre-SHAPE, During SHAPE phase 1 and During SHAPE phase 2 as indicated in Figure 4.6. These stages aligned with Theory U's development stages in which the progressive development and entrepreneurship behavioural changes were examined. The development process activates the learners to work together as a team of like-minded individuals to aid their intention and action. The SHAPE training project and progressive development established that there was a relationship between the action learning and the participants' progressive development for entrepreneurship intention and action.

The need for a paradigm shift from traditional learning to systemic action learning action research, experiential learning, hands-on-learning, and internship was noted in the context of university entrepreneurship training and development. Such systemic learning could invariably transform and develop individual behaviour for entrepreneurship (Robinson, 2016). The study suggests that the implication of a systemic action learning action research model's effect on entrepreneurship development can be investigated in future research and be incorporated in HEIs' pedagogical methods.

7.4.5 Reflection on the development of ESE, IEO and Theory U's effect

The study set out to determine if the development of ESE and IEO activate students' entrepreneurial intention. This study stands as a contemporary research when compared to previous studies conducted mainly in developed countries. It was undertaken to affirm or refute earlier arguments about the results of past studies and to bring to the fore the application of

Theory U in entrepreneurship training and development. Extant literature on the subject confirmed that studies have been carried out on ESE and IEO separately, however, the combination of ESE and IEO in entrepreneurship development with the application of Theory U has not yet been researched in detail. Some of the studies were able to establish a positive relationship between ESE and entrepreneurship desirability (Li, Wu & Wu, 2008; Karabulut, 2016), while others found that the two variables are not related (Von Graevenitz, Harhoff & Webber, 2010). The findings of the current research indicate that there is a significant relationship between ESE, IEO and possible entrepreneurial intention. It was revealed from Rounds 1 to 3 that $N = 46$ with a median and standard deviation of 2.813 and 0.303 respectively; $N = 49$ with a median and standard deviation of 2.853 and 0.276 respectively and $N = 48$ with a median and standard deviation of 3.098 and 0.340 respectively were recorded, respectively. This indicated that there was a significant difference in IEO throughout Rounds 1, 2 and 3 of the SHAPE project at ($F(2, 68) = 23.145, P < 0.001$). The study revealed that ESE propensities did not correlate with the IEO risk-taking propensity. Similarly, the findings of this study refuted other investigations that did not find any significant relationship between ESE, IEO and Theory U. On this basis, it is apt to conclude that ESE served as a predictor of IEO development on the participants.

Unlike traditional teaching that is teacher-centred and dictates student activities, this study provided empirical understanding of the significance of systemic action learning action research and Theory U in the context of entrepreneurship training. The research findings based on the study's objectives and validated by the participants suggest an integrated model for entrepreneurship development training in higher institutions in developing countries such as South Africa.

7.5 REFLECTION ON THE LITERATURE REVIEW

An excursion into the extant literature about this research revealed that there was a gap in knowledge with regard to student entrepreneurship momentum development. Arrays of research conducted on ESE, IEO, entrepreneurship theory and practice and entrepreneurship development in developing countries revealed that information about students' entrepreneurship self-efficacy, individual entrepreneurship orientation, training and development remains scanty. Available literature established that various factors influenced learning habits, such as curricula and pedagogies, content of what to teach and methods of imparting knowledge and skills respectively (Ganyaupfu, 2013). It was also found that the

production of non-skilled entrepreneurial graduates is attributed to ineffective delivery strategies and lack of counselling and motivation for entrepreneurship as a career (Achieng, 2018; Ganyaupfu, 2013). This study, therefore, established an understanding in alignment with other scholars that acceptable delivery methods for skill acquisition must be focused, experiential, task specific, action oriented and motivational for both the learner and the trainer (Gibbs, 2013; Wahid, Ibrahim & Hashim, 2016).

Studies such as those conducted by Fatoki (2014), Olorundare and Kayode (2015), Van der Westhuizen (2016), Mutanda et al. (2018) and Nyamuda (2018) revealed that the entrepreneurship learning design in most HEIs is a classroom teaching model with theory and abstract like any other modules that are being taught in sub-Saharan African universities such as those in South Africa. Gatchalian (2010), Mkala and Wanjau (2013) confirmed that recent knowledge suggests that entrepreneurship training and development requires different training approaches and that learners have different learning moments. Their studies further revealed students' preference for action-oriented learning, task-specific learning, and concrete teaching pedagogies. Similarly, a complementary linkage between cognitive and non-cognitive skills development was noted in previous studies as having a multiplier effect at various stages of learning. This also potentially influences entrepreneurial intention and action (Nader & Hamdy, 2019; Piperopoulous & Dimov, 2015). This study found that most entrepreneurship education and training research in most African countries has a framework gap. Addressing this challenge and other contributions in this study are perceived to be critical to entrepreneurship research and development in this era of artificial intelligence.

7.6 REFLECTION ON THE SIGNIFICANCE OF THE STUDY

7.6.1 Reflection on the Theoretical Significance

This study added some thoughts to existing literature on entrepreneurship training and development.

The nondualism approach contributed to developing a detailed understanding of students' entrepreneurial self-efficacy and emerging future opportunities. It also advanced strategies for ensuring that graduates in higher institutions of learning acquire the requisite skills in preparation for entrepreneurial action. This study provides insight into how to see the future as it emerges through the application of Theory U to entrepreneurial training, which was used to

develop a model for systemic action learning action research. This was to establish the uniqueness of Theory U in developing future entrepreneurship leaders, hence its suitability to investigate the research questions and contribute to knowledge on how best to teach and develop the ESE and IEO microsystems.

This study is significant in the sense that it provided reliable data and valuable information regarding entrepreneurship training and developed a framework to address the research questions (Figure 1.2). The justification presented in Chapter One reflects appropriate utilisation of the central tenets of the Theory U model as a driver for addressing the research objectives. A review of theories relevant to the study revealed that there is a link between training approaches, learners' desirability, and entrepreneurship intention. This informed the suggestion of a systemic action learning action research hub, incubation, and skills acquisition centres in universities. The conceptual framework was specifically designed with information obtained from background findings and proposals for the development (entrepreneurship training) and activation of student and youth entrepreneurship intention in a systemic action learning action research process. This was anticipated to lead to the achievement of the objectives of empowering entrepreneurial students and creating an enabling environment for learning. It could also result in the production of graduate entrepreneurs and create a foundation for future investigations into entrepreneurship behavioural outcomes.

7.6.2 Reflection on the methodological significance

Preference for the quantitative research design and nondualism philosophy was considered to make the research and its findings a reference point and this aided the development and creation of the study's conceptual framework and integrated development training model respectively. Quantitative methods used in social and behavioural science research is invaluable in the context of higher education policy. The researcher observed that earlier related studies employed mixed methods with limited development (Van der Westhuizen, 2016; Nyamuda, 2019). This study employed a quantitative method because of its nature and the focus group participants in the project (SHAPE) solely for activating youth entrepreneurial orientation and development. To obtain relevant information from the study's population, the focus was on the behavioural development of the student participants at time intervals because South African students enrolled in entrepreneurship courses to become certified intrapreneurs or entrepreneurs. Therefore, this research contributed to human capital development and

entrepreneurship development theory by proposing a training model that focuses on skills acquisition as an alternative to traditional classroom teaching.

It must be emphasised that philosophies such as positivism, pragmatism and constructivism have been overused in the past and this study therefore employed nondualism as a suitable paradigm to approach the systemic disconnect by incorporating different systems to address the phenomenon under investigation. In most African higher education institutions, entrepreneurship curriculum is mostly built around business administration, which is theoretical in nature and developed by academics along theoretical lines (Mentoor & Fredrich, 2007). Van der Westhuizen (2016) proposed the need for transformation through connection with the deeper self. This study took a step in that direction by providing a development training model for ESE and IEO development in university students' entrepreneurship intention. Figure 4.1, as reported in Chapter 4 of the study, sought to contribute practically to the teaching of entrepreneurship by providing an action learning action research model for entrepreneurship training and development.

The model will be useful for the curriculum restructuring and training in HEIs in South Africa and beyond to develop students in any of their career choices knowing that entrepreneurship is the solution to unemployment globally. The method employed (systemic action learning action research) provided some acceptable solutions to the research and training problem that led to low total entrepreneurial activities in South Africa, low entrepreneurial self-efficacy, and low individual entrepreneurial orientation. Literature, policy reports, Global Entrepreneurship Monitor (GEM) reports, print media and other documentary records that constituted the secondary sources of data for this study revealed that South African youth have negative feelings about their entrepreneurial future and have limited vision pertaining to the bigger picture (Van der Westhuizen, 2016). The data obtained and analysed for this research were found to be reliable because of the nature of the study (Sekaran & Bougie, 2016; Saunders et al., 2019).

7.6.3 Reflection on the significance of policy

The framework applied in this study took into consideration the dearth of research in the sub-area of entrepreneurship development training in higher education institutions in sub-Saharan countries such as South Africa. It provided an understanding of the five different components of learning that could grow entrepreneurship both in theory and practice i.e. the content, the

trainers and learners, the pedagogical methods, the learning hub or school and the starting point or level at which the training begins. The study also served as a reference point for the following stakeholders involved in entrepreneurship training and development: The Department of Higher Education, Provincial Government, Entrepreneurship Development in Higher Education, the Department of Higher Education and Training, Local Economic Development, the university's management, and entrepreneurship practitioners. It also validates previous studies and compare various theories and methods in the context of study location, political, cultural, and environmental differences. It built on the level of understanding of the relationship that exists between conventional models of learning and the systemic action learning action research framework and influenced the activation of entrepreneurship behaviour. This study suggests the adoption and implementation of an action learning action research training model. The findings reported in this research will no doubt be of value to the policy makers, HEIs' management, and local and international business practitioners.

7.6.4 Reflection on the Practical significance

As an applied research, the study served as a reconfiguration drive for government policy relevant to entrepreneurship development in higher education, creating an enabling environment for students to learn, innovate and venture. Regarding the practical application of the study, the research findings revealed the extent to which ESE development activated and enhanced the individual entrepreneurial orientation of students and their learning needs for entrepreneurial intention and action. This is consistent with Scharmer refers to as “institutional inversion” turning the inside out and outside in; moving out of classroom learning environment and engage with salient hotspots of societal innovation in their ecosystem and vice versa (Scharmer, 2019, <https://youtu.be/EBr2aK4dbI>). It also addressed challenges relating to entrepreneurship curriculum restructuring, the adoption of a cross-disciplinary learning model and complementary strategies to classroom teaching as was introduced into entrepreneurship curricula of higher institutions through various programmes and projects (Gerba, 2012; Frovola et al., 2019). Also, with the result of the study hypothesis one, it revealed standardised Beta and corresponding P values for opportunity identification and IEO propensities in the three rounds at: $\beta = 0.293$, $p > 0.05$; $\beta = 0.155$, $p > 0.05$ and $\beta = 0.542$, $p < 0.05$ respectively and were positively associated with the training model. With these results, one could conclude that OI_ESE served as a predictor of IEO development in the participants and was able to inform intention and action. This is because of the significance of the practical experienced by the participants. The study will add more value to the economy by creating jobs, developing human capital, reducing youth unemployment and socio-economic restiveness and check rural-urban

drift. This was revealed through the choice made by the participants out of their modules times table to attend the thirteen weeks training for their self-development as indicated in the week seven to ten of the SHAPE training where business model canvas was part of the development, and proactive decision of seventy three who decided to start business immediately after the training. The study also established the need for professional mentorship and learning and an incubation hub for the youth in every central business district of every municipality in every province and financial support that can enable SMEs to thrive. If the purpose of any training project is to transform and enhance learners' entrepreneurial self-efficacy and change their orientation and behaviour, there is a need to consider their efficacy level before they are accepted into the training project. This is because knowledge and intent do not inform entrepreneurial action and there is a need for non-volitional activity to transform ideas into intention and action (Brannback & Casrud, 2017; Iwu, Ezeuduji, Eresia-Eke & Tengeh, 2016).

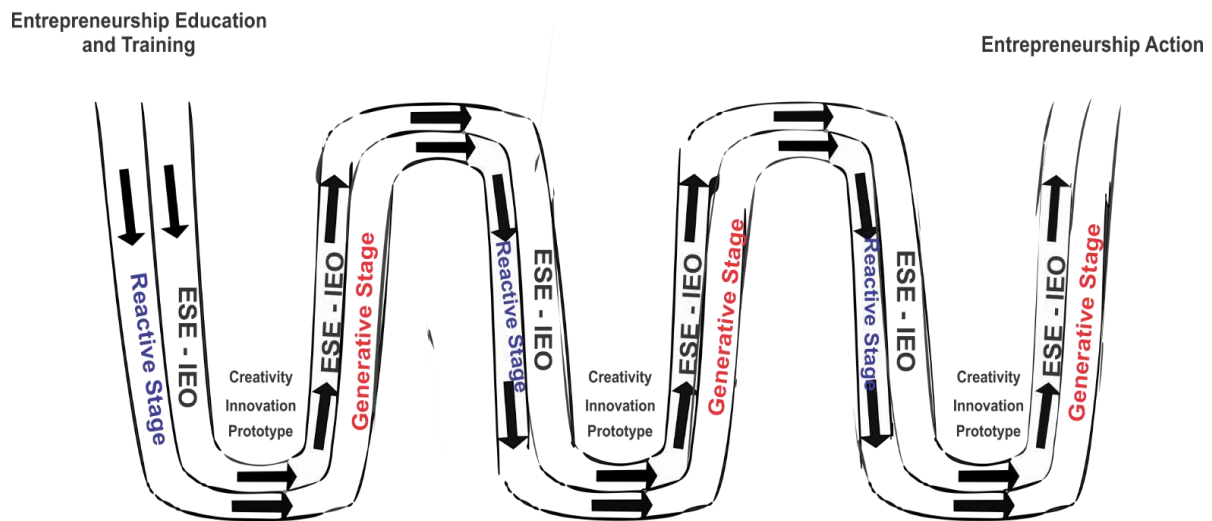
7.7 CONTRIBUTIONS TO THEORY AND PRACTICE

This study sought to understand and develop entrepreneurship self-efficacy and individual entrepreneurial orientation and their significance to the entrepreneurship intention and action of a university's graduates to affect the entrepreneurial culture. The focus was on establishing how the nondualism approach with systemic action learning and action research through a theory U lens could influence the desire for entrepreneurship. The domain mixed the action learning action research, social technology (SHAPE) training model with the contents and context of learning. The nondualism approach and theory U were identified as mediating factors in this context. The study provided contributions to the theory and practice of entrepreneurship, as discussed under the next two sub-headings.

CONTRIBUTION TO THEORY

The SHAPE action-training model. One of the unquantifiable contributions of this study was the SHAPE action-training model developed for systemic action learning action research that combined appropriate delivery strategies that impacted student and youth's entrepreneurship development. The model, as applied to the training and discussed in Chapter 4 of this study, developed the participants' ESE and IEO, which led to the proposed intention and action for business start-up by the seventy-three participants from the overall registered participants including the analysed (n=59) respondents who signalled their intention to act immediately after the training. Figure 7.1 presents the SHAPE action-training model's contribution to theory in a spiraldynamic form.

Figure 7.1: SHAPE action-training model.



Source: Author's compilation.

Repeated from Chapter 4 for ease of reference.

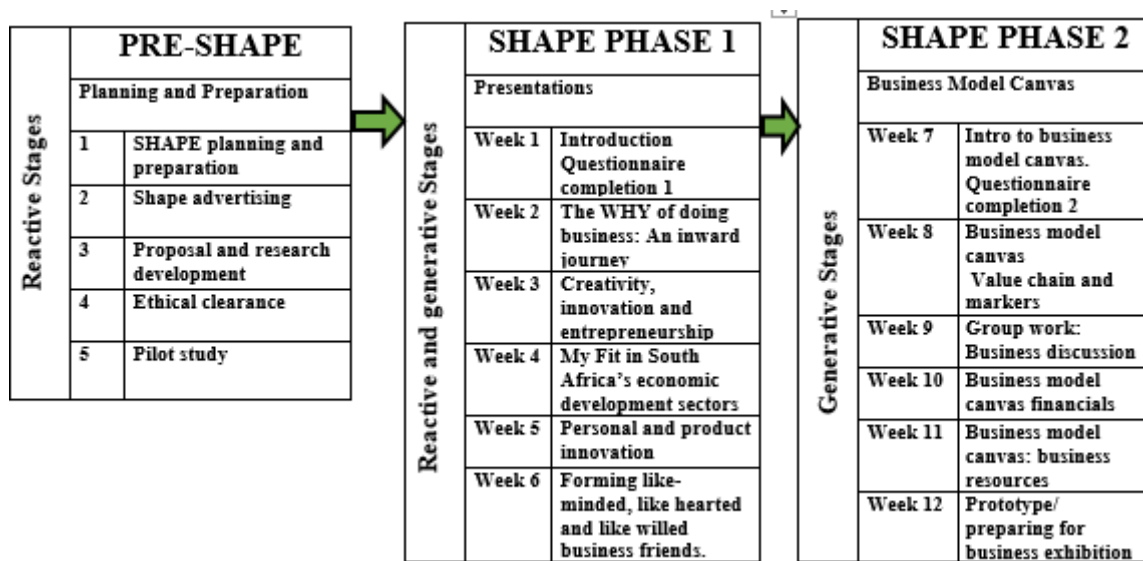
The model in Figure 7.1 indicates that the SHAPE action-training model can be applied to entrepreneurship development, as indicated in this study, through a nondualism approach and by incorporating systemic action learning action research with the application of Theory U to develop elements of ESE (opportunity identification self-efficacy, relationship self-efficacy, managerial self-efficacy and tolerance self-efficacy) and IEO constructs (risk-taking IEO, innovation IEO and proactivity IEO). This research revealed that there was a progressive and significant development in ESE and IEO from Round 1 to Round 3 of the study and therefore recommends that the model be applied to the future cycles of SHAPE training. This model could also be adopted by developing nations that wish to develop their youth entrepreneurship.

This is what the Transformative Learning Centre (2016) described as a fundamental shift in certain premises of thought, behaviour and action that will irreversibly alter ways of being. The lesson from this study was that there was a progressive development to maturity among the participants from Round 1 to Round 3 of the project, which was consistent with the view of Murray and O'Fallon (2020) and provided developmental experience (Al-Qahtani & Higgins, 2013) among the training participants. The Figure 7.1 fit could be adopted for entrepreneurship development in institutions of higher learning and the model will equip academia with strategies for ensuring that graduates from higher learning institutions acquire the requisite skills and become prepared for entrepreneurial action. The model will also be

useful for entrepreneurship education and training curricula restructuring in HEIs in South Africa and beyond to develop students in any of their career choices, knowing that entrepreneurship, training, and development are the solution to unemployment globally. This is in support of Fayomi (2017) submission that there should be a paradigm shift from traditional classroom teaching to other forms of learning, such as research and development (R & D) which is equivalent to incubation, to develop innovation and creativity through technology. Such strategies should be incorporated in entrepreneurship education.

SHAPE social technology development program. Another contribution was the systemic action learning action research training content application that could be incorporated into research. This served as a cross-disciplinary learning model for all academic learning fields to train and develop students entrepreneurially, knowing that entrepreneurship traits are relevant in all life endeavours and that entrepreneurship is the answer to most nations' economic development. This contribution can provide a suitable transformative learning technique and foster development skills taught in theory. It will address complex transition challenges that will promote the competencies required to practice in non-linear processes. More importantly, it will establish a stimulating learning system for collaborative, active and reflexive learning with the intention for learners to explore various concepts and methods. The combined learning method indicated that there is a need to address the systemic disconnect in the current entrepreneurship theory and practice. The SHAPE training project's phases can be considered as a paradigm shift from traditional classroom teaching to systemic action learning, which this study categorised into three phases; pre-SHAPE, during SHAPE phase 1 and during SHAPE phase 2, as indicated in Figure 7.2.

Figure 7.2: SHAPE social technology development program



Source: Adapted from Nyamuda (2018)

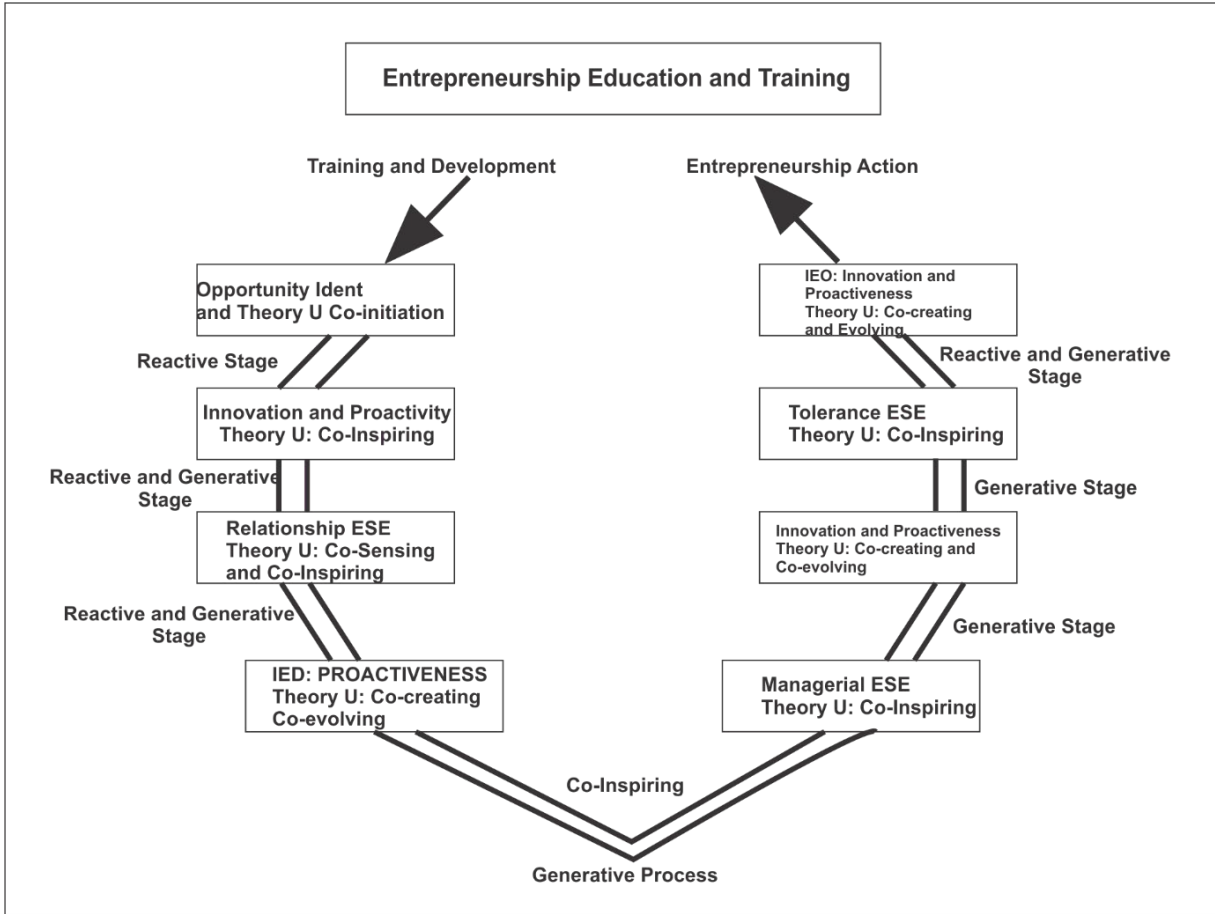
Repeated from Chapter 4 for ease of reference.

Figure 7.2 presents a schedule of the application of the SALAR thirteen-week training content in project SHAPE that was used to drive the participants' progressive development. This supported the achievement of the SHAPE social technology and the research objectives "to train and develop South African youth entrepreneurially". The figure contributes learning content and serves to illustrate the application of Theory U for the training, which promoted progressive development at every learning session and was reflected in the participants' responses to the research questions. The findings revealed that learning took place, and the participants were developed entrepreneurially, which indicated that there was a relationship between action learning action research and entrepreneurship development. This is as a result of technological advancements and the implications for entrepreneurship education and training that enable various forms of collaboration in the learning hub, which add value to the cultural and technological base interacting with both local and international stakeholders. This is consistent with Van der Westhuizen's (2016) assertion that action learning correlates with studentpreneurs' entrepreneurship development when applying Theory U. This study therefore recommends that entrepreneurship learning hubs and incubation centres be established in all tertiary education institutions for all-encompassing ecosystemic involvement because of the invaluable contribution to the national and global economy in terms of theory and practice.

Interrelationship between ESE, IEO propensities and Theory U. Another contribution was the significant interrelationship between systemic action learning

action research and learners’ progressive entrepreneurship development based on its content, context, methods, academia, and facilitators that transformed the participants. The research also contributed to the validation of previous studies such as those conducted by Van der Westhuizen (2016), Nyamuda (2018) and Mattar (2018) by re- applying systemic action learning action research and the non-duality approach that is currently gaining momentum. This application led to the success of the training after which seventy-three of the participants that volunteered for the training expressed their intention to start their businesses immediately after the training project. This fit was because of the skills addressed in the training dealing with the complexity and uncertainty in taking risk, creativity, practical problem solving and action learning to work in a transdisciplinary context. This was an indication that learning had taken place and the positive role that SALAR and the training content played in human capital development that could lead to job creation. This was fully explained in Figure 7.3 in relation to Figure 7.1.

Figure 7.3: Interrelationship between ESE, IEO and Theory U



Source: Author’s compilation

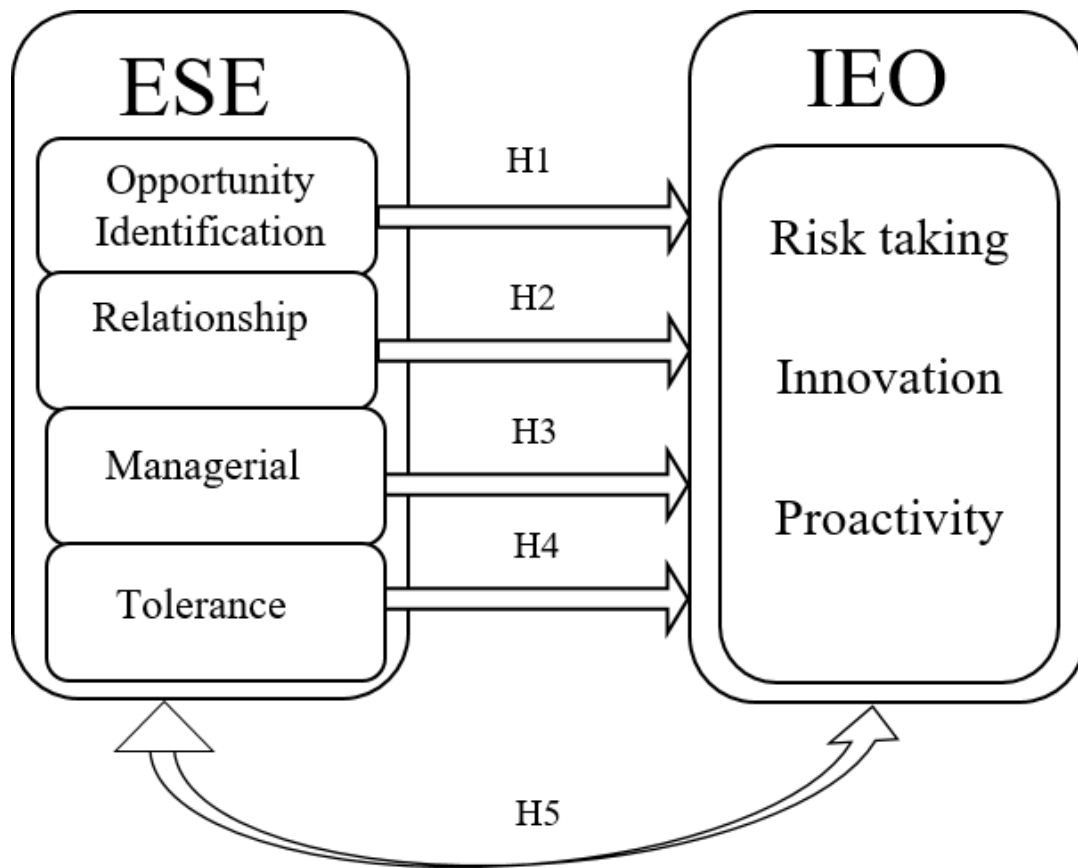
Repeated from Chapter 6 for ease of reference.

Figure 7.3 presents an invaluable contribution that revealed the impact of the association between the action learning action research and the SHAPE project with the application of Theory U and the effects thereof on participants' progressive entrepreneurship development. Murray and O'Fallon (2020) assert that there is a significant positive relationship between ESE and IEO, as indicated in Figure 6.47 in Chapter 6. It was also revealed that a significant relationship exists between ESE, IEO and students' entrepreneurial intentions and the underpinning theory in the training using Pearson's product-moment correlation coefficient, as depicted in Table 6.23. The table revealed that there was a significant relationship between ESE and IEO at $r = 0.583$, $n = 44$, $p < 0.001$; $r = .519$, $n = 42$, $p < 0.001$ and $r = .505$, $n = 43$, $p < 0.001$ respectively in the three rounds of the analysis. The empirical findings indicated that entrepreneurship self-efficacy contributed to the training participants' individual entrepreneurial orientation development, which was not limited to their entrepreneurial intention but also shaped their behaviour. The results also indicated the degree of effectiveness of ESE on the participants' IEO because of the training model. Theory U applied to the systemic action learning action research training project can boost youth entrepreneurship momentum over time. It can therefore be deduced that the progressive development of the participants' entrepreneurial self-efficacy was due to the application of Theory U, environmental factors, the facilitators' competence, and wealth of experience, as well as the students' willingness to learn.

Conceptual framework to measure the ESE and IEO development of youth entrepreneurs over time. The development of a conceptual framework was a significant contribution that aided the provision of reliable data and valuable information regarding entrepreneurial self-efficacy and individual entrepreneurial orientation, which addressed the research questions. It bridged the gap between traditional classroom teaching and the training framework that was lacking in the higher education learning curricula and entrepreneurship development. This implies that the incorporation of learning aids in technology will enhance learners' technical expertise and their ability to learn from other parts of the world, thus developing their individual skills and enabling them to start businesses after graduation. It also aided in finding new ways of conducting research in management and social sciences by incorporating multiple systems regarded as the nondualism approach that significantly contributed to

the theory and knowledge by applying a different theory and approach for research and development.

Figure 7.4. A conceptual framework to measure the effectiveness of ESE



Source: Author's compilation

Repeated from Chapter 1 for ease of reference.

Figure 7.4 revealed the most significant contribution of the conceptual framework. The findings indicated that the IEO instruments required refinement and revalidation. Bolton and Lane (2012) recommend continuous refinement and revalidation of IEO instruments. The framework assisted in attaining the research objective and testing the hypotheses using Pearson's product-moment correlation co-efficient and regression analysis.

Refined instrument to measure the ESE and IEO development of youth entrepreneurs over time. The instrument used in the two phases of the SHAPE training, 2014 and 2017, was refined. This study contributed to knowledge by refining and revalidating the ESE and IEO instruments where factors correlated to previous factor analysis from SHAPE and thus added to the extant body of literature. The refined instrument was another major contribution to knowledge that can be applied in future

iterations of SHAPE, other higher education institutes in South Africa and other developing nations that wish to develop youth entrepreneurship. The instrument was tested and validated for future use after confirmation of its internal consistency and reliability through test and retest on the same population, see Appendix F for the validated instrument. Table 7.2 presents the Cronbach's alpha table of the refined instrument, revealing the new factors developed for risk taking (risk-taking attitude and risk-taking job security) IEO and the regrouping of ESE factors and the number of items for the variables.

Table 7.2: Refined Instrument's Internal Consistency

SCALES		
VARIABLES	NO. OF ITEMS	CRONBACH'S ALPHA
Tolerance Self-efficacy	6	0.89
Opportunity Identification	5	0.89
Relationship Self-efficacy	5	0.94
Managerial Self-efficacy	5	0.94
Proactivity	7	0.79
Innovation	5	0.83
Risk-taking Attitude	3	0.76
Risk-taking Job Security	4	0.75

Source: Author's compilation

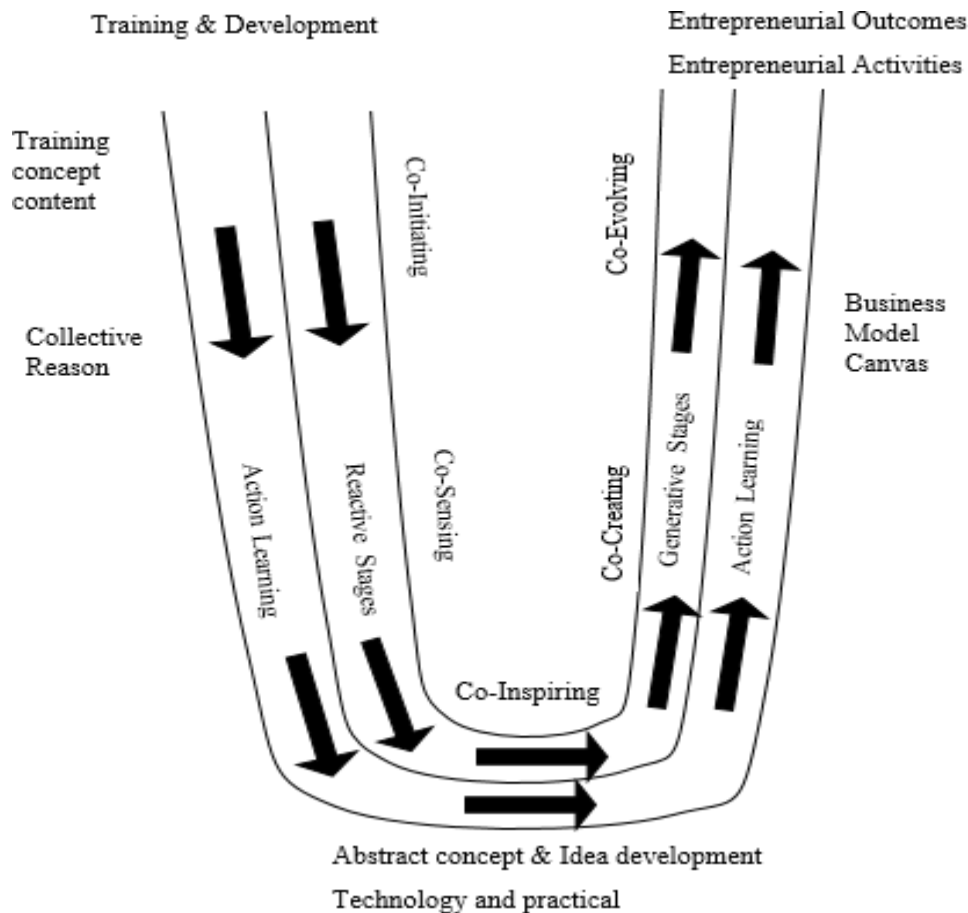
Repeated from Chapter 6 for ease of reference.

Table 7.2 presents the result of the internal consistency test of the instrument after the analysis, which validated and presented new factors for the IEO instrument as a result of the extraction method in the exploratory factor analysis. The Cronbach's indicates a good result above the threshold of 0.7, which implied that the refined instrument was good and could be utilised in future studies.

The SHAPE Ideation Model. Another significant contribution of the study was the SHAPE ideation, which was to advance the development and the weekly training content in relation to Theory U's application in an interactive manner. This provided an enabling environment for the stakeholders to meet, learn, collaborate, relate, develop and engage in venture creation, which exposed the learners to the ethics and standard principles of doing business locally and internationally. The study also advanced the theory and practice of entrepreneurship by establishing the application of social

technology development theory to train the learners on entrepreneurship efficacy as opposed to traditional classroom teaching that is abstract, theoretical and for the attainment of degrees.

Figure 7.5: The SHAPE Ideation Model



Source: Author's compilation (Adapted from Scharmer, 2007)

Repeated from Chapter 4 for ease of reference.

Figure 7.5 contributed to the application of the training model by ensuring the suitable application of Theory U and adding to the training content based on the South African context for participants' development. The social technology applied five stages for creating desirable innovation and future vision for a sustainable system to foster development. Also, through the co-sensing, it allowed the system to see itself and by welcoming the blind spots, included all the stakeholders as part of the system to see from all angles and beyond the system's borders. Co-inspiring/presensing is the process of bringing the mind to a stillness and creative silence

to explore new angles using technology to move away from abstract and theoretical learning. The application of technology in action learning spurs the movement into praxis from theory to finding relationships with practice as the reality of the social field's collective creation. The action/outcomes moment revealed the value added to a society by reflecting on how transformation has taken place and impacted the ecosystem.

This study, in no small measure, also contributed to existing knowledge in the field of entrepreneurship in that it supports and encourages research and development policy and human capital development by proposing a skills acquisition training model (institutional- tailored) as an alternative to classroom teaching. It improved on the previous entrepreneurship training program (SHAPE) in which it identified unreliable measurements in the action research with regard to the individual entrepreneurship orientation variable by conducting a test and re-test to validate the research data collection instrument. Finally, this study served to validate previous studies and methods in the context of study location, political, cultural and environmental differences. The instrument contributes to knowledge and is consistent with the views of Bolton and Lane (2012), who suggested that the IEO instrument needs refinement and revalidation based on the context of its application.

7.8 CONTRIBUTION TO PRACTICE

The SHAPE social technology 2014 phase 1 was tremendously successful, which reflected on the SHAPE 2017 phase 2 of the project. The SHAPE social technology 2017 built on the previous phase and enriched some areas. Firstly, in the area of facilitation and training, phase 1 was mostly carried out by the practitioner-researcher whereas phase 2 (2017) included academics and practitioners facilitating the project from various parts of the entrepreneurship sector. Secondly, in phase 1 a day visit to the municipality's business support incubator to meet with the nascent entrepreneurs to learn from them and to the beach, where innovative entrepreneurship activities took place within short period. Practitioners were invited to the training venue as against phase 1 to share their experience with the participants in a collaborative effort. SHAPE 2017 phase 2 training sessions were held all through in the university which gave room for student more commitment to skills acquisition and possible business networking with like-mind business partners and entrepreneurship enablers. The significant contribution is that it builds an acceptable entrepreneurship ecosystem where the stakeholders can relate for social economic development. This was followed up with the walk-around exhibition on the closing ceremony and certificate award day where feedback from

different individual participants' perspectives and skills learnt from the training was communicated in an abstract market which might be supported by the government or entrepreneurship enablers.

A major contribution to practice was that while universities rely mostly on the business administration curricula for teaching entrepreneurship, this study's success was attributed to the developed SHAPE training model for an action learning approach. This model will serve as a template for entrepreneurship action learning that will employ various learning aids such as video, technology, practitioners and materials for new business idea, innovation, and creativities, prototyping for the sector growth and development. It will add to skillset of individual learner, the ability to work in non-linear processes of problem solving and keep the skills open for further expansion in all possible directions. This is in conformity with the European Commission submission that evolution and technological advancement changes how knowledge is created in knowledge economy (European Commission, 2012). This could promote paradigm shift from business administration to all-inclusive entrepreneurship education and training that will attract entrepreneurship enablers and stakeholders support for the higher institutions' entrepreneurship development.

Another contribution was that the action learning approach built and transformed the learners' entrepreneurship behaviour to be more innovative and creative, thereby signalling their readiness for entrepreneurship intention and action immediately after the project, which could lead to employment creation. This was the implication of this research approach that combined various systems such as SALAR, Theory U, a training model, practitioners, academia, government departments and the university environment, which had multiple effects on theory and practice. This is consistent with the views Mojalalchubqlu et al. (2011) that the use of different learning activities and methods have potential to motivate and enhance entrepreneurship development.

The study will serve as a source of reference for entrepreneurship stakeholders such as Provincial Government, Entrepreneurship Development in Higher Education, the Department of Higher Education and Training, Local Economic Development, university management and practitioners. This will also serve as a guide when planning for such a program or establishing an entrepreneurship training hub in the university or the entrepreneurship sector.

7.9 RECOMMENDATIONS

A thorough literature review pertaining to youth entrepreneurial ESE and IEO development in the South African context using a longitudinal study assisted the researcher to identify the grey areas that need improvement. This informs the recommendations for effective entrepreneurship education, training, and development in developing countries both in theory and practice.

Based on the earlier discussion and extant literature that was reviewed, entrepreneurship education and learning in higher institutions is mainly theoretical, abstract and examination oriented (Radipere, 2012; Fayomi, 2017). The findings in Round 1 of this study revealed that traditional teaching had not prepared the participants for entrepreneurial action or activated their entrepreneurship potential. Based on this finding, the study recommends the incorporation of entrepreneurship education that involves practical teaching (systemic action learning action research) such as the SHAPE development training into the education curricula of universities in South Africa. Action learning should be incorporated into entrepreneurship modules or courses in higher institutions of learning as part of the requirement for the award of a degree.

The study recommends SHAPE training model incorporation into higher education action learning that is tailored and focused on innovation, creativity, and development. This will build entrepreneurship ecosystem that will foster growth and development of the small and medium enterprise. The invaluable contribution of the model to the training success in this study applying theory U is a notable fit in the development of student and youth in entrepreneurship. It therefore recommends its use combining theory U for entrepreneurship education and training both in formal and informal training to activate and develop youth entrepreneurial self-efficacy and individual entrepreneurial orientation for action.

Regarding the low response to entrepreneurship training, the study recommends that the government should support the establishment of a dedicated entrepreneurship university and skills acquisition centres in all universities that teach entrepreneurship and municipalities for easy access to knowledge and skills development. The government should ensure the suitable delivery of support to the potential or would-be entrepreneurs who would like to pursue a career in entrepreneurship. This would encourage students and youth to take up careers in entrepreneurship, which could reduce poverty, unemployment, and other social vices in our society.

The study also revealed that individual entrepreneurial orientation risk-taking propensity had no relationship with the participants' entrepreneurship development because of the fear of the unknown exhibited by the participants during the training. This was due to a lack of entrepreneurship education and career guidance and counselling for the new entrants into the university. The study therefore recommends that higher education institutions should establish entrepreneurship career guidance and counselling for all new entrants to guide their career through the course of their studies. There is a need to focus on the education sector by paying attention to curricula restructuring, early entrepreneurial education and training the trainers, as entrepreneurship can be taught at all levels. More importantly, an enabling environment with favourable policy should be created to encourage entrepreneurship practitioners.

The current research affirmed that systemic action learning action research with ESE development predicted the participants' IEO and entrepreneurial intention. The study observed that effective implementation of the training project with the appropriate theory may change the entrepreneurship behaviour of any potential entrepreneur. It therefore recommends that the DHET charged EDHE and universities academics to formulate all-inclusive curricula and adopt the SHAPE social technology for entrepreneurship education and training as applied in this study to build individual entrepreneurial self-efficacy. This study recommends that entrepreneurship courses and modules should be incorporated at all levels across the various disciplines in South African universities and that further research be conducted into entrepreneurship development.

The invaluable application of the nondualism approach in the development of the participants' entrepreneurship momentum should be encouraged for theoretical application in higher education institutions' curricula to ensure a paradigm shift from the old ways of thinking to new theoretical thinking. Extant literature (Borah, Malik & Massini, 2019; Mutanda et al., 2018; Herrington, Kew, Kew, & Monitor, 2010) revealed that the lack of qualified academics, and teaching business administration instead of entrepreneurship adversely affects the production of graduates that are suitable for the jobs available in the labour market. This has a negative impact on students' entrepreneurial development and their ability to create a venture after their studies. It is therefore recommended that the human resources department of the university put in place a recruitment process for skilled academic staff that could result in the development and production of graduates that are skilled entrepreneurs.

The study focused on the student participants' entrepreneurial self-efficacy and individual entrepreneurship orientation development and entrepreneurship intention. However, higher education institutions that wish to replicate this study and enrich their youth entrepreneurship teaching and learning offerings should develop an institutional-tailored model. It recommends the SHAPE social technology that will incorporate the versatile professional from the practice into the training to develop technical know-how of the learner. The recommendation could build and stabilise the systemic disconnect in the ecosystem and enhance global entrepreneurship networking. Further research should investigate the entrepreneurship action and venturesustenance of the investigated participants for the affirmation of venture creation and growth.

The effect of the ESE constructs and IEO on the progressive development of the training participants were explored using a quantitative research design in a longitudinal action learning action research to gather information. Van der Westhuizen (2016) employed a mixed method and further research may be conducted using a qualitative method and by extension, incorporate students from other disciplines and other universities. The expansion of this research testing to other universities and provinces in South Africa and beyond will add more insight into the proposed model and instrument's potential to boost youth entrepreneurship.

This study revealed that there was no correlation between risk-taking IEO and observed ESE constructs because of a low Cronbach's alpha, this informed ad hoc post-test to improve the reliability as stated in chapter six. This is consistent with Bolton and Lane (2012) who posited that continuous refinement of the measurements should be performed according to the context of their application. However, further studies could consider the phrasing and refinement of risk-taking measurement in another context of entrepreneurship training to confirm this finding, re-test the proposed instruments for content and construct validity, and other factors that may affect the development of the construct in entrepreneurship development.

Lastly, this study recommends the fostering of the youth entrepreneurs and continuous involvement of ecosystemic role-players (practitioners) in entrepreneurship teaching and learning offerings to ensure the sustainable long-term development of youth's ESE and IEO hopefully resulting in increased entrepreneurship intention and action.

7.10 LIMITATIONS AND SUGGESTIONS FOR FURTHER RESEARCH

The study employed a longitudinal research design that adopted the survey method for data collection i.e. a quantitative data collection approach. The SHAPE project was employed to complement the study in a systemic action learning action research for students' entrepreneurial development. The research findings are limited to the University of KwaZulu-Natal, South Africa. One of the main limitations of this research was that the results of the findings cannot be generalised to all higher education institutions in South Africa and the entrepreneurship sector in general.

Although the study provided insight and improved understanding of the relationship between ESE and IEO in the entrepreneurship training participants (SHAPE 2017) at the University of KwaZulu-Natal, it also revealed that there was no significant relationship between OI_ESE and RT_IEO in all rounds of the study. The study was therefore limited to exploring the effects of ESE constructs and IEO on progressive development of participants in the SHAPE project using a mono research design in a longitudinal action learning action research to seek information from the right sample.

Another limitation to the study was the time interval of the repeated measurements and attrition (Ployhart & Vandenberg, 2010), which affected the trend because the project interfered with participants lectures, which was their primary focus on campus. This accounts for the low response rate and the decision to analyse data collected from the fifty-nine participants that consistently attended the sessions and completed the programme to support objectives set in chapter one for the study.

The scope of the study was limited to the entrepreneurial self-efficacy, individual entrepreneurship orientation development and the student participants' entrepreneurship intention and did not extend to examine the entrepreneurship action and venture sustenance of the investigated participants for affirmation of venture creation and growth.

7.11 CONCLUSION

The outlook for effective entrepreneurship training and development revolves around the various strategies required by all the concerned stakeholders in the university. The study explored extant literature to explain the relevant methodologies in the context of knowledge and skills acquisition, venture creation and sustainability in entrepreneurship training and development. The findings not only established the critical role played to influence

entrepreneurial culture, it also indicated the progressive development of participants' entrepreneurial intention and action, creation, growth and development and sustainability. In a bid to fulfil these critical roles, the issue of entrepreneurship training and development approaches are germane in the context of entrepreneurship training and development projects or programmes. The fact that different studies have investigated the importance of entrepreneurship education as a field of academic endeavour does not detract from the fact that there is a dearth of research in the sub-field of entrepreneurship training and development. It is therefore essential to note that the success of the entrepreneurship development training project is not limited to curriculum, pedagogy, facilitator, learning hub and time frame but includes the skill and versatility of the facilitators to employ various methods relevant to entrepreneurial training and development.

Considering the influence of action learning action research methods on ESE and IEO, the study reviewed learning strategies in conjunction with practices to provide different training methods. A quantitative research strategy was adopted as the most suitable to complete the list. The findings established that action learning action research, collaboration, teamwork, mentoring, business networking, simulations, hands-on-learning, experiential learning, and other methodologies are preferred in higher institutions of learning. This indicates that creative and innovative learning is driven by action learning action research and experiential learning pedagogies. The study also established the potential need for an entrepreneurship training and development curriculum that will involve hands-on learning, experiential learning with a focus on life's challenges. The study also observed that poor graduate entrepreneurship and new start-up is as a result of poor curriculum content, lack of training hubs and technological equipment to facilitate the training and methods that are ineffective for attaining the learning and training objectives.

It is instructive to note that there is no known study of this nature in the existing literature that investigated the development of students' ESE and IEO together for venture creation and self-reliance with a Theory U application in the context of higher education institutions (action learning action research) in South Africa. The results of this study showed that the model and methods of training (delivery strategies) employed in the project SHAPE are preferred by the university and entrepreneurship stakeholders to develop, enhance, and activate entrepreneurship intention and action. To some extent, the lack of a training model and application thereof is

one of the challenges faced by HEIs in South Africa and several sub-Saharan African countries.

Consequently, the study concluded that entrepreneurship teaching approaches are heterogeneous and lack a common paradigm among academics and researchers. There is no doubt that the adoption and application of SHAPE model could be efficient if structured around the learners' needs and the learning objectives. The study's conceptual framework and developed training model serves as contributions to practice (entrepreneurship learning, training, and development), and synthesise possible relationships between action learning approaches and entrepreneurial behaviour amongst university graduates. The development training model could serve as a reference and medium of inquiry for relevant empirical studies that may be embarked upon in the entrepreneurship field. This study was novel because it combined entrepreneurial education, training, and development mechanisms to enhanced knowledge and skills acquisition important to HEI graduates during this era of the fourth industrial revolution. The framework equally contributes to existing knowledge in entrepreneurial research by adding to the development of entrepreneurial momentum and its ecosystem. The findings of this research could be of tremendous value to policy makers, HEI management and local and international business practitioners.

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APPENDIX A: PERMISSION TO CONDUCT RESEARCH



20 August 2018

Mr Matthew Olusegun Awotunde (SN 217080901)
School of Management, IT and Governance
College of Law and Management Studies
Westville Campus
UKZN
Email: 217080901@stu.ukzn.ac.za

Dear Mr Awotunde

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:

"Developing Individual Entrepreneurial Orientation: Activating Entrepreneurial Action Amongst The Youth."

It is noted that you will be constituting your sample by handing out questionnaires to students on the Westville Campus and/or conducting interviews with academic staff in the School of Management, IT and Governance on the Westville Campus.

Please ensure that the following appears on your notice/questionnaire:

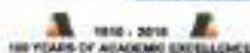
- Ethical clearance number;
- Research title and details of the research, the researcher and the supervisor;
- Consent form is attached to the notice/questionnaire and to be signed by user before he/she fills in questionnaire;
- gatekeepers approval by the Registrar.

You are not authorized to contact staff and students using 'Microsoft Outlook' address book. Identity numbers and email addresses of individuals are not a matter of public record and are protected according to Section 14 of the South African Constitution, as well as the Protection of Public Information Act. For the release of such information over to yourself for research purposes, the University of KwaZulu-Natal will need express consent from the relevant data subjects. Data collected must be treated with due confidentiality and anonymity.

MR SS MOKOENA
REGISTRAR

Office of the Registrar

Postal Address: Private Bag X54001, Durban, South Africa
Telephone: +27 (0) 31 280 8006/2200 Facsimile: +27 (0) 31 280 7824/2204 Email: registrar@uct.ac.za
Website: www.ukzn.ac.za



Founding Campuses: Durban Pietermaritzburg Howick College Medical School Westville

APPENDIX B: ETHICS APPROVAL



**UNIVERSITY OF
KWAZULU-NATAL**
INYUVESI
YAKWAZULU-NATALI

22 October 2018

Mr Matthew Olusegun Awotunde (217080901)
School of Management, IT & Governance
Westville Campus

Dear Mr Awotunde,

Protocol reference number: HSS/1546/018D
Project title: Developing individual entrepreneurial orientation: Activating entrepreneurial action amongst youth

Approval Notification – Expedited Application

In response to your application received on 04 September 2018, the Humanities & Social Sciences Research Ethics Committee has considered the abovementioned application and the protocol has been granted **FULL APPROVAL**.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the 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.

The ethical clearance certificate is only valid for a period of 3 years from the date of issue. Thereafter Recertification must be applied for on an annual basis.

I take this opportunity of wishing you everything of the best with your study.

Yours faithfully


Dr Shamila Naidoo (Deputy Chair)

/ms


Cc Supervisor: Dr Theo van der Westhuizen
cc Academic Leader Research: Professor Isabel Martins
cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair) / Dr Shamila Naidoo (Deputy Chair)
Westville Campus, Govan Mbeki Building
Postal Address: Private Bag X54001, Durban 4008
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Website: www.ukzn.ac.za

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Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

APPENDIX C: AMENDMENT APPROVAL LETTERS



UNIVERSITY OF
KWAZULU-NATAL

INYUVESI
YAKWAZULU-NATALI

24 June 2019

Dr Thea van der Westhuizen (38259)
School of Management, IT & Governance
Westville Campus

Dear Dr Van der Westhuizen,

Protocol reference number: HSS/1051/017
Project title: An Action Learning Program to enhance Individual Entrepreneurial Orientation and Entrepreneurial Self Efficacy: A case study of South African Youth

Approval Notification – Amendment Application

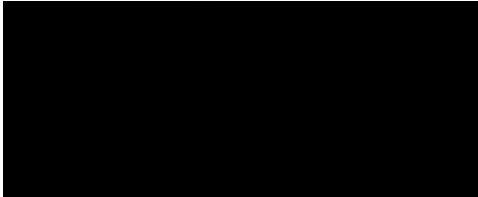
This letter serves to notify you that your application and request for an amendment received on 19 and 20 May 2019 has now been approved as follows:

- Inclusion of new Questionnaire
- Inclusion of new PI to SHAPE Project (Mr Olusegun Awotunde – 217080501)
- Inclusion of additional site

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.

The ethical clearance certificate is only valid for period of 3 years from the date of original issue. Thereafter Recertification must be applied for on an annual basis.




Research protocol.

Dr Rosemary Sibanda (Chair)

/ms






Cc Academic Leader Research: Professor Isabel Martins
Cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee
Professor Shenuka Singh (Chair)
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Website: www.ukn.ac.za



1918 - 2018

100 YEARS OF ACADEMIC EXCELLENCE

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

08 December 2020

Mr Matthew Olusegun Awotunde (217080901)
School of Management, IT & Governance
Westville Campus

Dear Mr Awotunde,

Protocol reference number: HSS/1546/018D (linked to HSS/1051/017)

Project title: Developing individual entrepreneurial orientation: Activating entrepreneurial action amongst youth

Approval Notification – Amendment / Recertification Application

This letter serves to notify you that your application and request for an amendment and recertification received on 16 November 2020 has now been approved as follows:

- Amendment to Questionnaire
- Recertification: 01 year (08 December 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: Dr Thea van der Westhuizen
cc Academic Leader Research: Professor Isabel Martins
cc School Administrator: Ms Angela Pearce

Humanities & Social Sciences Research Ethics Committee
UKZN Research Ethics Office Westville Campus, Govan Mbeki Building
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Tel: +27 31 260 8388 / 4557 / 3587
Website: <http://research.ukzn.ac.za/Research-Ethics/>

Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville

INSPIRING GREATNESS

APPENDIX D: INFORMATION SHEET AND CONSENT TO PARTICIPATE IN RESEARCH

Date: 22 August 2017

Greetings.

You are being invited to consider participating in a study that involves research into your level of confidence to becoming an entrepreneur (Entrepreneurial Self-Efficacy). The aim and purpose of this research is to evaluate how confident you are about being an entrepreneur. The research will be supported by entrepreneurship training provided by SHAPE, a programme run by the School of Management, Information Technology and Governance.

The study is expected to include about 300 participants who will be enrolled in the shape programme. The SHAPE programme is run from UKZN Westville campus. It will involve the following procedures: enrolling into the SHAPE programme, completing the questionnaire, some training and completing the same questionnaire during and at the end of the programme. The duration of your participation, if you choose to participate and remain in the study is expected to be 12weeks. The study is funded by ABSA AND Teaching and Learning Innovations and Quality Enhancement Grant.

The study may involve discomforts associated with critically examining your personal beliefs about entrepreneurship. We hope that the study will help in the design of entrepreneurship training programmes which are effective in better preparing people to become entrepreneurs. In addition, the study could be a guide as to the elements which make up an effective entrepreneurial training programme. An alternative method for data collection would have been to conduct in-depth interviews with participants. This would be more time consuming and limit the number of people who can participate in the research.

This study has been ethically approved by UKZN Humanities and Social Sciences Research Ethics Committee. In the event of any problems or concerns/questions, you may contact the researcher or the UKZN Humanities and Social Sciences Research Ethics Committee.

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

Research Office, Westville Campus Govan Mbeki Building
Private Bag X 54001 Durban
4000
KwaZulu-Natal, SOUTH AFRICA
Tel: 27 31 2604557 - Fax: 27 31 2604609
Email: HSSREC@ukzn.ac.za

Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any point in time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will be maintained by the researcher and the School of Management, IT and Governance and your responses will not be used for any purposes outside of this study.

All data, both electronic and hard copy, will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed. If you have any questions or concerns about participating in the study, please contact me or my research office on the numbers previously listed.

Sincerely

Olusegun Awotunde

Demographics

STUDENT NUMBER				ID NUMBER				
First name				Surname				
Cell No./ Telephone No.				Gender	Male	1	Female 2	
Email Address								
Registered UKZN student:	Yes	1	No	2				
Race	Black	1	White	2	Indian	3	Coloured 4	Other 5

Age:	17		18		19		20		21		22		23		24	
	25		26-30		31-35		36-40		41-45		46-50		51-55		56-60	

I have participated in SHAPE 2014 program	Yes		No	
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Where were you born?		
1	KwaZulu Natal	
2	Gauteng	
3	Free State	
4	Eastern Cape	
5	Western Cape	
6	Northern Cape	
7	Limpopo	
8	North-West	
9	Mpumalanga	
10	Other	

Where do you live?		
1	KwaZulu Natal	
2	Gauteng	
3	Free State	
4	Eastern Cape	
5	Western Cape	
6	Northern Cape	
7	Limpopo	
8	North-West	
9	Mpumalanga	

What is your highest qualification completed?		
1	Matric	
2	Diploma	
3	B-Tech	
4	Bachelor's degree	
5	Honours degree	
6	Post-graduate diploma	
7	Masters	
8	PhD	
9	Other, please specify	

I prefer to do business alone or in partnership?	Alone	1	Partnership	2	Both	3	N/A	4
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APPENDIX E: QUESTIONNAIRE

Developing Entrepreneurial Self-Efficacy: A transformative learning theory approach to coaching

Please respond to the questions below by ticking in the relevant box. Your completion of this questionnaire is voluntary and even after completing some questions, you can choose to withdraw at any time. We collect your personal details for statistical purposes, and confidentiality of your records and answers is maintained by the School of Management, IT and Governance.

Section A:

Opportunity identification self-efficacy	<i>Please rate your level of confidence on a 7point Likert scale. (1= not confident, 7= completely confident)</i>						
1. I can recognise a good opportunity when I see it	1	2	3	4	5	6	7
2. I can apply an abstract concept or idea to a real problem or situation	1	2	3	4	5	6	7
3. I can develop a working environment that encourages people to try out something new.	1	2	3	4	5	6	7
4. I can originate new ideas and products	1	2	3	4	5	6	7
5. I can see new market opportunities for new products and services	1	2	3	4	5	6	7
6. I can identify potential sources of funding for investment	1	2	3	4	5	6	7
7. I can originate new ideas and products	1	2	3	4	5	6	7
Relationship self-efficacy							
8. I could be able to persuade company managers they should take a new idea seriously	1	2	3	4	5	6	7
9. I can work on collaborative projects as a member of a team	1	2	3	4	5	6	7
10. I can motivate others to work together	1	2	3	4	5	6	7
11. I can form a partnership or alliance relationship with others.	1	2	3	4	5	6	7

12. I can develop and maintain favourable relationships with potential investors	1	2	3	4	5	6	7
13. I can get people to agree with me	1	2	3	4	5	6	7
Managerial self-efficacy							
14. I understand the language of new venture creation	1	2	3	4	5	6	7
15. I understand what it takes to start my own social enterprise	1	2	3	4	5	6	7
16. I can start a successful business if I want to	1	2	3	4	5	6	7
17. I can manage money	1	2	3	4	5	6	7
18. I am creative	1	2	3	4	5	6	7
19. I am a leader	1	2	3	4	5	6	7
20. I can make sound decisions	1	2	3	4	5	6	7
21. It is easy for me to stick to my aims and accomplish my goals	1	2	3	4	5	6	7
22. I can work productively under continuous stress, pressure and conflict	1	2	3	4	5	6	7
23. I can recruit and train key team members	1	2	3	4	5	6	7
24. I can develop a working environment that encourages people to try out something new	1	2	3	4	5	6	7
Tolerance self-efficacy							
25. I can lead a group of members who strongly disagree with one another	1	2	3	4	5	6	7
26. I am confident that I could deal efficiently with unexpected events	1	2	3	4	5	6	7
27. Thanks to my resourcefulness, I know how to handle unforeseen situations	1	2	3	4	5	6	7
28. I can solve most problems if I invest the necessary effort	1	2	3	4	5	6	7
29. I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4	5	6	7

30. When I am confronted with a problem, I can usually find several solutions	1	2	3	4	5	6	7
31. I am able to solve problems	1	2	3	4	5	6	7
32. I can always manage to solve difficult task if I try hard enough	1	2	3	4	5	6	7
33. If someone opposes me, I can find the means and ways to get what I want	1	2	3	4	5	6	7
34. I can remain calm when facing difficulties because I can rely on my coping abilities	1	2	3	4	5	6	7
35. When I am confronted with a problem, I can usually find several solutions	1	2	3	4	5	6	7
36. If I am in trouble, I can always think of a solution	1	2	3	4	5	6	7
37. I can usually handle whatever comes my way	1	2	3	4	5	6	7

Section B: Individual Entrepreneurial Orientation

Q.1. Please give your opinion about the following statements.

	Disagree	Somewhat disagree	Somewhat agree	Agree
I am willing to work full-time for myself	1	2	3	4
I am willing to invest my own money in a new business	1	2	3	4
I can handle risky situation with confidence	1	2	3	4
It is a safe career choice to work for an organisation that offer a good salary	1	2	3	4
It is preferable for me to have job security though working for a well-established business that offers a good salary	1	2	3	4
I rather want to start-up a business alone than in partnership with somebody else	1	2	3	4
I prefer to start a business in partnership with an established business in the private sector	1	2	3	4

Q.2. Please indicate your level of savings to invest into starting a new business

I have no savings	0-R5 000	R5 000-R10 000	R10 000-R20 000	More than R20 000
1	2	3	4	5

Q.3. If you handled a big risk before, please explain how you proceed. If not go to Q.4

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Q.4. Do you have financial obligations that you must fulfill once you finish your studies?

Yes	1	No	2
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Q.5. Please give your opinion about the following statements

	Disagree	Somewhat disagree	Somewhat agree	Agree
A. I am comfortable in moving into new situations	1	2	3	4
B. I have already experienced very big changes in my life	1	2	3	4
C. I sometimes such as to try new and unusual activities	1	2	3	4
D. I such as order and routine	1	2	3	4
E. I think that government should provide me with new business ideas	1	2	3	4
F. The government must tell me where new business opportunities will arise	1	2	3	4
G. BEE will help me getting my business started	1	2	3	4
H. I am creative and new business ideas come easily to me	1	2	3	4

I. I need help to come up with new ideas	1	2	3	4
J. I prefer to experiment and use original approaches to solve challenges rather than using methods other generally apply.	1	2	3	4
K. I spend hours and hours finding out more about new business ideas	1	2	3	4

Q.6. If you had experience changes, please explain what happened. If not go to Q.7

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Q.7. Please give your opinion about the following statements

	Disagree	Somewhat disagree	Somewhat agree	Agree
A. I usually plan ahead	1	2	3	4
B. I already have a business plan	1	2	3	4
C. I submit my assignment before time	1	2	3	4
D. When working in a team, I find myself doing more work just to get the work done on time	1	2	3	4
E. I have plenty of experience working in a team	1	2	3	4
F. I am regarded by my friends as a person who makes things happen	1	2	3	4
G. Usually when I start with a new business idea, I follow it through	1	2	3	4

End. Thank you !!

APPENDIX F: INFORMATION SHEET AND CONSENT TO PARTICIPATE IN RESEARCH (REFINED INSTRUMENT)

Date: 14 November 2020

Greetings.

You are being invited to participate in an exercise that is meant to retest the study conducted by SHAPE training project in 2017 coordinated by the School of Management, Information Technology and Governance in which you voluntarily participated. The aim and purpose of the research is to evaluate how confident you are about being an entrepreneur (entrepreneurship self-efficacy and individual entrepreneurial orientation).

A total of 320 participants voluntarily enrolled in the training project funded by ABSA AND Teaching and Learning Innovations and Quality Enhancement Grant which was held at UKZN Westville campus. The duration of the programme was 13 weeks, and it involved the following procedures: enrolling into the SHAPE programme, completing the questionnaire, some training and completing the same questionnaire during and at the end of the programme. The current exercise is a three-year post-completion of SHAPE assessment designed to compare and contrast your current entrepreneurial activities versus where you are in 2017.

The study retest may involve discomforts associated with critically examining your personal beliefs about entrepreneurship. We hope that the study will help in the design of entrepreneurship training programmes which are effective in better preparing people to become entrepreneurs. In addition, the study could be a guide as to the elements which make up an effective entrepreneurial training programme. An alternative method for data collection would have been to conduct in-depth interviews with participants. This would be more time consuming and limit the number of people who can participate in the research.

This study has been ethically approved by UKZN Humanities and Social Sciences Research Ethics Committee. In the event of any problems or concerns/questions, you may contact the researcher or the UKZN Humanities and Social Sciences Research Ethics Committee.

HUMANITIES & SOCIAL SCIENCES RESEARCH ETHICS ADMINISTRATION

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Your participation in the study is voluntary and by participating, you are granting the researcher permission to use your responses. You may refuse to participate or withdraw from the study at any point in time with no negative consequence. There will be no monetary gain from participating in the study. Your anonymity will be maintained by the researcher and the School of Management, IT and Governance and your responses will not be used for any purposes outside of this study.

All data will be securely stored during the study and archived for 5 years. After this time, all data will be destroyed. If you have any questions or concerns about participating in the study, please contact the SHAPE research team and the school research office on the numbers previously listed.

Sincerely

The SHAPE research team.

STUDENT NUMBER	
Full name	
Surname	
Email	
Telephone	

For each question, select the ONE response option that best applies to you

Demographics

1 Registered UKZN student

Yes	No

2 Did you participate in the SHAPE 2017 programme?

Yes	No

3 Gender

Male	Female

4 Race

Black	White	Indian	Coloured	Other

5 Age _____

6 In which province were you born?

KwaZulu -Natal	Gauteng	Freestate	Eastern Cape	Western Cape	Northern Cape	Limpopo	North West	Mpuma- langa

7 In which province do you live?

KwaZulu -Natal	Gauteng	Freestate	Eastern Cape	Western Cape	Northern Cape	Limpopo	North West	Mpuma- langa

8 Highest qualification completed

Matric	Diploma	B-Tech	Bachelor's degree	Honours degree	Post- graduate diploma	Masters	PhD

9 Indicate how you prefer to do business:

Alone	Partnership	Both

10 What is your current entrepreneurship status?

Government establishment	Private organisation	Personal business	Partnership	Searching

Questionnaire

Developing Entrepreneurial Self-Efficacy and Activating individual entrepreneurial orientation: an action-oriented approach

Please respond to the questions below by ticking in the relevant box. Your completion of this questionnaire is voluntary and even after completing some questions, you can choose to withdraw at any time. We collect your personal details and confidentiality of your records and answers is maintained by the School of Management, IT and Governance.

Section A: Entrepreneurial self-efficacy

Indicate your agreement with the following statements:

		Strongly disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Tolerance self-efficacy							
1	When I am confronted with a problem, I can usually find several solutions						
2	I can remain calm when facing difficulties because I can rely on my coping abilities						
3	I can always manage to solve difficult task if I try hard enough						
4	I can remain calm when facing difficulties because I can rely on my coping abilities						
5	I am able to solve problems						
6	I can usually handle whatever comes my way						
7	If I am in trouble, I can always think of a solution						

Opportunity identification self-efficacy							
8	I can see new market opportunities for new products and services						
9	I can originate new ideas and products						
10	I can develop a working environment that encourages people to try out something new						
11	I can recognise a good opportunity when I see it						
12	I can identify potential sources of funding for investment						
Relationship self-efficacy							
13	I can motivate others to work together						
14	I can form a partnership or alliance relationship with others						
15	I can develop and maintain favourable relationships with potential investors						
16	I can work on collaborative projects as a member of a team						
17	I can get people to agree with me						
Managerial self-efficacy							
18	I can make sound decisions						
19	I am a leader						
20	It is easy for me to stick to my aims and accomplish my goals						

21	I am creative						
22	I can recruit and train key team members						

Section B: Individual entrepreneurial orientation

Indicate your agreement with the following statements:

		Strongly Disagree	Disagree	Slightly disagree	Slightly agree	Agree	Strongly agree
Proactivity IEO							
1	I am regarded by my friends as a person who makes things happen						
2	I usually plan ahead						
3	I have plenty of experience working in a team						
4	When working in a team, I find myself doing more work just to get the work done on time						
5	I already have a business plan						
6	Usually when I start with a new business idea, I follow it through						
7	I submit my assignments before time						
Innovation IEO							
8	I sometimes such as to try new and unusual activities						
9	I am comfortable in moving into new situations						
10	I have already experienced very big changes in my life						
11	I am creative and new business ideas come easily to me						

12	I prefer to experiment and use original approaches to solve challenges rather than using methods other generally apply						
Risk-Taking IEO (attitude)							
13	I am willing to invest my own money in a new business						
14	I can handle risky situation with confidence						
15	I am willing to work full-time for myself						
Risk-Taking IEO (job security)							
16	It is preferable for me to have job security though working for a well-established business that offers a good salary						
17	It is a safe career choice to work for an organisation that offer a good salary						
18	I prefer to start a business in partnership with an established business in the private sector						
19	I rather want to start-up a business alone than in partnership with somebody else						

Thank you for your time

APPENDIX G: ESE AND IEO'S ITEMS STATISTICS

OI_ESE	ROUND 1				ROUND 2				ROUND 3			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted
OI_SELF1 I can recognise a good opportunity when I see it	24,88	45,968	0,679	0,862	28,61	30,491	0,714	0,821	31,91	38,556	0,739	0,907
OI_SELF2 I can apply an abstract concept or idea to a real problem or situation	25,17	44,488	0,719	0,856	28,79	32,669	0,581	0,839	31,80	39,506	0,693	0,911
OI_SELF3 I can develop a working environment that encourages people to try out something new.	25,10	44,403	0,649	0,864	28,74	30,340	0,718	0,820	31,82	36,840	0,845	0,896
OI_SELF4 I can originate new ideas and products	25,34	39,504	0,777	0,847	29,07	27,816	0,782	0,807	31,89	33,952	0,881	0,890
OI_SELF5 I can see new market opportunities for new products and services	25,17	45,591	0,683	0,861	28,95	28,122	0,751	0,812	31,86	34,306	0,908	0,887
OI_SELF6 I can identify potential sources of funding for investment	26,42	46,352	0,451	0,892	29,93	35,138	0,169	0,907	32,27	38,272	0,518	0,934
OI_SELF7 I can originate new ideas and products	25,47	42,323	0,755	0,850	29,07	28,495	0,778	0,809	31,95	38,524	0,720	0,908

REL_ESE												
ITEMS	ROUND 1				ROUND 2				ROUND 3			
	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted
RELSE1 I could be able to persuade company managers they should take a new idea seriously	23,88	45,796	0,679	0,906	26,72	31,537	0,597	0,898	28,31	28,595	0,696	0,918
RELSE2 I can work on collaborative projects as a member of a team	22,66	44,849	0,720	0,900	25,84	30,519	0,796	0,869	27,85	27,959	0,760	0,909
RELSE3 I can motivate others to work together	22,58	43,731	0,796	0,890	26,02	28,894	0,756	0,874	27,75	26,986	0,796	0,904
RELSE4 I can form a partnership or alliance relationship with others.	22,75	42,986	0,886	0,877	25,95	32,015	0,716	0,881	27,76	28,253	0,836	0,901
RELSE5 I can develop and maintain favorable relationships with potential investors	23,37	40,479	0,841	0,882	26,09	29,273	0,751	0,874	27,93	27,064	0,799	0,904
RELSE6 I can get people to agree with me	23,15	47,614	0,608	0,915	26,19	30,051	0,741	0,876	28,03	27,413	0,776	0,907

MNG_ESE		ROUND 1				ROUND 2				ROUND 3			
ITES	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	
MNGSE1 I understand the language of new venture creation	42,19	113,174	0,555	0,880	51,14	95,579	0,516	0,885	55,57	95,849	0,763	0,932	
MNGSE2 I understand what it takes to start my own social enterprise	42,52	108,570	0,646	0,874	51,16	95,046	0,571	0,881	55,59	95,410	0,765	0,932	
MNGSE3 I can start a successful business if I want to	42,33	105,031	0,625	0,877	50,86	94,488	0,528	0,884	55,36	95,252	0,738	0,933	
MNGSE4 I can manage money	41,67	115,557	0,471	0,885	50,89	95,079	0,465	0,890	55,46	96,508	0,594	0,940	
MNGSE5 I am creative	41,57	109,864	0,630	0,875	50,80	97,106	0,477	0,887	55,11	97,770	0,655	0,936	
MNGSE6 I am a leader	41,34	111,072	0,699	0,871	50,46	90,471	0,802	0,867	54,89	95,734	0,803	0,930	
MNGSE7 I can make sound decisions	41,38	114,871	0,679	0,874	50,38	92,057	0,810	0,868	54,96	95,890	0,768	0,931	
MNGSE8 It is easy for me to stick to my aims and accomplish my goals	41,62	110,871	0,690	0,871	50,57	94,831	0,632	0,877	55,27	97,654	0,743	0,933	
MNGSE9 I can work productively under continuous stress, pressure and conflict	41,55	120,743	0,410	0,887	50,50	98,036	0,579	0,881	55,21	97,517	0,707	0,934	
MNGSE10 I can recruit and train key team members	42,19	113,174	0,622	0,875	50,86	92,306	0,680	0,874	55,25	94,445	0,836	0,929	
MNGSE11 I can develop a working environment that encourages people to try out something new	42,33	111,943	0,684	0,872	50,95	91,688	0,744	0,871	55,18	96,913	0,783	0,931	

TOL_ESE	ROUND 1				ROUND 2				ROUND 3			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted
TOLSE1 I can lead a group of members who strongly disagree with one another	50,52	124,745	0,468	0,899	61,22	143,723	0,574	0,957	66,42	108,355	0,734	0,952
TOLSE2 I am confident that I could deal efficiently with unexpected events	50,10	116,866	0,833	0,880	60,91	141,331	0,793	0,950	66,37	109,773	0,769	0,951
TOLSE3 Thanks to my resourcefulness, I know how to handle unforeseen situations	50,31	122,849	0,611	0,891	61,13	141,134	0,718	0,952	66,51	105,469	0,750	0,952
TOLSE4 I can solve most problems if I invest the necessary effort	49,33	124,154	0,620	0,891	60,31	143,163	0,817	0,950	66,14	106,301	0,798	0,950
TOLSE5 I can remain calm when facing difficulties because I can rely on my coping abilities	49,64	119,674	0,658	0,889	60,63	135,521	0,771	0,951	66,44	114,108	0,607	0,955
TOLSE6 When I am confronted with a problem, I can usually find several solutions	49,79	118,974	0,742	0,885	60,81	139,550	0,827	0,950	66,46	112,681	0,734	0,952
TOLSE7 I am able to solve problems	49,45	121,585	0,699	0,887	60,59	138,774	0,822	0,950	66,33	109,726	0,804	0,950
TOLSE8 I can always manage to solve difficult tasks if I try hard enough	49,24	121,625	0,671	0,888	60,44	141,912	0,803	0,950	66,19	109,694	0,804	0,950
TOLSE9 If someone opposes me, I can find the means and ways to get what I want	50,10	130,831	0,400	0,900	60,94	140,318	0,734	0,952	66,46	108,681	0,797	0,950
TOLSE10 I can remain calm when facing difficulties because I can rely on my coping abilities	49,81	122,718	0,621	0,891	60,65	139,478	0,735	0,952	66,54	106,003	0,813	0,950
TOLSE11 When I am confronted with a problem, I can usually find several solutions	49,74	126,441	0,553	0,894	60,76	140,639	0,817	0,950	66,21	108,598	0,795	0,950
TOLSE12 If I am in trouble, I can always think of a solution	49,74	128,651	0,514	0,895	60,52	141,877	0,845	0,950	66,28	107,313	0,836	0,949
TOLSE13 I can usually handle whatever comes my way	48,98	129,666	0,451	0,898	60,63	138,313	0,824	0,950	66,18	108,219	0,765	0,951

RT_IEO	ROUND 1				ROUND 2				ROUND 3			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted
RISK1_IEO I am willing to work full-time for myself	16,83	5,349	-0,063	0,243	17,64	3,569	0,097	-.062a	18,58	11,212	0,169	0,689
RISK2_IEO I am willing to invest my own money in a new business	16,94	4,582	0,226	0,099	17,55	3,808	-0,007	0,006	18,60	10,566	0,276	0,671
RISK3_IEO I can handle risky situation with confidence	17,59	4,284	0,231	0,071	18,00	3,926	-0,109	0,081	18,79	10,169	0,377	0,650
RISK4_IEO It is a safe career choice to work for an organisation that offer a good salary	17,80	3,939	0,197	0,068	18,49	2,921	0,088	-.111a	19,47	8,111	0,467	0,621
RISK5_IEO It is preferable for me to have job security though working for a well-established business that offers a good salary	18,00	3,660	0,266	-.004a	18,84	2,658	0,129	-.183a	19,16	8,242	0,479	0,616
RISK6_IEO I rather want to start-up a business alone than in partnership with somebody else	18,07	5,277	-0,168	0,381	18,75	3,341	-0,027	0,033	19,37	8,665	0,436	0,630
RISK7_IEO I prefer to start a business in partnership with an established business in the private sector	17,76	4,752	-0,032	0,267	18,49	3,921	-0,163	0,156	19,19	8,909	0,503	0,612

INN_IEO	ROUND 1				ROUND 2				ROUND 2			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted
INNOV1_IEO I am comfortable in moving into new situations	25,86	15,266	0,571	0,602	25,96	14,888	0,255	0,536	28,90	19,893	0,226	0,734
INNOV2_IEO I have already experienced very big changes in my life	25,96	15,917	0,382	0,633	26,11	13,988	0,311	0,520	28,88	18,692	0,420	0,710
INNOV3_IEO I sometimes such as to try new and unusual activities	25,58	17,473	0,272	0,653	25,84	14,436	0,372	0,514	28,92	18,700	0,477	0,705
INNOV4_IEO I such as order and routine	26,06	16,956	0,157	0,678	26,31	13,180	0,330	0,512	29,15	18,054	0,450	0,705
INNOV5_IEO I think that government should provide me with new business ideas	27,24	15,492	0,548	0,608	27,40	12,541	0,517	0,460	30,02	17,078	0,483	0,698
INNOV6_IEO The government must tell me where new business opportunities will arise	26,98	14,591	0,534	0,600	27,15	13,164	0,377	0,499	29,71	16,837	0,495	0,696
INNOV7_IEO BEE will help me getting my business started	26,44	16,170	0,228	0,666	26,91	14,529	0,186	0,553	29,58	18,367	0,311	0,727
INNOV8_IEO I am creative and new business ideas come easily to me	26,30	16,867	0,271	0,652	26,35	15,008	0,195	0,548	29,15	19,348	0,380	0,716
INNOV9_IEO I need help to come up with new ideas	26,10	16,582	0,211	0,667	26,73	15,832	0,013	0,595	29,62	19,339	0,260	0,731
INNOV10_IEO I prefer to experiment and use original approaches to solve challenges rather than using methods other generally apply.	26,02	17,938	0,144	0,669	26,35	16,378	-0,011	0,585	29,04	18,940	0,400	0,713
INNOV11_IEO I spend hours and hours finding out more about new business ideas	26,26	16,441	0,282	0,651	26,55	15,178	0,107	0,572	29,13	19,099	0,316	0,723

PROACT_IEO		ROUND 1				ROUND 2				ROUND 3			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's alpha if item Deleted	
PROAC1_IEO I usually plan ahead	17,34	9,283	0,325	0,669	17,78	8,840	0,442	0,635	19,76	10,564	0,528	0,798	
PROAC2_IEO I already have a business plan	18,30	8,070	0,269	0,706	18,38	8,574	0,323	0,674	20,11	9,421	0,539	0,803	
PROAC3_IEO I submit my assignment before time	17,84	7,628	0,423	0,646	18,11	7,729	0,497	0,615	20,02	10,358	0,546	0,795	
PROAC4_IEO When working in a team, I find myself doing more work just to get the work done on time	17,39	8,897	0,433	0,647	18,04	9,406	0,266	0,682	19,87	10,455	0,500	0,803	
PROAC5_IEO I have plenty of experience working in a team	17,30	9,197	0,338	0,667	17,78	9,026	0,467	0,632	19,74	10,460	0,644	0,781	
PROAC6_IEO I am regarded by my friends as a person who makes things happen	17,36	7,906	0,643	0,592	17,78	9,285	0,400	0,648	19,67	10,453	0,725	0,773	
PROAC7_IEO Usually when I start with a new business idea, I follow it through	18,00	7,818	0,471	0,629	18,35	9,304	0,403	0,647	19,94	10,695	0,515	0,800	

ESE	ROUND 1				ROUND 2				ROUND 3			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted
OI_SELF1 I can recognise a good opportunity when I see it	152,49	1055,112	0,671	0,951	182,88	994,475	0,673	0,965	197,42	1000,406	0,705	0,977
OI_SELF2 I can apply an abstract concept or idea to a real problem or situation	152,75	1054,653	0,652	0,952	183,18	1011,334	0,467	0,966	197,29	999,621	0,728	0,977
OI_SELF3 I can develop a working environment that encourages people to try out something new.	152,74	1043,019	0,711	0,951	183,12	1000,720	0,546	0,966	197,33	989,283	0,818	0,976
OI_SELF4 I can originate new ideas and products	152,98	1037,303	0,661	0,951	183,42	988,167	0,601	0,965	197,44	977,389	0,836	0,976
OI_SELF5 I can see new market opportunities for new products and services	152,81	1058,337	0,622	0,952	183,30	991,684	0,566	0,965	197,38	984,555	0,778	0,977
OI_SELF6 I can identify potential sources of funding for investment	154,00	1062,571	0,438	0,953	184,32	1005,242	0,362	0,967	197,81	1007,962	0,430	0,978
OI_SELF7 I can originate new ideas and products	153,12	1055,038	0,582	0,952	183,44	992,170	0,572	0,965	197,46	1010,253	0,536	0,977
RELSE1 I could be able to persuade company managers they should take a new idea seriously	153,42	1049,177	0,582	0,952	183,44	985,639	0,622	0,965	197,48	989,745	0,784	0,977
RELSE2 I can work on collaborative projects as a member of a team	152,21	1054,955	0,515	0,952	182,66	985,168	0,728	0,965	197,04	994,273	0,706	0,977

ESE	ROUND 1				ROUND 2				ROUND 3			
RELSE3 I can motivate others to work together	152,14	1040,730	0,667	0,951	182,86	966,368	0,800	0,964	196,92	987,798	0,719	0,977
RELSE4 I can form a partnership or alliance relationship with others.	152,28	1042,741	0,673	0,951	182,74	984,482	0,749	0,965	196,94	995,546	0,755	0,977
RELSE5 I can develop and maintain favorable relationships with potential investors	152,89	1026,989	0,700	0,951	182,82	987,661	0,610	0,965	197,06	986,565	0,808	0,976
RELSE6 I can get people to agree with me	152,67	1054,405	0,546	0,952	182,90	983,684	0,655	0,965	197,25	988,583	0,757	0,977
MNGSE1 I understand the language of new venture creation	153,33	1033,298	0,736	0,951	183,50	983,806	0,582	0,965	197,42	986,014	0,804	0,976
MNGSE2 I understand what it takes to start my own social enterprise	153,67	1044,440	0,577	0,952	183,54	990,498	0,540	0,966	197,44	987,546	0,776	0,977
MNGSE3 I can start a successful business if I want to	153,47	1029,147	0,610	0,952	183,22	986,338	0,523	0,966	197,25	986,544	0,736	0,977
MNGSE4 I can manage money	152,82	1067,076	0,394	0,953	183,20	979,959	0,567	0,966	197,31	992,570	0,615	0,977
MNGSE5 I am creative	152,70	1047,356	0,569	0,952	183,14	989,878	0,531	0,966	196,98	997,078	0,656	0,977
MNGSE6 I am a leader	152,49	1046,933	0,663	0,951	182,78	968,665	0,820	0,964	196,81	986,864	0,808	0,976
MNGSE7 I can make sound decisions	152,51	1061,433	0,598	0,952	182,70	977,194	0,802	0,964	196,88	991,045	0,748	0,977
MNGSE8 It is easy for me to stick to my aims and accomplish my goals	152,75	1050,296	0,614	0,952	182,80	982,735	0,677	0,965	197,19	994,864	0,734	0,977

ESE	ROUND 1				ROUND 2				ROUND 3			
MNGSE9 I can work productively under continuous stress, pressure and conflict	152,68	1072,934	0,421	0,953	182,78	992,502	0,629	0,965	197,10	994,755	0,716	0,977
MNGSE10 I can recruit and train key team members	153,33	1049,262	0,636	0,952	183,18	974,640	0,714	0,965	197,17	980,656	0,859	0,976
MNGSE11 I can develop a working environment that encourages people to try out something new	153,47	1048,004	0,665	0,951	183,28	972,655	0,793	0,964	197,10	988,912	0,808	0,976
TOLSE1 I can lead a group of members who strongly disagree with one another	153,81	1048,230	0,582	0,952	183,58	986,657	0,608	0,965	197,23	990,416	0,797	0,976
TOLSE2 I am confident that I could deal efficiently with unexpected events	153,39	1042,598	0,743	0,951	183,24	984,594	0,774	0,965	197,23	999,083	0,775	0,977
TOLSE3 Thanks to my resourcefulness, I know how to handle unforeseen situations	153,67	1049,940	0,659	0,951	183,42	990,616	0,663	0,965	197,33	988,499	0,772	0,977
TOLSE4 I can solve most problems if I invest the necessary effort	152,60	1064,602	0,539	0,952	182,68	998,589	0,665	0,965	196,94	995,820	0,764	0,977
TOLSE5 I can remain calm when facing difficulties because I can rely on my coping abilities	152,98	1058,089	0,512	0,952	183,00	981,429	0,627	0,965	197,29	1021,229	0,468	0,978
TOLSE6 When I am confronted with a problem, I can usually find several solutions	153,14	1056,909	0,570	0,952	183,14	988,327	0,704	0,965	197,29	1013,856	0,624	0,977

ESE	ROUND 1				ROUND 2				ROUND 3			
TOLSE7 I am able to solve problems	152,77	1058,251	0,582	0,952	182,90	983,357	0,764	0,965	197,17	999,322	0,787	0,977
TOLSE8 I can always manage to solve difficult tasks if I try hard enough	152,53	1067,575	0,463	0,953	182,80	991,592	0,737	0,965	197,04	1004,430	0,729	0,977
TOLSE9 If someone opposes me, I can find the means and ways to get what I want	153,39	1064,956	0,545	0,952	183,32	984,344	0,704	0,965	197,27	1001,181	0,744	0,977
TOLSE10 I can remain calm when facing difficulties because I can rely on my coping abilities	153,12	1069,788	0,425	0,953	182,96	990,243	0,637	0,965	197,42	993,504	0,746	0,977
TOLSE11 When I am confronted with a problem, I can usually find several solutions	153,04	1071,106	0,458	0,953	183,14	990,123	0,713	0,965	197,08	1002,347	0,714	0,977
TOLSE12 If I am in trouble, I can always think of a solution	153,07	1064,852	0,573	0,952	182,84	988,872	0,798	0,965	197,12	994,183	0,795	0,976
TOLSE13 I can usually handle whatever comes my way	152,33	1070,690	0,486	0,953	182,98	976,796	0,807	0,964	197,04	1000,940	0,666	0,977

IEO	ROUND 1				ROUND 2				ROUND 3			
ITEMS	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted	Scales Mean if item deleted	Scale Variance if item Deleted	Corrected item-total Correlation	Cronbach's Alpha if item Deleted
RISK1_IEO I am willing to work full-time for myself	66,67	56,136	0,140	0,742		47,308	0,052	0,674	73,88	68,239	0,386	0,799
RISK2_IEO I am willing to invest my own money in a new business	66,76	56,275	0,099	0,744	67,59	46,205	0,230	0,664	73,88	66,580	0,498	0,794
RISK3_IEO I can handle risky situation with confidence	67,52	53,233	0,367	0,730	68,00	45,875	0,211	0,665	74,10	65,500	0,583	0,791
RISK4_IEO It is a safe career choice to work for an organisation that offer a good salary	67,61	54,066	0,186	0,742	68,51	45,255	0,155	67,67	74,67	67,801	0,193	0,809
RISK5_IEO It is preferable for me to have job security though working for a well-established business that offers a good salary	67,83	55,747	0,054	0,752	68,90	45,302	0,127	0,674	74,31	67,453	0,252	0,805
RISK6_IEO I rather want to start-up a business alone than in partnership with somebody else	67,87	54,605	0,131	0,747	68,71	46,208	0,091	0,675	74,65	66,191	0,319	0,801
RISK7_IEO I prefer to start a business in partnership with an established business in the private sector	67,48	54,655	0,146	0,745	68,59	47,455	-0,011	0,683	74,52	68,127	0,238	0,805
INNOV1_IEO I am comfortable in moving into new situations	67,28	50,829	0,552	0,718	68,20	45,499	0,203	0,665	74,15	68,383	0,268	0,803
INNOV2_IEO I have already experienced very big changes in my life	67,41	51,048	0,470	0,722	68,33	43,391	0,327	0,653	74,10	67,542	0,349	0,800

INNOV3_IEO I sometimes such as to try new and unusual activities	67,04	54,798	0,284	0,736	68,08	44,118	0,379	0,652	74,17	65,631	0,556	0,791
INNOV4_IEO I such as order and routine	67,43	56,740	-0,015	0,757	68,47	41,546	0,400	0,643	74,40	66,202	0,410	0,797
INNOV5_IEO I think that government should provide me with new business ideas	68,70	52,083	0,444	0,725	69,57	41,208	0,484	0,635	75,21	64,254	0,449	0,794
INNOV6_IEO The government must tell me where new business opportunities will arise	68,41	50,603	0,456	0,722	69,35	44,523	0,204	0,665	74,96	66,722	0,265	0,805
INNOV7_IEO BEE will help me getting my business started	67,83	53,614	0,180	0,744	69,06	47,350	-0,019	0,687	74,79	70,722	0,032	0,817
INNOV8_IEO I am creative and new business ideas come easily to me	67,74	53,442	0,294	0,734	68,57	46,667	0,064	0,676	74,42	67,440	0,411	0,797
INNOV9_IEO I need help to come up with new ideas	67,54	53,454	0,205	0,741	68,90	44,719	0,204	0,665	74,79	70,296	0,103	0,810
INNOV10_IEO I prefer to experiment and use original approaches to solve challenges rather than using methods other generally apply.	67,43	54,340	0,279	0,736	68,55	46,919	0,061	0,675	74,33	66,610	0,448	0,796
INNOV11_IEO I spend hours and hours finding out more about new business ideas	67,67	51,158	0,436	0,724	68,76	45,855	0,102	0,675	74,42	65,823	0,448	0,795
PROAC1_IEO I usually plan ahead	67,04	53,198	0,419	0,728	68,08	42,952	0,408	0,646	74,06	66,656	0,421	0,796
PROAC2_IEO I already have a business plan	67,93	52,062	0,281	0,736	68,78	42,553	0,336	0,651	74,50	66,298	0,309	0,802
PROAC3_IEO I submit my assignment before time	67,65	51,521	0,343	0,730	68,47	41,629	0,393	0,644	74,31	66,900	0,377	0,798

PROAC4_IEO When working in a team, I find myself doing more work just to get the work done on time	67,15	54,976	0,226	0,738	68,35	45,690	0,128	0,672	74,08	67,823	0,323	0,801
PROAC5_IEO I have plenty of experience working in a team	67,04	54,176	0,309	0,734	68,08	42,535	0,512	0,639	74,06	67,379	0,398	0,798
PROAC6_IEO I am regarded by my friends as a person who makes things happen	67,07	52,062	0,559	0,721	68,10	45,635	0,183	0,666	73,98	66,787	0,503	0,794
PROAC7_IEO Usually when I start with a new business idea, I follow it through	67,70	51,372	0,401	0,726	68,65	43,231	0,448	0,645	74,27	66,797	0,410	0,797

TEST OF NORMALITY

	<u>ROUND 1</u>			<u>ROUND 1</u>			<u>ROUND 2</u>			<u>ROUND 2</u>			<u>ROUND 3</u>			<u>ROUND 3</u>		
	<u>KOLMOGOROV SMIRNOV</u>			<u>SHAPIRO-WILK</u>			<u>KOLMOGOROV SMIRNOV</u>			<u>SHAPIRO WILK</u>			<u>KOLMOGOROV SMIRNOV</u>			<u>SHAPIRO WILK</u>		
	<u>Statistics</u>	<u>df</u>	<u>Sig.</u>	<u>Statistic</u>	<u>df</u>	<u>Sig.</u>	<u>Statistic</u>	<u>df</u>	<u>Sig.</u>	<u>Statistic</u>	<u>df</u>	<u>Sig.</u>	<u>Statistic</u>	<u>df</u>	<u>Sig.</u>	<u>Statistic</u>	<u>df</u>	<u>Sig.</u>
<u>OI ESE</u>	0,124	41	0,116	0,956	41	0,110	0,122	41	0,128	0,976	41	0,533	0,132	40	0,075	0,963	40	0,217
<u>REL ESE</u>	0,118	41	0,167	0,957	41	0,119	0,145	41	0,031	0,928	41	0,012	0,158	40	0,013	0,892	40	0,001
<u>MNG ESE</u>	0,089	41	.200*	0,987	41	0,903	0,130	41	0,078	0,946	41	0,049	0,131	40	0,082	0,896	40	0,001
<u>TOL ESE</u>	0,099	41	.200*	0,965	41	0,232	0,158	41	0,011	0,952	41	0,085	0,112	40	.200*	0,968	40	0,304
<u>RISK IEO</u>	0,184	41	0,001	0,953	41	0,090	0,166	41	0,006	0,961	41	0,175	0,148	40	0,027	0,910	40	0,004
<u>INN IEO</u>	0,118	41	0,162	0,964	41	0,212	0,147	41	0,027	0,939	41	0,029	0,102	40	.200*	0,975	40	0,526
<u>PROACT IEO</u>	0,090	41	.200*	0,987	41	0,915	0,163	41	0,008	0,938	41	0,026	0,122	40	0,135	0,935	40	0,023
<u>ESE</u>	0,079	41	.200*	0,983	41	0,804	0,130	41	0,081	0,955	41	0,102	0,104	40	.200*	0,934	40	0,023
<u>IEO</u>	0,084	41	.200*	0,984	41	0,813	0,130	41	0,078	0,948	41	0,061	0,111	40	.200*	0,972	40	0,411

<u>OPPORTUNITY ESE COMMUNALITIES</u>	<u>ROUND 1</u>		<u>ROUND 2</u>		<u>ROUND 3</u>	
	<u>INITIAL</u>	<u>EXTRACTION</u>	<u>INITIAL</u>	<u>EXTRACTION</u>	<u>INITIAL</u>	<u>EXTRACTION</u>
<u>OI_SELF1 I can recognise a good opportunity when I see it</u>	1,000	0,623	1,000	0,679	1,000	0,678
<u>OI_SELF2 I can apply an abstract concept or idea to a real problem or situation</u>	1,000	0,659	1,000	0,498	1,000	0,628
<u>OI_SELF3 I can develop a working environment that encourages people to try out something new.</u>	1,000	0,573	1,000	0,670	1,000	0,817
<u>OI_SELF4 I can originate new ideas and products</u>	1,000	0,733	1,000	0,773	1,000	0,854
<u>OI_SELF5 I can see new market opportunities for new products and services</u>	1,000	0,606	1,000	0,730	1,000	0,891
<u>OI_SELF6 I can identify potential sources of funding for investment</u>	1,000	0,304	1,000	0,049	1,000	0,364
<u>OI_SELF7 I can originate new ideas and products</u>	1,000	0,682	1,000	0,748	1,000	0,612

OI-ESE TOTAL VARIANCE EXPLAINED (Round 1-3)

Components	Initial Eigen values			Loadings		
Round 1	Total	% of variance	Cumulative %	Total	% of Variance	Cumulative %
<u>1</u>	4,180	59,713	59,713	4,180	59,713	59,713
<u>2</u>	0,837	11,964	71,677			
<u>3</u>	0,651	9,307	80,984			
<u>4</u>	0,479	6,848	87,831			
<u>5</u>	0,444	6,342	94,173			
<u>6</u>	0,275	3,935	98,108			
<u>7</u>	0,132	1,892	100,000			
ROUND 2						
<u>1</u>	4,147	59,243	59,243	4,147	59,243	59,243
<u>2</u>	0,968	13,823	73,066			
<u>3</u>	0,678	9,682	82,748			
<u>4</u>	0,433	6,185	88,933			
<u>5</u>	0,314	4,492	93,425			
<u>6</u>	0,285	4,075	97,500			
<u>7</u>	0,175	2,500	100,000			
ROUND 3						
	4,844	69,195	69,195	4,844	69,195	69,195
	0,869	12,410	81,604			
	0,450	6,425	88,029			
	0,353	5,049	93,078			
	0,254	3,625	96,703			
	0,131	1,866	98,569			
	0,100	1,431	100,000			

RELATIONSHIP ESE COMMUNALITIES (ROUND 1-3)

	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>
<u>RELSE1 I could be able to persuade company managers they should take a new idea seriously</u>	1,000	0,593	1,000	0,496	1,000	0,611
<u>RELSE2 I can work on collaborative projects as a member of a team</u>	1,000	0,659	1,000	0,754	1,000	0,697
<u>RELSE3 I can motivate others to work together</u>	1,000	0,760	1,000	0,724	1,000	0,754
<u>RELSE4 I can form a partnership or alliance relationship with others.</u>	1,000	0,868	1,000	0,657	1,000	0,799
<u>RELSE5 I can develop and maintain favorable relationships with potential investors</u>	1,000	0,806	1,000	0,701	1,000	0,750
<u>RELSE6 I can get people to agree with me</u>	1,000	0,505	1,000	0,672	1,000	0,719

TOL_ESE Total Variance Explained (Round 1-3)

<u>Component</u>	<u>Initial Eigenvalues</u>			<u>Loadings</u>		
<u>Round 1</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
<u>1</u>	4,192	69,861	69,861	4,192	69,861	<u>69,861</u>
<u>2</u>	0,669	11,158	81,019			
<u>3</u>	0,490	8,173	89,191			
<u>4</u>	0,310	5,166	94,357			
<u>5</u>	0,234	3,892	98,249			
<u>6</u>	0,105	1,751	100,000			
<u>Round 2</u>						
<u>1</u>	4,003	66,713	66,713	4,003	66,713	66,713
<u>2</u>	0,739	12,322	79,035			
<u>3</u>	0,473	7,879	86,914			
<u>4</u>	0,345	5,748	92,662			
<u>5</u>	0,284	4,734	97,395			
<u>6</u>	0,156	2,605	100,000			
<u>Round 3</u>						
<u>1</u>	4,331	72,181	72,181	4,331	72,181	72,181
<u>2</u>	0,521	8,691	80,872			
<u>3</u>	0,434	7,238	88,110			
<u>4</u>	0,315	5,257	93,367			
<u>5</u>	0,257	4,285	97,652			
<u>6</u>	0,141	2,348	100,000			

MNG_ESE COMMUNALITIES (Round 1-3)

	<u>Round 1</u>		<u>Round 2</u>		<u>Round 3</u>	
	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>
<u>MNGSE1 I understand the language of new venture creation</u>	1,000	0,558	1,000	0,549	1,000	0,828
<u>MNGSE2 I understand what it takes to start my own social enterprise</u>	1,000	0,644	1,000	0,550	1,000	0,832
<u>MNGSE3 I can start a successful business if I want to</u>	1,000	0,621	1,000	0,604	1,000	0,665
<u>MNGSE4 I can manage money</u>	1,000	0,498	1,000	0,519	1,000	0,667
<u>MNGSE5 I am creative</u>	1,000	0,516	1,000	0,436	1,000	0,532
<u>MNGSE6 I am a leader</u>	1,000	0,619	1,000	0,735	1,000	0,802
<u>MNGSE7 I can make sound decisions</u>	1,000	0,682	1,000	0,736	1,000	0,785
<u>MNGSE8 It is easy for me to stick to my aims and accomplish my goals</u>	1,000	0,715	1,000	0,619	1,000	0,755
<u>MNGSE9 I can work productively under continuous stress, pressure and conflict</u>	1,000	0,519	1,000	0,640	1,000	0,600
<u>MNGSE10 I can recruit and train key team members</u>	1,000	0,548	1,000	0,689	1,000	0,796
<u>MNGSE11 I can develop a working environment that encourages people to try out something new</u>	1,000	0,643	1,000	0,673	1,000	0,701

MNG_ESE Variance Explained

<u>Initial Eigen Values</u>				<u>Loadings</u>			<u>Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
<u>1</u>	5,303	48,208	48,208	5,303	48,208	48,208	3,614	32,856	32,856
<u>2</u>	1,259	11,441	59,649	1,259	11,441	59,649	2,947	26,793	59,649
<u>3</u>	0,986	8,964	68,613						
<u>4</u>	0,819	7,448	76,061						
<u>5</u>	0,652	5,931	81,992						
<u>6</u>	0,528	4,799	86,791						
<u>7</u>	0,388	3,529	90,320						
<u>8</u>	0,339	3,086	93,405						
<u>9</u>	0,280	2,542	95,947						
<u>10</u>	0,243	2,207	98,155						
<u>11</u>	0,203	1,845	100,000						
<u>Round 2</u>									
<u>1</u>	5,451	49,559	49,559	5,451	49,559	49,559	3,568	32,433	32,433
<u>2</u>	1,298	11,802	61,361	1,298	11,802	61,361	3,182	28,928	61,361
<u>3</u>	0,886	8,058	69,418						
<u>4</u>	0,764	6,945	76,363						
<u>5</u>	0,642	5,839	82,202						

6	0,586	5,327	87,529						
<u>7</u>	0,397	3,612	91,141						
8	0,346	3,145	94,286						
<u>9</u>	0,250	2,269	96,555						
<u>10</u>	0,212	1,924	98,479						
<u>11</u>	0,167	1,521	100,000						
<u>1</u>	6,927	62,977	62,977	6,927	62,977	62,977	4,638	42,163	42,163
2	1,035	9,405	72,382	1,035	9,405	72,382	3,324	30,219	72,382
<u>3</u>	0,813	7,390	79,772						
4	0,550	4,996	84,768						
<u>5</u>	0,439	3,994	88,762						
6	0,348	3,164	91,926						
<u>7</u>	0,261	2,375	94,301						
8	0,219	1,989	96,290						
<u>9</u>	0,161	1,461	97,751						
<u>10</u>	0,133	1,210	98,961						
<u>11</u>	0,114	1,039	100,000						

TOL_ESE COMMUNALITIES

	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>
<u>TOLSE1 I can lead a group of members who strongly disagree with one another</u>	1,000	0,831	1,000	0,794	1,000	0,735
<u>TOLSE2 I am confident that I could deal efficiently with unexpected events</u>	1,000	0,802	1,000	0,826	1,000	0,796
<u>TOLSE3 Thanks to my resourcefulness, I know how to handle unforeseen situations</u>	1,000	0,665	1,000	0,680	1,000	0,798
<u>TOLSE4 I can solve most problems if I invest the necessary effort</u>	1,000	0,639	1,000	0,736	1,000	0,710
<u>TOLSE5 I can remain calm when facing difficulties because I can rely on my coping abilities</u>	1,000	0,741	1,000	0,785	1,000	0,730
<u>TOLSE6 When I am confronted with a problem, I can usually find several solutions</u>	1,000	0,749	1,000	0,776	1,000	0,764
<u>TOLSE7 I am able to solve problems</u>	1,000	0,679	1,000	0,739	1,000	0,727
<u>TOLSE8 I can always manage to solve difficult tasks if I try hard enough</u>	1,000	0,767	1,000	0,724	1,000	0,745
<u>TOLSE9 If someone opposes me, I can find the means and ways to get what I want</u>	1,000	0,811	1,000	0,609	1,000	0,713
<u>TOLSE10 I can remain calm when facing difficulties because I can rely on my coping abilities</u>	1,000	0,764	1,000	0,792	1,000	0,732
<u>TOLSE11 When I am confronted with a problem, I can usually find several solutions</u>	1,000	0,811	1,000	0,780	1,000	0,701
<u>TOLSE12 If I am in trouble, I can always think of a solution</u>	1,000	0,715	1,000	0,779	1,000	0,757
<u>TOLSE13 I can usually handle whatever comes my way</u>	1,000	0,758	1,000	0,744	1,000	0,647

TOL_ESE TOTAL VARIANCE EXPLAINED

<u>Initial Eigen Values</u>				<u>Loadings</u>			<u>Loadings</u>		
<u>Component</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
<u>1</u>	6,019	46,297	46,297	6,019	46,297	46,297	3,672	28,244	28,244
<u>2</u>	1,407	10,826	57,124	1,407	10,826	57,124	2,120	16,311	44,555
<u>3</u>	1,296	9,969	67,093	1,296	9,969	67,093	2,011	15,473	60,027
<u>4</u>	1,011	7,773	74,866	1,011	7,773	74,866	1,929	14,839	74,866
<u>5</u>	0,716	5,505	80,371						
<u>6</u>	0,547	4,209	84,580						
<u>7</u>	0,477	3,668	88,248						
<u>8</u>	0,400	3,075	91,323						
<u>9</u>	0,350	2,693	94,016						
<u>10</u>	0,265	2,040	96,056						
<u>11</u>	0,221	1,697	97,752						
<u>12</u>	0,164	1,259	99,012						
<u>13</u>	0,128	0,988	100,000						
<u>Round 2</u>									
<u>1</u>	8,622	66,323	66,323	8,622	66,323	66,323	5,694	43,799	43,799
<u>2</u>	1,141	8,776	75,099	1,141	8,776	75,099	4,069	31,300	75,099
<u>3</u>	0,601	4,619	79,718						

4	0,569	4,376	84,094						
<u>5</u>	0,457	3,514	87,609						
6	0,403	3,101	90,709						
<u>7</u>	0,345	2,654	93,363						
8	0,226	1,738	95,101						
<u>9</u>	0,201	1,544	96,645						
<u>10</u>	0,165	1,268	97,914						
<u>11</u>	0,134	1,029	98,943						
<u>12</u>	0,074	0,566	99,509						
<u>13</u>	0,064	0,491	100,000						
<u>Round 3</u>									
<u>1</u>	8,493	65,331	65,331	8,493	65,331	65,331	4,920	37,846	37,846
2	1,064	8,185	73,516	1,064	8,185	73,516	4,637	35,670	73,516
<u>3</u>	0,656	5,048	78,564						
4	0,553	4,253	82,817						
<u>5</u>	0,437	3,365	86,182						
6	0,401	3,086	89,268						
<u>7</u>	0,305	2,344	91,612						
8	0,270	2,079	93,691						
<u>9</u>	0,247	1,901	95,593						

<u>10</u>	0,234	1,798	97,391						
<u>11</u>	0,152	1,169	98,561						
<u>12</u>	0,107	0,820	99,381						
<u>13</u>	0,080	0,619	100,000						

RISK-TAKING COMMUNALITIES (ROUND 1-3)

	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>
<u>RISK1 IEO I am willing to work full-time for myself</u>	1,000	0,533	1,000	0,775	1,000	0,684
<u>RISK2 IEO I am willing to invest my own money in a new business</u>	1,000	0,667	1,000	0,727	1,000	0,818
<u>RISK3 IEO I can handle risky situation with confidence</u>	1,000	0,582	1,000	0,336	1,000	0,658
<u>RISK4 IEO It is a safe career choice to work for an organisation that offer a good salary</u>	1,000	0,756	1,000	0,734	1,000	0,696
<u>RISK5 IEO It is preferable for me to have job security though working for a well-established business that offers a good salary</u>	1,000	0,833	1,000	0,798	1,000	0,852
<u>RISK6 IEO I rather want to start-up a business alone than in partnership with somebody else</u>	1,000	0,669	1,000	0,503	1,000	0,408
<u>RISK7 IEO I prefer to start a business in partnership with an established business in the private sector</u>	1,000	0,669	1,000	0,668	1,000	0,503

RISK-TAKING TOTAL VARIANCE EXPLAINED

<u>Initial Eigen Values</u>				<u>Loadings</u>			<u>Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
<u>1</u>	1,884	26,912	26,912	1,884	26,912	26,912	1,799	25,696	25,696
<u>2</u>	1,541	22,017	48,929	1,541	22,017	48,929	1,506	21,508	47,204
<u>3</u>	1,284	18,346	67,275	1,284	18,346	67,275	1,405	20,072	67,275
<u>4</u>	0,802	11,457	78,733						
<u>5</u>	0,725	10,354	89,087						
<u>6</u>	0,466	6,658	95,744						
<u>7</u>	0,298	4,256	100,000						
<u>Round 2</u>									
<u>1</u>	2,081	29,728	29,728	2,081	29,728	29,728	1,636	23,371	23,371
<u>2</u>	1,347	19,240	48,968	1,347	19,240	48,968	1,623	23,191	46,562
<u>3</u>	1,113	15,905	64,873	1,113	15,905	64,873	1,282	18,311	64,873
<u>4</u>	0,834	11,910	76,782						
<u>5</u>	0,782	11,172	87,955						
<u>6</u>	0,491	7,018	94,973						
<u>7</u>	0,352	5,027	100,000						
<u>1</u>	2,426	34,652	34,652	2,426	34,652	34,652	2,347	33,530	33,530

2	2,192	31,316	65,968	2,192	31,316	65,968	2,271	32,438	65,968
<u>3</u>	0,789	11,265	77,234						
4	0,699	9,987	87,220						
<u>5</u>	0,471	6,731	93,951						
6	0,219	3,127	97,078						
<u>7</u>	0,205	2,922	100,000						

INN_IEO COMMUNALITIES

	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>
<u>INNOV1 IEO I am comfortable in moving into new situations</u>	1,000	0,697	1,000	0,550	1,000	0,728
<u>INNOV2 IEO I have already experienced very big changes in my life</u>	1,000	0,707	1,000	0,458	1,000	0,618
<u>INNOV3 IEO I sometimes such as to try new and unusual activities</u>	1,000	0,647	1,000	0,629	1,000	0,610
<u>INNOV4 IEO I such as order and routine</u>	1,000	0,644	1,000	0,541	1,000	0,374
<u>INNOV5 IEO I think that government should provide me with new business ideas</u>	1,000	0,776	1,000	0,721	1,000	0,739
<u>INNOV6 IEO The government must tell me where new business opportunities will arise</u>	1,000	0,662	1,000	0,689	1,000	0,709
<u>INNOV7 IEO BEE will help me getting my business started</u>	1,000	0,613	1,000	0,574	1,000	0,745
<u>INNOV8 IEO I am creative and new business ideas come easily to me</u>	1,000	0,654	1,000	0,797	1,000	0,579
<u>INNOV9 IEO I need help to come up with new ideas</u>	1,000	0,806	1,000	0,663	1,000	0,309
<u>INNOV10 IEO I prefer to experiment and use original approaches to solve challenges rather than using methods other generally apply.</u>	1,000	0,864	1,000	0,694	1,000	0,657
<u>INNOV11 IEO I spend hours and hours finding out more about new business ideas</u>	1,000	0,551	1,000	0,631	1,000	0,533

INN_IEO TOTAL VARIANCE EXPLAINED

<u>Initial Eigen Values</u>				<u>Loadings</u>			<u>Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
<u>1</u>	2,913	26,482	26,482	2,913	26,482	26,482	2,364	21,489	21,489
<u>2</u>	2,292	20,834	47,316	2,292	20,834	47,316	2,068	18,801	40,291
<u>3</u>	1,399	12,718	60,034	1,399	12,718	60,034	1,846	16,779	57,070
<u>4</u>	1,017	9,244	69,278	1,017	9,244	69,278	1,343	12,209	69,278
<u>5</u>	0,872	7,925	77,204						
<u>6</u>	0,565	5,139	82,343						
<u>7</u>	0,498	4,526	86,869						
<u>8</u>	0,451	4,097	90,966						
<u>9</u>	0,417	3,793	94,759						
<u>10</u>	0,367	3,341	98,100						
<u>11</u>	0,209	1,900	100,000						
<u>Round 2</u>									
<u>1</u>	2,376	21,602	21,602	2,376	21,602	21,602	2,109	19,173	19,173
<u>2</u>	2,261	20,552	42,154	2,261	20,552	42,154	1,921	17,460	36,634
<u>3</u>	1,162	10,565	52,719	1,162	10,565	52,719	1,601	14,553	51,187
<u>4</u>	1,148	10,438	63,157	1,148	10,438	63,157	1,317	11,971	63,157
<u>5</u>	0,938	8,525	71,683						

6	0,858	7,800	79,482						
7	0,695	6,314	85,797						
8	0,513	4,664	90,461						
9	0,490	4,451	94,911						
10	0,333	3,030	97,942						
11	0,226	2,058	100,000						
Round 3									
1	3,149	28,626	28,626	3,149	28,626	28,626	2,497	22,703	22,703
2	2,221	20,191	48,817	2,221	20,191	48,817	2,123	19,301	42,004
3	1,230	11,183	60,000	1,230	11,183	60,000	1,980	17,997	60,000
4	0,988	8,980	68,980						
5	0,883	8,027	77,007						
6	0,652	5,925	82,932						
7	0,531	4,827	87,759						
8	0,451	4,100	91,859						
9	0,440	4,001	95,860						
10	0,327	2,972	98,831						
11	0,129	1,169	100,000						

PROACT_IEO COMMUNALITIES

	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>	<u>Initial</u>	<u>Extraction</u>
<u>PROAC1_ IEO I usually plan ahead</u>	1,000	0,350	1,000	0,431	1,000	0,468
<u>PROAC2_ IEO I already have a business plan</u>	1,000	0,735	1,000	0,673	1,000	0,455
<u>PROAC3_ IEO I submit my assignment before time</u>	1,000	0,432	1,000	0,646	1,000	0,426
<u>PROAC4_ IEO When working in a team, I find myself doing more work just to get the work done on time</u>	1,000	0,436	1,000	0,570	1,000	0,434
<u>PROAC5_ IEO I have plenty of experience working in a team</u>	1,000	0,610	1,000	0,504	1,000	0,582
<u>PROAC6_ IEO I am regarded by my friends as a person who makes things happen</u>	1,000	0,655	1,000	0,548	1,000	0,699
<u>PROAC7_ IEO Usually when I start with a new business idea, I follow it through</u>	1,000	0,557	1,000	0,353	1,000	0,416

PROACT_IEO TOTAL VARIANCE EXPLAINED

<u>Initial Eigen Values</u>				<u>Loadings</u>			<u>Loadings</u>		
	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>	<u>Total</u>	<u>% of Variance</u>	<u>Cumulative %</u>
<u>1</u>	2,625	37,505	37,505	2,625	37,505	37,505	2,115	30,217	30,217
<u>2</u>	1,149	16,412	53,917	1,149	16,412	53,917	1,659	23,699	53,917
<u>3</u>	0,823	11,752	65,668						
<u>4</u>	0,700	10,005	75,673						
<u>5</u>	0,674	9,632	85,305						
<u>6</u>	0,608	8,681	93,986						
<u>7</u>	0,421	6,014	100,000						
<u>Round 2</u>									
<u>1</u>	2,500	35,709	35,709	2,500	35,709	35,709	1,866	26,660	26,660
<u>2</u>	1,226	17,508	53,217	1,226	17,508	53,217	1,859	26,557	53,217
<u>3</u>	0,967	13,809	67,026						
<u>4</u>	0,714	10,204	77,230						
<u>5</u>	0,620	8,852	86,082						
<u>6</u>	0,561	8,013	94,095						
<u>7</u>	0,413	5,905	100,000						
<u>Round 3</u>									
<u>1</u>	3,481	49,723	49,723	3,481	49,723	49,723			

2	0,917	13,102	62,826						
<u>3</u>	0,787	11,241	74,067						
4	0,724	10,344	84,410						
<u>5</u>	0,536	7,651	92,062						
6	0,301	4,306	96,367						
<u>7</u>	0,254	3,633	100,000						

APPENDIX H: TURNITIN REPORT

1/27/2021

Turnitin

Turnitin Originality Report	
Processed on: 27-Jan-2021 7:59 PM CAT ID: 1495403904 Word Count: 111413 Submitted: 1	Similarity Index 11%
DEVELOPING ENTREPRENEURIAL SELF-EFFICACY AND INDIVIDUAL ENTREPRENEURIAL ORIENTATION: AN ACTION ORIENTED APPROACH By Matthew Olusegun Awotunde	
Similarity by Source Internet Sources: 12% Publications: 4% Student Papers: 4%	
3% match ()	https://researchspace.ukzn.ac.za/handle/10413/17395
1% match (Internet from 27-Apr-2019)	https://researchspace.ukzn.ac.za/bitstream/handle/10413/14673/Atiku_Sulaiman_Olusegun_2014.pdf?sequence=1
1% match ()	https://researchspace.ukzn.ac.za/handle/10413/17636
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< 1% match (student papers from 28-Jan-2016)	Submitted to University of KwaZulu-Natal on 2016-01-28
< 1% match (Internet from 18-Nov-2010)	http://www.allbusiness.com/management/278976-1.html
< 1% match (publications)	"The International Encyclopedia of Higher Education Systems and Institutions", Springer Science and Business Media LLC, 2020
< 1% match (publications)	Thea Van der Westhuizen, "chapter 8 Good Entrepreneurial Intentions, No Entrepreneurial Action", 3GI Global, 2019
< 1% match (Internet from 09-Nov-2018)	http://www.nsfas.org.za/content/reports/NSFAS%20Analysis%20V3%20-%2029032018.pdf
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CHAPTER ONE INTRODUCTION AND BACKGROUND TO THE STUDY 1.1 INTRODUCTION This report provides an account of a longitudinal systemic action learning and action research initiative, where the purpose of the study was to investigate how students' entrepreneurial orientation and entrepreneurial self-efficacy developed over time, by applying an action- oriented approach to learning. Entrepreneurship and innovation have been the focus and main mechanisms for transformation and development in both developed and emerging economies (Gamede & Uleanya, 2018). Entrepreneurship is seen as a critical engine of economic development that engages various activities in the sector, including entrepreneurial creativity, to solve societal and individuals' problems through opportunity and its advantages (Chai, Lysova, Bart & Bossink, 2019; Khelavar & Qazvini, 2012). Globally, governments and individual people are encouraged to engage in entrepreneurial activities (Koe, 2016; Herrington & Kew, 2016) thereby ensuring that education institutions serve as links between theoretical knowledge and practical skills in various sectors. According to Light and

APPENDIX I: CERTIFICATE FROM THE LANGUAGE PRACTITIONER



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TO WHOM IT MAY CONCERN

I, Redène Noeleen Steenberg, declare that the language editing has been done for the thesis of:

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DEVELOPING ENTREPRENEURIAL SELF-EFFICACY AND INDIVIDUAL ENTREPRENEURIAL ORIENTATION: AN ACTION ORIENTED APPROACH

Submitted in fulfilment of the requirements for the degree of Doctor of Philosophy at the University of KwaZulu Natal.

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Any other queries related to the language editing of this thesis may be directed to me at 076 481 8341.

Signed at Port Elizabeth on 27 January 2021

