# AN ASSESSMENT OF ENTREPRENEURIAL SELF-EFFICACY AMONG TECHNICAL COLLEGE STUDENTS: THE CASE OF NASAWA TECHNICAL COLLEGE

**MASTER OF TECHNICAL AND VOCATIONAL EDUCATION THESIS**

**DIVERSON MTALIKA**

**UNIVERSITY OF MALAWI**

**THE POLYTECHNIC**

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# AN ASSESSMENT OF ENTREPRENEURIAL SELF-EFFICACY AMONG TECHNICAL COLLEGE STUDENTS: THE CASE OF NASAWA TECHNICAL COLLEGE

**Master of Technical and Vocational Education Thesis**

**By**

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## DECLARATION

I, Diverson Mtalika, declare that this thesis is my own original work. Where other sources of information have been used, they have been acknowledged. I hereby certify that this work has not been submitted before in part or full for any other degree or examination.

**SIGNATURE** :_____

**DATE** : _____

## CERTIFICATE OF APPROVAL

We, the undersigned, certify that we have read and hereby recommend for acceptance by the University of Malawi a thesis entitled: *An Assessment of Entrepreneurial Self-efficacy among Technical College Students: The case of Nasawa Technical College*

**Dean - Postgraduate** :_____

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**Main Supervisor** :_____

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**Date** :_____

**Co-Supervisor** :_____

**Signature** :_____

**Date** :_____

**Head of Department** :_____

**Signature** :_____

**Date** :_____

## DEDICATION

This project is dedicated to my late uncle, Rev Fr Alfred Magwaya, for his numerous sacrifices in helping me to recognise the value of and acquire education. My mother and the entire Magwaya family thank you for shaping me into the man I am today. To my wife, Esmie, continue being such a loving and caring wife and mother to our kids. You are a blessing to my life.

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Most of all, I remain forever grateful to the almighty God for His abundance of grace and mercy during the entire period of my studies.

## ABSTRACT

Entrepreneurship is believed to be the solution to unemployment problems in many parts of the world. However, for one to venture into an entrepreneurial lifestyle, a person has to demonstrate to have high levels of Entrepreneurial Self-Efficacy (ESE). ESE is a way to assess a person who can likely become an entrepreneur.

Purpose of the study was to assess students' perceived entrepreneurial self-efficacy at Nasawa Technical College. Since the introduction of Entrepreneurship Education in the TVET system in 2006, no study has been conducted to assess students' perceived efficacy. The study established three objectives: to assess levels of entrepreneurial self-efficacy among TVET students respective of their programme of study; to determine levels of entrepreneurial self-efficacy among students exposed to entrepreneurship education against students not exposed to entrepreneurship education; and to establish the extent of entrepreneurial self-efficacy in relation to gender.

Data was collected using a questionnaire which had 31 items. Reliability test of the instrument recorded 0.98 on Cronbach alpha. A total of 119 final year students participated in the study sampled from six different programmes. The SPSS version 20 software package was used to analyse the data and non-parametric tests such as Mann Whitney U and Kruskal-Wallis H tests were applied to provide inferences to the results.

There was no statistically significant difference among students pursuing different courses in levels of perceived entrepreneurial self-efficacy. Students who were exposed to entrepreneurship education perceived their efficacy higher than students not exposed to entrepreneurship education and the differences were statistically significant on the Mann Whitney U test. Male students perceived their efficacy significantly higher than female students on all entrepreneurial domains and the outcome was also statistically significant on Mann Whitney U test.

The study recommended that entrepreneurship education should be taught to all students so that all apprentices enrolled in technical colleges should be exposed to entrepreneurship training regardless of the mode of entry into college and the entrepreneurship education should emphasise on modelling to develop female students' efficacy. A recommendation for further study there is a need to examine entrepreneurial self-efficacy for trainers and investigate how many students actually start their own businesses after being exposed to entrepreneurship education and after graduating from a technical college.

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## ABBREVIATIONS AND ACRONYMS

| | |
|---|---|
| **AMM** | Auto Mobile Mechanics |
| **BL** | Bricklaying |
| **CJ** | Carpentry and Joinery |
| **ESE** | Entrepreneurial Self-Efficacy |
| **GDP** | Gross Domestic Product |
| **GF** | General Fitting |
| **GNP** | Gross National Product |
| **MCM** | Motor Cycle Mechanics |
| **MGDS** | Malawi Growth and Development Strategy |
| **MoLMD** | Ministry of Labour and Manpower Development |
| **MPRS** | Malawi Poverty Reduction Strategy |
| **MSME** | Micro, Small and Medium Enterprises |
| **SME** | Small and Medium Enterprises |
| **SADC** | Southern African Development Community |
| **SEC** | Secretarial Studies |
| **SPSS** | Statistical Package for the Social Sciences |
| **TEVET** | Technical Entrepreneurial Vocational Education and Training |
| **TEVETA** | Technical Entrepreneurial Vocational Education and Training Authority |
| **TVET** | Technical Vocational Education and Training |
| **UNESCO** | United Nations Education Scientific and Cultural Organisation |

## APPENDICES

# CHAPTER 1
# INTRODUCTION

## 1.1 Study Background

Technical Vocational Education and Training (TVET) is key in equipping young people with skills that enable them engage in productive livelihoods. Maigida, Saba, and Namkere (2013) argue that to empower the youth there is need to provide them with adequate and quality technical and vocational education in order to make them self-reliant. However, the United Nations Education Scientific and Cultural Organisation (UNESCO) in 2006 observed that over a long time TVET programmes in many countries have not led to increased employment. Youth unemployment remains a serious problem in many countries, especially in Africa. OECD (2004) and Schoof (2006) observed that this state of affairs is accelerated by lack of wage employment opportunities for technically trained manpower. As a way to curb youth unemployment, many countries in the world introduced entrepreneurship education in all non-business related trades such as TVET courses. This was critical as observed by Kargwell and Inguva (2012) that the new world economy requires innovation, training and reinventing in technical and vocational education and that entrepreneurship training significantly empowers the youth to start and run businesses. Carswell (2011) argued that countries in the world should educate young people and train them in entrepreneurship and encourage them to pursue an entrepreneurial career to increase economic efficiency, bring innovation to the market, create new job opportunities and sustain employment levels.

Entrepreneurship education therefore is important in many aspects. Kanyani and Namusonge (2013) said that entrepreneurship education helps the youth develop the mindset and acquire the know-how necessary to make self-employment a viable career option. In addition, the UNFPA (2012) paper highlights that today the world has become private sector driven such that economic prosperity in the 21$^{st}$ century requires the possession of entrepreneurial skills to function in the TVET sector. Therefore, the youths need exposure to practical entrepreneurial work experience in order to be proficient in their chosen careers and be useful to themselves and the society. Grimm, Luisa, and Fhausen (2014) noted that the development of entrepreneurial values and skills in the business venture creation process prepares students for the realities of life when they graduate. The application of entrepreneurial competencies in daily life empowers students to learn business and enhance their social and life skills. In so doing, this fosters values and skills that are critically needed by today's society (Kaburi, 2013).

Like many countries in the world, the Government of Malawi rolled out a TVET curriculum in 2006 which emphasizes the provision of entrepreneurship education in both formal and informal technical and vocational education systems. The training curriculum is known as Technical, Entrepreneurial, Vocational Education and Training (TEVET) (Malawi TEVET Policy, 1998). The TEVET curriculum is aimed at encouraging students to become entrepreneurs once they finish their training. As highlighted in the TEVET entrepreneurship training manual, entrepreneurship education aims to achieve the following objectives among others; develop skills, knowledge and values required for entrepreneurship with respect of various codes and regulations; practice safety in potentially harmful situations and develop an appreciation for conservation and environmental issues (Ministry of Education Science and Technology, 2006). The Government of Malawi through various agencies and organisations pursue other programs to make sure that necessary support is provided to the youthful TEVET trainees. For instance, the Ministry of Labour and Manpower Development, in conjunction with Technical Entrepreneurial Vocation Education and Training Authority (TEVETA) provides some technical college students with start-up tools as one way of encouraging them to open their enterprises when they graduate. In fact, TEVET in Malawi is recognised as one of the main pillars for poverty alleviation and national development (MGDS II, 2008; Ministry of Industry and Trade, 2012; MPRS, 2002; Mutharika, 2014; Vision 2020, 1998).

However, some sources report that, TEVET trainees in Malawi do not go for entrepreneurship lifestyle once they graduate from an institution (Jimart Development Consultants, 2009; Malawi TEVET Policy, 1998; MGDS II, 2008). Further, the Jimart Development consultant's report of 2009 also highlighted that in Malawi, the level of entrepreneurial activity remains very low and unsatisfactory among TVET graduates. The Malawi Labour Survey of 2009 found that many TEVET graduates with formal training continue to seek employment from the formal sector (Jimart Development Consultants, 2009). This state of affair is contrary to the objectives of entrepreneurial education which aims to influence TEVET graduates to develop an entrepreneurial mindset while in college and consequently become entrepreneurs. On the other hand, literature indicates that many businesses run by TEVET graduates fail to survive within the first three years of the venture (Castel, Phiri, & Stampini, 2010). Some studies found that college students including TVET graduates in many countries do not go for entrepreneurship due to a number of factors (Arzeni, 2014; Banadaki, Harimzaden, & Meiboudi, 2013). One of such factors is lack of entrepreneurial self-efficacy. Setiawan (2014) argue that students can only go into entrepreneurship if they have high self-efficacy to drive them to become dedicated entrepreneurs. Without such minimal levels of entrepreneurial self-

efficacy it is unlikely that potential entrepreneurs would be sufficiently motivated to engage in the new venture creation process.

Self-efficacy is a person's belief in their abilities to perform certain tasks (Panc, Mihalcea, & Panc, 2012). This belief can as well be viewed as the 'I can do it attitude'. Self-efficacy is also the conviction that one can successfully accomplish the behaviour required by an individual to produce a particular outcome (Bula, 2012). Other literature describe self-efficacy as a judgment about how well one can organize and implement effective strategies in a situation that may be challenging and often contain stressful elements (Pihie, Bagheri, & Sani, 2013). A study conducted by Smetanova (2013) in Russia found that the most critical issue college students face in establishing and developing a business venture is the 'I can do it attitude'. Self-efficacy is, therefore, considered the most critical factor contributing to the entrepreneurial success during the early stages of start-up of a business venture.

Maigida, Saba, and Namkere, (2013) view entrepreneurship as the process of creating something new with value by devoting the necessary time and effort, assuming the accompanying financial, psychological and social risks and receiving the resulting rewards of monetary and personal satisfaction and independence. Therefore, an entrepreneur should demonstrate several important characteristics such as innovativeness, creativity and taking calculated risks (Akambi, 2013). In addition, Agbim, Oriarewo, and Owocho (2013) argued that entrepreneurs must also have passion for the business, be independent and have market sensitivity and persistence. On the other hand, Salas (2014) highlighted that the more entrepreneurial characteristics a person demonstrates, the higher the self-efficacy, hence intentions to become an entrepreneur. In order to anticipate challenges in the new business creation process, an entrepreneur must possess entrepreneurial skills and knowledge and must build a strong sense of self-efficacy (Brancu, Munteanu, & Gligor, 2012). Furthermore, the characteristics of the entrepreneur are also essential for ongoing venture and they are embedded in the entrepreneur. Students who study entrepreneurship are expected to have high entrepreneurial self-efficacy.

This study examined self-efficacy with respect to entrepreneurship; hence the term 'Entrepreneurial Self-Efficacy' (ESE). Luca et al. (2012) define entrepreneurial self-efficacy as "a construct that measures people's belief in their own abilities to perform on the various skill requirements necessary to pursue a new venture opportunity" (p.86). Entrepreneurial self-efficacy is measured in respect to various activities which an entrepreneur is expected to perform and practice. For example, De Noble et al (1999), Setiawan (2014) and Luca et al.

(2012) identified six dimensions of entrepreneurship venture process which they used in their study to measure entrepreneurship self-efficacy among students. Such domains included the following: developing new product and market opportunities; building an innovative environment; initiating investor relationships; defining core purpose; coping with unexpected challenges and developing critical human resources. On the other hand, Malebana and Swanepoel (2014) in their study at two South African universities, namely the Eastern Cape and Limpopo, measured entrepreneurial self-efficacy by asking students to indicate their level of confidence in their ability to carry out entrepreneurial tasks in the four phases of the entrepreneurial life-cycle. These phases include the searching phase, planning phase, marshalling phase and implementation phase.

### 1.2 Problem background

The study of entrepreneurship in Technical Entrepreneurial Vocation Education and Training (TEVET) is relatively recent in Malawi. Although the crucial role played by entrepreneurship education in driving economic development and job creation is increasingly acknowledged, there has been little effort to study it from students' perspective in the TEVET system in Malawi. There is a general lack of in-depth research data on how trainees in TEVET colleges in Malawi perceive their entrepreneurial self-efficacy. Therefore, this study addresses this information gap.

On the other hand, although a new TEVET curriculum which emphasises entrepreneurship education was introduced in 2006, not all students in technical colleges learn entrepreneurship education. Many of them do not learn this important course due to their mode of admission. Only Technical Entrepreneurial Education and Training Authority (TEVETA) sponsored students follow the revised TEVET curriculum while the other group of students, called parallel entry students, follow the old curriculum which does not provide entrepreneurship education. There are such variations because Technical Vocation Education and Training (TVET) in Malawi have three different curricula offered at the same time. This state of affair has an influence on students' achievements especially entrepreneurial ability and consequently their readiness to run business upon graduating. This study also explored the gap in terms of levels of entrepreneurial self-efficacy between entrepreneurial and non-entrepreneurial students.

In Malawi, there is also growing concern that regardless of the provision of entrepreneurship education to TVET students, such students do not demonstrate to have acquired sufficient entrepreneurial skills to venture into business particularly running small and medium

enterprise (SME) set-ups (Castel et al., 2010). A Finmark Trust (2012) report also established that TEVET students have narrow business perspectives, less flexible to branch into other working areas and view themselves as only job seekers and not job creators. This spells the need for researchers in the TEVET field to focus on establishing students' entrepreneurial potentials in order to inform technical colleges in Malawi on how best to produce many potential entrepreneurs.

Many research studies done by academicians such as Jordaan (2014), Luca, Cazan, and Tomulescu (2012) and Panc et al. (2012) in entrepreneurship education focused on the influence of entrepreneurial training on students entrepreneurial intentions with the assumption that the intentions will drive students to be entrepreneurs. Such studies found that many students exposed to entrepreneurship education demonstrate high intentions to become entrepreneurs. However, Antonio, Lanawati, Wiriana, and Christina (2014) argue that the intention to be an entrepreneur is not strong enough to drive students to be entrepreneurs. Brancu et al. (2012) noted that students' entrepreneurial intentions do not turn into reality as most students do not have self-efficacy. On the other hand, entrepreneurial self-efficacy is an antecedent of entrepreneurial intentions.

Other critiques of students' failure to establish business ventures argue that teaching strategies in entrepreneurship education are not effective. The focus of teaching and learning processes in entrepreneurship education in most schools are limited to rote learning especially in developing nations (Manero & Egido, 2014). Some authors' such as Omondi (2013) and Obembe, Otesile, and Ukpong (2014) indicate that the primary goal for the majority of entrepreneurship programmes in schools is just to increase the awareness and understanding of entrepreneurship as a process. However, Uzezi (2014) argues that entrepreneurship education should not only teach someone to understand business; rather, it should inculcate in an individual creative thinking and promote a strong sense of self-efficacy.

Schoof (2006) asserted that learners can demonstrate high entrepreneurial self-efficacy and develop business intentions if entrepreneurial teaching and learning pedagogies in schools are based on experiential learning strategies. The other challenge in the TEVET education system is to make entrepreneurial teaching and learning more experiential or practical based.

### 1.3 Objectives

The main objective of this study was to examine perceived entrepreneurial self-efficacy among students at Nasawa Technical College.

This study was based on the following specific objectives:

1. To assess levels of entrepreneurial self-efficacy among TVET students in respective to their programme of study.
2. To determine the level of differences in entrepreneurial self-efficacy among students exposed to entrepreneurship education and those not exposed to entrepreneurship education.
3. To establish the extent of entrepreneurial self-efficacy in relation to gender.

**Research Hypothesis**

In line with the research objectives and literature three hypotheses were formulated for empirical testing.

**Hypothesis 1**

$H_0$: There is no significant difference on students' perceived entrepreneurial self-efficacy with respect to their trades.

$H_1$: Students belonging to a particular programme of study would significantly score high on entrepreneurial self-efficacy domains than students studying other programmes.

**Hypothesis 2**

$H_0$: There is no significant difference between students exposed to entrepreneurship education and students not exposed to entrepreneurship education in their perceived entrepreneurial self-efficacy.

$H_1$: Students exposed to entrepreneurship education would perceive their self-efficacy significantly higher than students not exposed to entrepreneurship education.

**Hypothesis 3**

$H_0$: There is no significant difference among male and female students on their perceived entrepreneurial self-efficacy

$H_1$: There is statistically significant difference among male and female students on their perceived entrepreneurial self- efficacy.

## 1.4 Purpose of the study

The main purpose of this research was to examine perceived entrepreneurial self-efficacy among students at Nasawa Technical College.

As it is argued, entrepreneurship education needs to focus on developing self-confidence in students so as to influence them to become entrepreneurs upon graduating from college (Tiago, Faria, Couto, & Tiago, 2015). Efforts need to be made to achieve high entrepreneurial self-efficacy among students. Entrepreneurship education facilitates the creation of start-ups by changing students' mind-set and developing their entrepreneurial orientation measured through entrepreneurial intentions (Chiru, Tachiciu, & Ciuchete, 2012).

## 1.5 Significance of the study

The TEVET system in Malawi and across the world encourages students to create their own jobs and become entrepreneurs since opportunities of getting employment in government or private organizations are declining (Maigida et al., 2013; Malawi TEVET Policy, 1998; MGDS II, 2008). This is due to lack of employment opportunities on the labour market. Therefore, conducting this research study was worthwhile due to the following:

- This study assessed entrepreneurship education in Malawi TEVET system and how much influence it has on college students to graduate as entrepreneurs. Thus, this study has established whether entrepreneurial education in the TEVET sector is indeed influencing students' high self-confidence or self-efficacy.
- Through this study, the findings have exposed some research gaps for further studies in the TEVET system in Malawi.
- Above all, the study helped to add more literature in the TVET field in Malawi as this sector requires more publications and this can only be enhanced through research studies.

## 1.6 Limitations

The topic under investigation is broad and required a large sample from a number of technical colleges in Malawi. However, the study was narrowed down to a single case study. Therefore, the results could not be inferred as a case of students ESE levels in Malawi's Technical College education. On the other hand, the study did not look into cause and effect of entrepreneurial education as regards to ESE levels.

# CHAPTER 2
# LITERATURE REVIEW

## 2.1 Chapter Overview

A review of published research findings on a particular topic facilitates awareness of inconsistencies and gaps that may justify further research. The study sought literature on various studies and provided an overview of literature to inform study objectives and purpose. Firstly it discusses the theoretical model used in this study. Additionally, the chapter provides an insight into entrepreneurship issues which include; the impact of entrepreneurship on economic growth, some challenges of entrepreneurship, an overview of the concept self-efficacy and entrepreneurial self-efficacy, the influence of entrepreneurship education on entrepreneurial self-efficacy, gender and entrepreneurial intentions and self-efficacy issues on entrepreneurial education pedagogy and issues on measuring entrepreneurial self-efficacy.

## 2.2 Theoretical Framework

This research study derives its theoretical basis from the Self-Efficacy Theory (SET). The need for using one theory is premised on the statement of Jorgan, Carlie, and Stack (2008) that one interpretational mode or set of theoretical tools or interpretational stance is adequate of the analytical possibilities of phenomenon under study.

### 2.2.1 Self-Efficacy Theory

The Self-Efficacy Theory has its background in Bandura's social learning theory/ social cognitive theory. The theory was developed in 1987. According to the theory, the concept of self-efficacy focuses on how people feel, think, behave and motivate themselves (Bandura, 1998). Self-efficacy in this regard is the belief in one's own ability to successfully accomplish something. The theory proposes that people will only attempt things they believe they can accomplish and will not attempt things they believe they will fail. The theory highlights that self-efficacy facilitates cognitive processes and performance in a variety of settings, including quality of decision making and even academic achievement (Sanna, 2005). When it comes to behaviour, self-efficacy can influence people's choice of activities (Zalkosky, 2009). Bandura, (1998) indicates that generally self-efficacy levels can increase or hamper motivation. He points out that people's self-efficacy beliefs determine their level of motivation, as reflected in how much effort they will exert in an endeavour and how long they will persevere in the face of obstacles (Bandura, 1998).

The theory further emphasizes that highly efficacious people set challenging goals and maintain strong commitment to achieve them. In the face of impending failure, such people increase and sustain their efforts to be successful. They approach difficult or threatening situations with confidence as they believe that they have control over them. Thus, people with high self-efficacy approach difficult tasks as challenges and do not try to avoid them. The theory also argues that having this type of outlook reduces stress and lowers the risk of depression (Bandura, 1998).

The theory asserts that people with a low sense of self-efficacy doubt their ability to accomplish difficult tasks and generally see such tasks as threats. They avoid taking risks based on their own personal weaknesses or on the obstacles preventing them from being successful. They give up quickly in the face of difficulties or failure, and it does not take much for them to lose faith in their capabilities. According to Pollack, Burnette, and Hoyt (2012), individuals with a low sense of self-efficacy often have increased stress, high risk of depression, anxiety and feel helplessness. In addition, such individuals also have low self-esteem and become pessimistic about their accomplishments and personal development (Sanna, 2005).

The theory identified four factors that influence the development of self-efficacy among individuals. Such factors are; mastery experience, vicarious experience, verbal persuasion and physiological state.

#### 2.2.1.1 Mastery experience

Bandura (1998) defines mastery experiences as past successes or failures. Accordingly, performance accomplishments build one's personal mastery experiences. Zalkosky (2009) observes that in most cases mastery experiences occur when an individual attempts to do something and is successful. According to Zimmerman (2000), mastery experiences are the most effective way to boost self-efficacy because people are more likely to believe they can accomplish something new if it is similar to something they have already done in the past. These experiences form expectations that are generalized to other situations that may be similar or substantially different from the original experience. For example, strong efficacy expectations are developed through repeated success of behaviour, and reduced efficacy expectations can result from failures. According to Bandura (1998), "Personal mastery for behaviour can be increased through participant modelling, performance exposure, self-instructed performances and performance desensitization thus the process through which aversive behaviour is paired with a pleasant or relaxing experience" (p. 106).

The concept of mastery experiences has implications for entrepreneurship education. Colakogh, Top, and Dilek (2012) asserted that mastery is the basis for proactive teaching of students undergoing an entrepreneurship education programme. Understandably, mastery experiences help people to become proficient in new skills and increase their self-efficacy. Therefore, Hamid, Wennberg, and Berglund (2008) recommended that training programmes such as entrepreneurship education should prepare students in entrepreneurial experiences as the students prepare to enter the labour market. In this context, the choice of teaching strategies is critical in influencing students' entrepreneurial self-efficacy. For example, the use of simulated exercises and best business case competitions can promote mastery experiences (Lekoko, Rankhumise, & Rasi, 2012).

#### 2.2.1.2 Vicarious experience

Vicarious experience involves observing others perform threatening activities without adverse consequences (Bandura, 1998; Sanna, 2005). This aspect can also enhance personal self-efficacy by demonstrating that the activity is do-able with some effort and persistence. Vicarious experiences can be enhanced through live modelling, thus observing others perform an activity or symbolic modelling (Pollack et al., 2012). Zimmerman (2000) indicated that vicarious experiences are also an important element to cultivate high entrepreneurial self-efficacy among students. As Hamid et al. (2008, p. 105) highlight "In the process of teaching entrepreneurship courses, students should have many opportunities to see or interact with successful entrepreneurs". Inviting local entrepreneurs to give lectures or using cases of prestigious entrepreneurs can provide the opportunity for role modelling or vicarious experience (Pollack et al., 2012).

#### 2.2.1.3 Verbal Persuasion

Verbal/social persuasion is a third way of strengthening people's beliefs that they have what it takes to succeed. Praag (2009) observes that people who are persuaded verbally that they possess the capabilities to master given activities are likely to mobilize greater effort and sustain it than if they harbour self-doubts and dwell on personal deficiencies when problems arise.

In addition, Sanna (2005) noted that vocal persuasion in entrepreneurial programmes boosts self-efficacy and leads people to try hard enough to succeed; they promote development of skills and a sense of personal efficacy. Maritz (2013) noted that people who have been persuaded that they lack capabilities tend to avoid challenging activities that cultivate

potentialities and give up quickly in the face of difficulties. Raising people's beliefs in their capabilities helps them to structure situations for them in ways that bring success and hence avoid placing people in situations prematurely where they are likely to fail (Zalkosky, 2009). By evaluating students' course projects or mentoring students in regard to their career goals can serve as a way of influencing entrepreneurial self-efficacy.

#### 2.2.1.4 Physiological status

Bandura (1998) pointed out that people also rely partly on their somatic and emotional states in judging their capabilities. Accordingly, people interpret their stress reactions and tension as signs of vulnerability to poor performance. People can enhance perceived self-efficacy by diminishing emotional arousals such as fear, stress and physical agitation since they are associated with decreased performance, reduced success and other avoidance behaviours (Pollack et al., 2012). People who have a high sense of efficacy are likely to view their state of affective arousal as an energizing facilitator of performance (Sanna, 2005). On the other hand, people who are beset by self-doubts regard their arousal as a debilitation (Zalkosky, 2009). As a matter of fact, physiological indicators of efficacy play an especially influential role in entrepreneurship.

Entrepreneurship is equally a challenging career path; therefore, those practising it may find themselves in different physiological or emotional stress that can affect their judgement of their personal efficacy. As Zimmerman (2000) notes, mood also affects people's judgment of their personal efficacy. Wabe (2010) asserted that a positive mood enhances perceived entrepreneurial self-efficacy while a despondent mood diminishes it. In this regard, Smetanova (2013) asserts that to modify self-beliefs of entrepreneurial efficacy is to reduce people's stress reactions and alter their negative emotional proclivities and misinterpretations of their physical states.

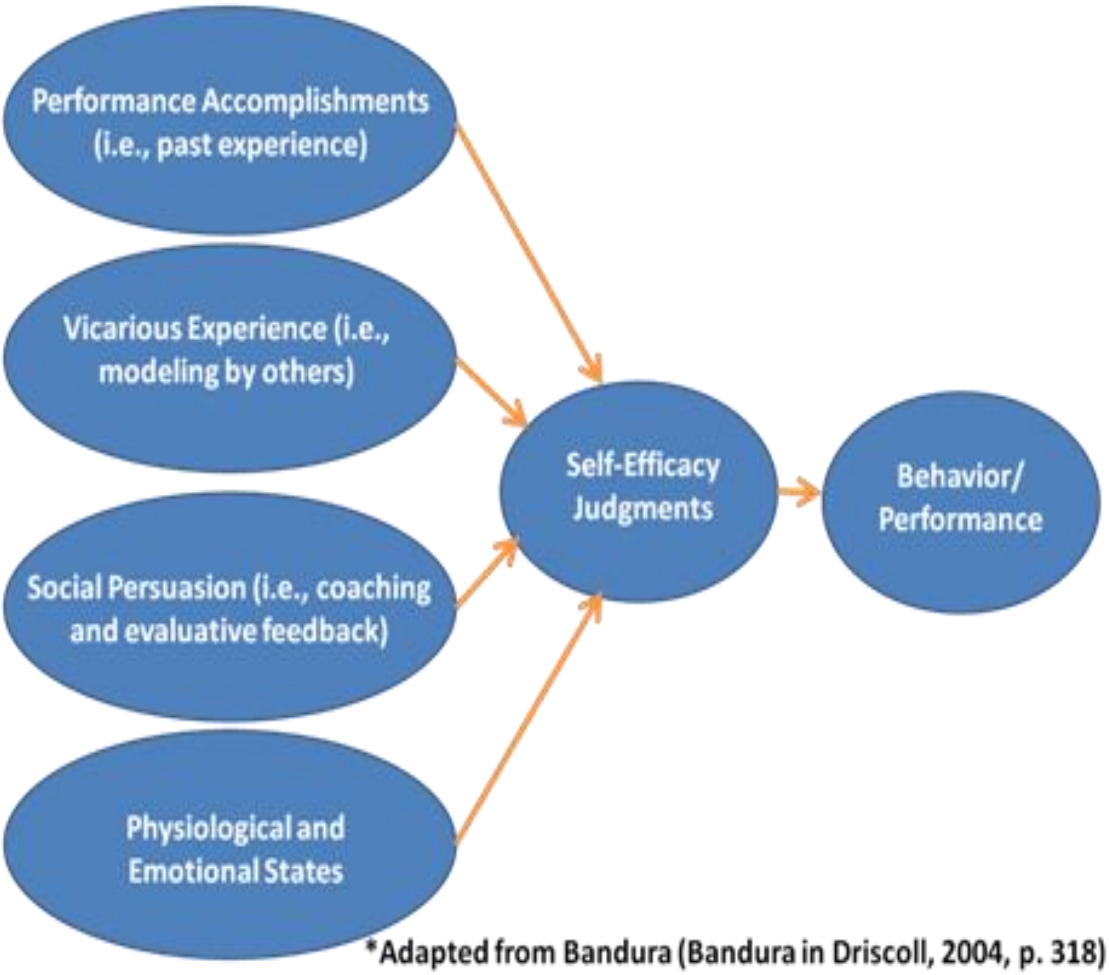


Figure 1: Self-efficacy theory model

**2.3 Perspectives of Entrepreneurship**

Entrepreneurship is a multi-dimensional concept such that it has no single definition. Fayolle, Klandt, and Elgar (2006) observe that it depends on the focus of the one defining it and from which perspective one looks at it. Entrepreneurship can be defined from the economics point of view, or from a psychological perspective or from the management perspective and also from the social perspective.

Cuevo, Ribeiro, and Roig (2008) define entrepreneurship as a process which involves evaluation of business opportunities, development of a business plan and determination of the required resources as well as management of resulting enterprise. Grieco (2007) says entrepreneurship is the practice of starting new organizations, particularly new businesses, generally in response to identified opportunities to meet specific market needs. Koe, Omar, and Majid (2014) say entrepreneurship is the practice of consistently converting goods and ideas into profitable commercial ventures. From the definitions in the preceding section it can be deduced that in entrepreneurism there are elements that talk about a kind of behaviour that

require: initiative taking, organizing and reorganizing of social and economic mechanisms to turn resources and situations to practical account and the acceptance of risk or failure.

### 2.4 Entrepreneurship and economic growth

Today, entrepreneurship continues to gain popularity as a change agent in various aspects of economic development. The past few decades have seen a great deal of attention paid to entrepreneurship as a subject. The interest in entrepreneurship stems primarily from the findings by economic theorists and activists that entrepreneurial activities contribute positively to economic growth and vitality both at micro and macro levels. All over the world, entrepreneurship is today regarded as an important key for economic growth, productivity, innovation and employment opportunity (Bula, 2012; Naudle, 2013). Such benefits have influenced many countries to make entrepreneurship an explicit policy priority. Entrepreneurial activities are recognized as an important element in organizational and economic development, performance and wealth creation, (Deloitte & Partiners, 2010).

According to Naudle (2013) there is a positive correlation between entrepreneurship and economic growth and development. An entrepreneur plays a key role in the economic world. Lekoko et al. (2012), argued that entrepreneurs seek to create new profit opportunities through their innovative activities. The innovativeness improves products and more efficient processes of production, thereby funnelling economic growth and producing a stronger and a more efficient economy (Pollack et al., 2012).

On the other hand, Luca et al. (2012) noted that due to market imperfections, it is the role of entrepreneurs to search, discover and evaluate opportunities, marshal the financial resources necessary for the enterprise, take ultimate responsibility for management and bear the ultimate uncertainty and take calculated risks. This notion is extended by the concept that the entrepreneur identifies and profits from a situation of disequilibrium by improving on market inefficiencies or deficiencies (Salas, 2014). Therefore, Schoof (2006), argue that entrepreneurs create changes and the changes produce more opportunities for entrepreneurship.

Literature has also revealed that entrepreneurial activities have contributed significantly to overall national development of most developed nations in the world. For instance, Wiguna and Manzilati (2014), note that the growth of countries such as China, Japan, Taiwan and India has been significantly influenced by entrepreneurs and the emergence of small firms.

They observe that start-up firms in such countries significantly strengthen the budding market economy by creating jobs, supplying consumer goods, mobilizing savings and ending the state firms' monopoly.

Other studies also found that economic growth of most Europeans countries such as Germany, Italy, England, France and Philippines is due to vibrant entrepreneurial activities (Yanya, Abdul-Hakim, & Abdul-Razak, 2013). A paper produced by the Commission of the European Committees in 2009 highlighted that European nations can successfully maintain their economic growth if more entrepreneurs are willing to embark on innovative ventures and countries register high growth of Small and Medium Enterprises. In the USA, entrepreneurship is perceived as the engine of GDP growth in many of its states. Some Empirical studies in America have demonstrated that entrepreneurship is positively related to GDP growth rate (Wiguna & Manzilati, 2014). In this context, Zaridis and Mousiolis (2014) observed that America's current growth is largely attributed to the efforts of entrepreneurs who come out of a government controlled environment to a market-based environment.

In Africa, entrepreneurship is also recognised as one of the aspects that boost economic growth and human development. A study conducted by UNESCO and UNFPA (2012) found that in the SADC region alone, the Micro Small Medium Enterprises (MSMEs) in the informal sector account for an estimated 60% of Gross National Product (GNP) for many countries. Other studies done in Sub-Saharan Africa also confirm the importance of the entrepreneurial activities as a major contributor to the creation of productive employment and poverty alleviation (Cho & Honorati, 2014). As Chirwa (2002) indicated, continuity of many new entrepreneurial ventures can be extremely important in helping a large number of very poor people in African nations to become a little less poor. Debelo, Teshome, and Minalu (2015) also noted that African enterprises who are seeking to expand can contribute in the area of economic growth and become an important mechanism to help people move up and out of poverty.

### 2.5 Challenges of Entrepreneurship

Even though entrepreneurship has many advantages, it is not free of challenges. Wabe (2010) classified the basic challenges that affect entrepreneurial success into two broad categories namely, economic and social challenges. The economic factors include competition in the market; lack of access to the market and to raw materials, lack of capital or finance, lack of marketing knowledge; lack of production/ storage space; poor infrastructure; inadequate

power supply and lack of business training. The social factors include lack of social acceptability; having limited contacts, outside prejudice and class bias; society looks down upon entrepreneurship.

Furthermore, (Kaburi, 2013); Omondi (2013) highlighted that cultural attitude towards youth entrepreneurship and lack of access to technologies are among crucial factors that affect entrepreneurial success.

### 2.6 An Overview of the Concept Self-Efficacy

Self-efficacy has already been described as a motivational construct that has been shown to influence an individual's choice of activities, goal levels, persistence and performance in a range of contexts (Zhao et al., 2005: 1266). It is a construct of social-cognitive theory and is defined as the individual's judgement of their ability to organise and execute a course of action in order to reach designated goals and competencies (Bandura, 1998; Cuevo et al., 2008).

Self-efficacy studies in a variety of disciplines have produced consistent findings. Thus, levels of self-efficacy in a particular discipline has shown to be associated with work-related performance, coping difficult career-related tasks, learning and achievement and adaptability to new technology (Couetil, Rhoads, & Haghighi, 2012; Debelo et al., 2015). Self-efficacy is an excellent measure because it is applicable to a variety of domains provided the efficacy measure is tailored to the specific tasks under study (Brancu et al., 2012).

### 2.7 The Concept Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy (ESE) is a construct that involves the individual's beliefs about their capabilities for attaining success and controlling cognitions in order to manage challenging goals during the business start-up phase (Banadaki et al., 2013; Cuevo et al., 2008). ESE has been shown to be closely tied to and a strong predictor of intentionality. Entrepreneurial Self-Efficacy is used to predict and study entrepreneurs' behaviour choice, persistence and effectiveness. According to Izquierdo and Beulens (2008) high ESE is often best demonstrated under characteristic conditions of entrepreneurship which include risk and uncertainty. Predictions as to who might be suited to becoming an entrepreneur use measures of ESE. Thus ESE is emphasized as a key antecedent to entrepreneurial choice (Maritz, 2013; Mclellan, Barakat, & Winfield, 2004).

ESE is an appropriate measure for entrepreneurship because it is task-specific and includes the individual's assessment of their own confident beliefs about their internal (personality) and external (environmental) constraints and possibilities and is close to action and action

intentionality (Pihie & Bagheri, 2011). Many significant entrepreneurship studies show that high ESE is an asset for aspiring entrepreneurs. High ESE is suggested to result in an entrepreneur who will exert more effort for a greater length of time, persist through setbacks, and develop better plans and strategies for the task (Colakogh et al., 2012). In contrast, those with low ESE are more likely to avoid challenges and see situations as potential risks rather than opportunities (Cooper and Lucas 2006).

### 2.8 An Overview of Entrepreneurship Education

Entrepreneurship education is also perceived differently just as the case of the concept entrepreneurship. For example, Fayolle et al. (2006) defines entrepreneurship education as:

> Learning directed towards developing in young people the skills, competencies, understandings and attributes which equip them to be innovative, to identify, create, initiate and successfully manage personal, community, business and work opportunities, including working for themselves (p. 10).

Banadaki et al. (2013) state that entrepreneurship education is the process of providing individuals with the ability to recognize commercial opportunities and the insight, self-esteem, knowledge and skills to act on them. Entrepreneurship education is believed to have started at Harvard Business School in 1945. Upon success, this initiative sparked the interest and the growth of entrepreneurship education in the global village in the later decades till today (Ahmad, 2004).

Many entrepreneurship education programmes are aimed at equipping learners to be able to establish their own businesses as soon they complete their studies. According to Banadaki et al. (2013) entrepreneurship education in most societies has three main objectives; namely to provide opportunity for students to learn about entrepreneurial orientation, increase students awareness of entrepreneurship as a career option and increase self-efficacy among the students.

### 2.9 Entrepreneurship Education in Technical and Vocational Education and Training

Technical and vocational education is recognised as an engine of scientific and technological invention and plays an important role in transforming invention and technological development through innovation (Colakogh et al., 2012). Technical and vocational institutions, therefore, play a key role in harnessing the talents of students. According to Arzeni (2014) TVET can be conceptualised as a societal innovation system and that when entrepreneurship education is embedded in such a system it can be regarded not only as a task of producing entrepreneurially oriented competent students, but also reproducing the social

mechanisms that underpin and facilitate the birth and growth of businesses. In addition, technical and vocational education and training play a key role as entrepreneurial hubs, connecting researchers, students, entrepreneurs, business enterprises and other stakeholders (Agbim et al., 2013).

## 2.10 Significance of Entrepreneurship Education on Development of Entrepreneurial Characteristics

Jordaan (2014) conducted a study to assess the significance of entrepreneurship education on the development of entrepreneurial characteristics and the results showed that entrepreneurship education had a positive impact on the entrepreneurial characteristics among students. Specifically, the study revealed that there were significant increases in students' entrepreneurial characteristics of market sensitivity, innovativeness, creativity, persistence and high ethical standard.

On the other hand, other evolutional studies of entrepreneurship education programmes in USA found that the majority of entrepreneurship programmes in USA helped significantly in increasing the awareness and understanding of entrepreneurship as a process among students (Deloitte & Partiners, 2010). In addition, studies such as Yanya et al. (2013) revealed that entrepreneurship education increased students' awareness of entrepreneurship as a career possibility. In summary, entrepreneurship education is critical for developing entrepreneurial skills, attitudes and behaviours that form the basis of the economic growth of a country (Lekoko et al., 2012).

Some studies such as Sondari (2014) and Schoof (2006) agreed to the notion that entrepreneurship education influences students' core entrepreneurial ability, guides interested entrepreneurs in fostering entrepreneurial spirit and ability to identify business opportunities. Entrepreneurship education is, therefore, crucial in assisting young people to develop entrepreneurial skills, attributes and behaviours. In their study, Heydari, Madani, and Rostami (2013) found that entrepreneurial students demonstrated significant by high scores in specific entrepreneurship characteristics which included the following: risk taking, innovativeness, flexibility, goal setting, persistence, self-confidence, devotion/commitment, accountability, accommodative, creativity, focused, ambitious, information seeking, persuasiveness and resourcefulness

## 2.11 The Influence of Entrepreneurship Education on Entrepreneurial Self-Efficacy

An overwhelming majority of studies from several countries have reported that exposure to entrepreneurship education impacts positively on the antecedents of entrepreneurial self-

efficacy and encourages students to start their own businesses. Some studies indicate that entrepreneurship education is significantly related to entrepreneurial self-efficacy (Jordaan, 2014; Kadir, Salim, & Kamarudin, 2012; Kargwell & Inguva, 2012). A study conducted by Koe et al. (2014) found that post-graduation start-up of a new firm by students who have taken an entrepreneurship course is directly related to entrepreneurial self-efficacy. According to Luca et al. (2012), entrepreneurial self-efficacy can influence an individual's decision to start a business and the effectiveness with which they manage their ventures once they have founded them. Other research findings indicate that self-confidence in performing entrepreneurial tasks is strongly related to behaviour leading to the formation of a new venture (Maigida et al., 2013; Nangoli, Turinamve, Kituyi, Kusemererwa, & Jaaza, 2013).

**2. 12 Gender and Entrepreneurial Intentions and Self-Efficacy**

Gender is a personal trait or attribute conditioned by a traditional social system in which men are expected to think and behave as men (masculine) and women are expected to think and behave as women (feminine) (Mueller & Datoon, 2008). Within such a social system, some behaviours, roles, and careers are stereotyped as masculine while others are stereotyped as feminine (Nwanko, Kanu, Marire, & Bolagum, 2012).

According to Sarwako and Nurdiana (2013) instrumental behaviours and attitudes that are stereotyped as masculine include assertiveness, competitiveness, independence and aggressiveness while expressive behaviours and attitudes that are stereotyped as feminine include submissiveness, dependence, deference, cooperation, caring and nurturing.

A study done by Mueller and Datoon (2008), women in general express less positive perceptions about themselves and the environment. The reasons for resistance in starting up a business are presumed to stem from a higher fear of failure (Barakat & Mclellan, 2010) or a lower perception of self-efficacy for careers, especially in professions where women are underrepresented (Krecar & Coric, 2013). Therefore, entrepreneurial intentions among women appear to be lower than among men.

A study conducted by Kurcuzewska and Bialek (2014) found that male students had a higher level of attitude towards entrepreneurship than female students. They attributed the results to the fact that after graduation female students prefer routine jobs and do not like risks. On the other hand, McStay (2008) noted that males conversely prefer a life of success and the notion of entrepreneurship is an opportunity to be successful than working for others. In addition Sweida and Reichard (2013) argued that male students have more support of parents or family

such that male students have a sense of confidence and mental maturity higher than female students in terms of entrepreneurial self-efficacy and intentions.

Sweida and Reichard, (2013) argued that students in general still depend on parents who are considered to contribute to their future. In summary, Kurcuzewska and Bialek (2014) indicated that the higher the social support the higher the entrepreneurial intention.

### 2.12 Entrepreneurial Education Pedagogy

Recent studies have shown that targeted education like entrepreneurship can help develop an individual's level of self-efficacy (Malindi, 2014; Nasr & Boujelbene, 2014). However, entrepreneurship researchers insist that teaching methodologies play a great role in raising entrepreneurial self-efficacy levels in individuals. As such, Mojab, Zaefarian, and Azizi (2011) emphasise that entrepreneurship programmes should be designed to increase entrepreneurial self-efficacy. Such researchers suggest the entrepreneurial self-efficacy construct can be used to determine both the curriculum content and the pedagogical techniques adopted to deliver it.

Manero and Egido (2014) highlight that mastery experiences increase confidence in one's own ability to successfully perform specific tasks. This can occur through activities that encourage "learning by doing". On the other hand, Zimmerman (2000) assert that the design of an entrepreneurship programme should also include activities designed to increase an individual's self-efficacy, such as engaging students in real-life business situations to encourage risk-taking and innovation. In so doing, changes in attitudes and confidence towards skills and competencies linked to entrepreneurial behaviour are possible (Pollack et al., 2012).

Juan, Leon, and Lukes (2008) also propose modelling and social persuasion as methods to increase self-efficacy. Accordingly, they assert that appropriate role models give an individual an opportunity to compare their own abilities and social persuasion in the form of positive feedback and reinforcement from program mentors and other participants can increase self-efficacy and intentions to create a business. Thus, research studies suggest that entrepreneurship education programmes should incorporate many different types of learning experiences designed to promote entrepreneurial self-efficacy, hence entrepreneurial intentions (Cho & Honorati, 2014; Hamid et al., 2008; Pihie & Bagheri, 2011).

### 2.13 Measuring Entrepreneurial Self-Efficacy

Some ideal research instruments have been used for over a decade to measure entrepreneurial self-efficacy. The most effective way of measuring entrepreneurial self-efficacy is typically

based on tasks that are considered to be entrepreneurial, captured by indicators ranked on a Likert scale, with the scale score being the average of the indicator scores. Researchers suggest that entrepreneurial self-efficacy should focus on individuals' perceptions regarding their ability to perform entrepreneurial tasks (Jordaan, 2014; Maritz, 2013). These researchers found that entrepreneurial self-efficacy is significantly associated with the likelihood of becoming an entrepreneur. The findings are supported by Zwan, Verhwul, Thurik, and Hessels (2010) who also agree to the notion that entrepreneurs should be capable of performing entrepreneurial tasks in the various domains of the entrepreneurial life-cycle.

Entrepreneurial self-efficacy indicators or items aim to measure an individual's perception of his or her ability in completing tasks typically associated with starting a new venture; the higher the degree of confidence in completing a task, the higher the entrepreneurial self-efficacy score. However, different researchers consider different entrepreneurial concepts altogether in trying to measure individual's self-efficacy levels. For example, Chen et al., (1998) & (Mclellan et al., 2004) used an entrepreneurial self-efficacy scale of 23 items that loaded on six entrepreneurial factors such as: (1) developing new product and market opportunities; (2) building an innovative environment; (3) initiating investor relationships; (4) defining core purpose; (5) coping with unexpected challenges; and (6) developing critical human resources. Malebana and Swanepoel (2014) in their study at two South African universities; namely; the Eastern Cape and Limpopo, entrepreneurial self-efficacy was measured by asking students to indicate their level of confidence in their ability to carry out entrepreneurial tasks in the four phases of the entrepreneurial life-cycle. These phases include the searching phase, planning phase, marshalling phase and implementation phase. They developed a 24 item data collecting instrument.

Entrepreneurship education curriculum in Malawi is centred on seven domains, such that students undergoing entrepreneurship education are expected to develop values and competences around such domains. Therefore for the purpose of this research study, the seven entrepreneurial dimensions were adopted with respect to the Malawi TEVET entrepreneurship curriculum's goals, aims and objectives. The seven entrepreneurial domains include the following: (1) Starting business and running a profitable business; (2) Business planning; (3) Coping with unexpected challenges; (4) Managing production functions, marketing functions and market opportunities; (5) Developing critical human resources and Managing human resource; (6) Managing finances; (7) Environmental scanning and Building an innovative environment.

The reliability tests of entrepreneurial self-efficacy items show that the data collection instruments which have been developed and used by many researchers are reliable to measure the entrepreneurial self-efficacy over Cronbach alpha. The reliability scale on Cronbach alpha is mostly calculated around 0.953 (Jordaan, 2014).

### 2.14 Chapter Summary

The literature has reviewed that self-efficacy measured in entrepreneurial domain has been studied as the predictors of entrepreneurial intention and activities. But most of the studies were from the western context and have ignored the African context. No studies have been conducted on self-efficacy in Sub Saharan context especially in Technical and Vocational and Training systems.

# CHAPTER 3

## METHODOLOGY

### 3.1 Chapter Overview

Research methodology is a generic term that refers to an approach that is followed in order to suit different situations that need investigation (Lyons & Doueck, 2010). This chapter presents a detailed discussion of the methods that were used in the study. These include research design, target population and sample size, sampling techniques, instruments for data collection, validity and reliability of instruments, data collection techniques, methods for data analysis and ethical matters.

### 3.2 Research Design

This study sought to assess entrepreneurial self-efficacy from a learners' perspective, therefore, understanding the social world from students' point of view was very critical. This study took the form of quantitative descriptive survey study. A descriptive study, according to Colakogh et al. (2012) is a research designed to produce accurate presentation of persons, events or situations. The descriptive research design helped to explore entrepreneurial self-efficacy among students at Nasawa Technical College. As earlier indicated, this study aimed to examine perceived entrepreneurial self-efficacy of technical college students and whether there was a significant difference between students exposed to entrepreneurship education and those not exposed to entrepreneurship educations.

### 3.3 Population and Sample

Population is all members of a real or hypothetical set of people, events or objects to whom the findings of a study apply (Cohen, Manion, & Morrison, 2007b). However, Leedy (1999) observe that researchers almost never collect data from all individuals who make up the entire population, as it is expensive and tiresome. Instead, a limited number of the whole population is preferred. Such a limited number of people and objects who represent the whole population are what is known as sample.

The target population of this study was all final year students at Nasawa Technical College studying various technical and vocational trades. Such students include those who have been exposed to entrepreneurship education up to their level three of studies while the other set of population were continuing education centre (Parallel entry) students who were not exposed to entrepreneurial education throughout their study period.

### 3.4 Sample

There are various formulas for calculating the required sample size based on whether the data collected are categorical or quantitative (Church & Rodgers, 2010). The formulas require knowledge of the variance or proportion in the population and a determination as to the maximum desirable error, as well as the acceptable Type I error risk (e.g., confidence level) (Burmeister & Aitken, 2011).

According to Sharon (1999), it is acceptable to use a table that suggests the optimal sample size, given a population size, a specific margin of error and a desired confidence interval. This helps researchers to avoid the formulas altogether and errors in determining the sample size. Table 1 as depicted by Burmeister and Aitken (2011) and Church and Rodgers (2010) presents the results of one set of sample size calculations used to determine the appropriate sample size for almost any study.

Table 1: *Sample size determination table*

| Required Sample Size† | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Confidence = 95% | | | | Confidence = 99% | | | |
| Population Size | Margin of Error | | | | Margin of Error | | | |
| | 5.0% | 3.5% | 2.5% | 1.0% | 5.0% | 3.5% | 2.5% | 1.0% |
| 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 20 | 19 | 20 | 20 | 20 | 19 | 20 | 20 | 20 |
| 30 | 28 | 29 | 29 | 30 | 29 | 29 | 30 | 30 |
| 50 | 44 | 47 | 48 | 50 | 47 | 48 | 49 | 50 |
| 75 | 63 | 69 | 72 | 74 | 67 | 71 | 73 | 75 |
| 100 | 80 | 89 | 94 | 99 | 87 | 93 | 96 | 99 |
| 150 | 108 | 126 | 137 | 148 | 122 | 135 | 142 | 149 |
| 200 | 132 | 160 | 177 | 196 | 154 | 174 | 186 | 198 |
| 250 | 152 | 190 | 215 | 244 | 182 | 211 | 229 | 246 |
| 300 | 169 | 217 | 251 | 291 | 207 | 246 | 270 | 295 |
| 400 | 196 | 265 | 318 | 384 | 250 | 309 | 348 | 391 |
| 500 | 217 | 306 | 377 | 475 | 285 | 365 | 421 | 485 |
| 600 | 234 | 340 | 432 | 565 | 315 | 416 | 490 | 579 |
| 700 | 248 | 370 | 481 | 653 | 341 | 462 | 554 | 672 |
| 800 | 260 | 396 | 526 | 739 | 363 | 503 | 615 | 763 |
| 1,000 | 278 | 440 | 606 | 906 | 399 | 575 | 727 | 943 |
| 1,200 | 291 | 474 | 674 | 1067 | 427 | 636 | 827 | 1119 |
| 1,500 | 306 | 515 | 759 | 1297 | 460 | 712 | 959 | 1376 |
| 2,000 | 322 | 563 | 869 | 1655 | 498 | 808 | 1141 | 1785 |
| 2,500 | 333 | 597 | 952 | 1984 | 524 | 879 | 1288 | 2173 |

The formula used for the calculations in the table above as indicated by Burmeister and Aitken (2011, p. 7) is:

$$n = \frac{X^2 * N * P * (1-P)}{(ME^2 * (N-1)) + (X^2 * P * (1-P))}$$

Where:

$n$ = sample size

$X^2$ = Chi – square for the specified confidence level at 1 degree of freedom

$N$ = Population Size

$P$ = population proportion (.50 in this table)

$ME$ = desired Margin of Error (expressed as a proportion)

The population of final year students at Nasawa Technical College was 200. The margin error adopted is 5% @ 95% confidence level. Therefore the study sampled 132 students. According to the sampling criteria used, each variable group had a total of 66 samples. There were two sets of sample variables which comprised year three normal entry students (students recruited by the government through TEVETA) and parallel entry (students recruited by the college) students. For each of these sample sets, 66 questionnaires were administered. In total 132 samples were targeted. This represented 66% of the entire population. The choice of such number of samples was based on the sampling table adopted which is much simpler than employing a formula

## 3.5 Sampling Techniques

### *3.5.1 Stratified Random Sampling*

This technique is used when the population consists of a number of groups that may differ in their characteristics or other specifications (Dawson, 2009). As a result, it was desirable to use a form of probability sampling which is known as stratified sampling. Keeping in mind that the students at the college belong to different departments and take different courses, then the students were grouped according to the following criteria; programme of study, mode of admission and year of study. Therefore, respondents were selected at random from each of the stratum to form one group. The strata in this regard comprised 75 - 100 students and 66 students were picked randomly from each sample set.

## 3.6 Data Collection Instruments

The standard way to measure self-efficacy is to present individuals with a range of items portraying different levels of task demands and ask them to rate their confidence in their ability to execute required activity (Mclellan et al., 2004). The instrument used in this study adopted this approach. The instrument was a modified questionnaire used in previous entrepreneurial self-efficacy studies conducted by various researchers.

To measure the level of entrepreneurial self-efficacy, this study used a modified questionnaire developed by De Noble et al. (1999). The instrument consisted of a set of items that asked the respondents to self-assess their capability to perform the required tasks for a target entrepreneurial behaviour. In which case, the target behaviour is creating and managing a new business. De Noble's instrument consists of 23 items which covers six dimensions of entrepreneurial self- efficacy namely;

(1) Developing new product and market opportunities
(2) Building an innovative environment
(3) Initiating investor relationships
(4) Defining core purpose
(5) Coping with unexpected challenges
(6) Developing critical human resources.

These items were identified with respect to the context under which the study was conducted and contents of the particular curriculum.

However, for the purposes of this study, seven ideal entrepreneurial self-efficacy domains were identified and established with respect to the Malawi TEVET entrepreneurship curriculum's goals, aims and objectives and Malawi's industrial context. The items were developed from standards covered in TEVET entrepreneurship training manual. Entrepreneurship students are expected to demonstrate such entrepreneurial competences upon completing a course in entrepreneurship. In this regard, the seven entrepreneurial self-efficacy domains include the following:

1. Starting and running a profitable business
2. Business planning
3. Coping with unexpected challenges
4. Managing production functions
5. Marketing functions and market opportunities
6. Developing and managing critical human resources and managing finances
7. Building an innovative environment and Environmental scanning.

The instrument had 31 test items portraying different levels of task demands. The participants were asked to respond to the items using a 4 point Likert type scale (1= strongly disagree to 4= strongly agree) based on the degree of their agreement with the statement. The higher the score they rate, the higher level of agreement they have. The lower the score they rate, the lower level of agreement they have.

Data on levels of exposure to entrepreneurship education was collected by means of a nominal scale, thus students who had exposure to entrepreneurship education for a period of three years and those who had not been exposed to entrepreneurship education.

### 3.7 Data Analysis

Data analysis is described as the search for explanations and understanding which may lead to establishing the truth or factor understanding the issue (Fielding, 2008). Cohen et al. (2007b) say that data analysis is necessary because raw data are chaotic and meaningless and they lack significance. This chapter provides an overview of data analysis. The Statistical Package for the Social Sciences (SPSS) version 20 was used to analyse the data. The data were analysed using descriptive and inferential statistics. Descriptive statistics included the mean, the variance, the standard deviation, the skewness and the kurtosis of the specific variables.

Inferential statistics in this case strived to make inferences and predictions based on the data that were gathered. These included, for example, hypothesis testing. Abayasekera (2000) highlighted that ideal statistical hypothesis testing techniques is the P-value methodology, which has been applied in this study. On the other hand, chi square was also applicable and was used to predict whether those students exposed to entrepreneurship education will score higher scores than non-entrepreneurial students. According to Lyons and Doueck (2010) a one tailed test one predicts, for example, that one group will score more highly than the other.

The structure of this section is organised to give initial screening of the data and descriptive statistics of the variables.

### 3.7.0 Descriptive Statistics for Nominal/Independent Variables

A total of 119 respondents out of 132 returned the questionnaires. This represents 90.2% response rate. This study had three independent variables: programme of study, mode of admission and gender.

### *3.7.1 Sample Distribution According to Programme of Study*

Table 2 indicates the distribution of respondents according to programme of study as follows; Bricklaying (BL) 25, Carpentry and Joinery (CJ) 23, Automobile Mechanics (AMM) 26, Secretarial Studies (SEC), General Fitting (GF) 18 and Motorcycle Mechanics (MCM) 9. The overall number of respondents was 119.

Table 2 S*ample Distribution by Programme of Study (Occupation)*

| Course of study | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | BL | 25 | 21.0 | 21.0 | 21.0 |
| | CJ | 23 | 19.3 | 19.3 | 40.3 |
| | AMM | 26 | 21.8 | 21.8 | 62.2 |
| | SEC | 18 | 15.1 | 15.1 | 77.3 |
| | GF | 18 | 15.1 | 15.1 | 92.4 |
| | MCM | 9 | 7.6 | 7.6 | 100.0 |
| | Total | 119 | 100.0 | 100.0 | |

### *3.7.2 Sample Distribution by Mode of Entry into College*

According to the mode of entry the data recorded 61 normal entry students and 58 Parallel entry students. Table 3 indicates that 61 of the 119 students who participated were normal entry students while 58 students were parallel entry students. This represents 51.3% and 48.9% participation rates respectively.

Table 3: *Distribution of Samples According to Mode of Admission into College*

| Mode of entry | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Normal entry | 61 | 51.3 | 51.3 | 51.3 |
| | Parallel entry | 58 | 48.7 | 48.7 | 100.0 |
| | Total | 119 | 100.0 | 100.0 | |

### *3.7.3 Sample Distribution by Gender*

The table 4 indicates that 81 of the 119 students were male while 38 were female students. This represents 68.1% and 31.9% participation rates respectively.

Table 4: *Description of Samples According to Gender*

| Gender | | | | | |
|---|---|---|---|---|---|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Male | 81 | 68.1 | 68.1 | 68.1 |
| | Female | 38 | 31.9 | 31.9 | 100.0 |
| | Total | 119 | 100.0 | 100.0 | |

### *3.7.4 Normality Testing for Sample Distribution*

Once the data has been gathered it is advisable to conduct a test to determine if sample variables were normally distributed or not normally distributed. Shapiro-Wilk test was applied for the three independent variables. This helps to determine the appropriate test statistic. Appendix 1 shows the results of normality tests for each independent variable.

Shapiro-Wilk test recorded P= 0.000 < 0.05 hence rejecting null hypothesis that sample was normally distributed therefore, sample distribution was not normally distributed and adopted non parametric test applications .

### *3.7.5 Data Skewness and Kurtosis*

If the distribution of data is perfectly normal a value of zero for both skewedness and kurtosis would be expected. Both skewness and kurtosis assumed negative values. Thus the data was negatively skewed and assumed left-skewed shape.

According to Bager (2013) skewness is negative when the mean is usually less than the median and data values are clustered to the right and tapers off to the left. On the other hand, negative kurtosis indicates a "flat" distribution. Therefore, distribution of data in the study was not perfectly normal. Cohen, Manion, and Morrison (2007a) indicate that when data distribution is not perfectly normal, non-parametric statistics tests have to be used to test hypothesis of the study.

### *3.7.6 Non-Parametric Statistics Tests*

As it has been observed earlier, the data did not have a normal distribution shape therefore non-parametric statistics tests were applied. Saunders, Lewis and Thornhill, (2009) define non-parametric statistics as statistics designed for use when the data are not normally distributed.

Statistical techniques for analysing non-parametric statistics include the Mann-Whitney U test, Kruskal-Wallis test, Chi-square test and Wilcoxon test. However in this study, Kruskal-Wallis test and Mann-Whitney U test were applied to analyse the study hypothesis.

## 3.8 Validity and Reliability

### *3.8.1 Validity*

Validity is defined as a demonstration that a particular data collection instrument in fact measures what it purports to measure (Cohen et al., 2007b). There are many factors that are considered in order to assess the validity of data collecting instrument. Validity of the instruments in this research was determined by pre-testing. A pilot study was conducted to

determine whether the items were correctly worded in order to avoid misinterpretation when they are finally administered to the participants. The questionnaires were pre tested at Soche Technical College. A total of 26 questionnaires were pre tested, and the pre-test exercise enhanced correction and restructuring of some test items. This enhanced the data collecting instrument to achieve high reliability.

### *3.8.2 Reliability*

Reliability is a synonym for consistency and replication over time, over instruments as well as over groups of respondents (Borg, 2005). It is concerned with consistency. Ary, Jacobs, and Sorensen (2010) indicated that for a research to be reliable it must demonstrate that if it were to be carried out on a similar group of respondents in a similar context similar results would be obtained. To determine reliability of the instruments, pilot study was conducted to enhance consistency and dependency, accuracy and adequacy of the instruments. Consistency of the test items was measured by the degree to which the test items attract similar and related responses from the participants in the pilot testing exercise.

The reliability tests of most entrepreneurial self-efficacy instruments show that the data collection instruments are reliable to measure the entrepreneurial self-efficacy. For example De Noble's instrument is reliable to measure entrepreneurial self-efficacy over Cronbach alpha scale around 0.953 (Jordaan, 2014). The results of reliability testing of the instrument are as presented in table 5.

Table 5: Cronbach's Alpha reliability test

| **Reliability Statistics** | |
|---|---|
| Cronbach's Alpha | N of Items |
| .980 | 38 |

## 3.9 Ethical Considerations

This section briefly tackles ethical issues relevant to educational research. Research ethics in this context deals with the interaction between researchers and the people who are involved in the study in one way or the other. Leedy (1999) advises educational researchers to consider ethical issues prior to data collection.

To ensure that this study was ethical, the following activities were observed before data collection in the defined samples:

- Seeking permission from authorities. Thus the researcher sought permission from the administrators of Nasawa Technical Colleges where data was collected.

- Finally, all the activities during and after data collection were treated with confidentiality. Those involved were assured of the purpose of the study as purely academic work.

# CHAPTER 4

# RESULTS AND DISCUSSION

## 4.1 Chapter overview

This chapter presents results and discussion of the results. Data computation was done using statistics software SPSS v20. The structure of this section is organised to give initial results and discussion of the three hypotheses presented in thematic way.

## 4.2 Entrepreneurial self-efficacy among students in respect of programme of study

### *4.2.1 Mean statistics*

Mean of scores was computed to determine how the respondents differed in terms of average score from one another in perceived entrepreneurial self-efficacy factors based on their course of study. Table 6 presents summaries of the results of mean of scores.

Table 6: *Mean statistics- entrepreneurial self-efficacy among students based on programme of study*

| **Report** | | | | | | | |
|---|---|---|---|---|---|---|---|
| Mean | | | | | | | |
| | Course of study | | | | | | |
| | BL | CJ | AMM | SEC | GF | MCM | Total |
| ability to see new market opportunities for new products and services | 3.28 | 3.22 | 3.04 | 2.56 | 2.94 | 3.00 | 3.03 |
| ability to generate and choose the most promising business idea | 3.24 | 3.30 | 2.92 | 2.11 | 2.89 | 3.33 | 2.97 |
| ability to conduct need assessment for a business opportunity | 3.00 | 3.13 | 2.81 | 2.06 | 2.89 | 3.11 | 2.83 |
| ability to keep business records and file business records | 3.16 | 3.30 | 2.81 | 2.28 | 3.06 | 3.89 | 3.02 |
| ability to classify costs and costing products/services | 2.96 | 3.13 | 2.77 | 2.61 | 3.11 | 3.44 | 2.96 |
| ability to identify new areas for potential growth | 3.12 | 3.22 | 2.73 | 2.56 | 2.78 | 3.44 | 2.94 |
| ability to design viable business plans | 2.92 | 3.04 | 3.00 | 2.50 | 2.22 | 3.44 | 2.83 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ability to write business plan | 3.16 | 3.39 | 2.92 | 2.22 | 2.67 | 3.78 | 2.98 |
| ability to use business plan | 3.20 | 3.30 | 2.92 | 2.33 | 2.83 | 3.78 | 3.02 |
| ability to seek business information | 3.20 | 3.26 | 2.96 | 2.33 | 2.78 | 3.67 | 3.00 |
| ability to take calculated risks | 3.08 | 2.78 | 2.88 | 2.39 | 2.72 | 3.56 | 2.86 |
| ability to work productively under continuous stress, pressure and conflict | 2.76 | 2.52 | 2.69 | 2.56 | 2.67 | 3.67 | 2.72 |
| ability to develop relationships with key people | 3.24 | 2.65 | 2.85 | 2.39 | 2.56 | 2.78 | 2.77 |
| ability to tolerate unexpected changes in business conditions | 3.28 | 3.09 | 2.46 | 2.61 | 2.61 | 3.33 | 2.87 |
| ability to persist in the face of adversity | 3.04 | 2.61 | 2.58 | 2.33 | 2.56 | 2.89 | 2.66 |
| ability to design production process | 2.96 | 2.70 | 2.81 | 2.50 | 2.67 | 3.44 | 2.80 |
| ability to locate a business | 3.16 | 3.09 | 3.15 | 2.22 | 2.94 | 3.33 | 2.98 |
| ability to source appropriate technology and inputs for business | 3.00 | 2.91 | 2.81 | 2.61 | 2.44 | 3.22 | 2.82 |
| ability to maintain quality of products/services | 3.04 | 3.09 | 3.04 | 2.56 | 2.83 | 3.56 | 2.98 |
| ability to provide what customers want or fulfil customer's unmet needs | 3.12 | 3.17 | 3.15 | 2.56 | 2.89 | 3.22 | 3.03 |
| ability to design products that solve current problems | 3.00 | 2.70 | 2.77 | 2.78 | 2.72 | 3.22 | 2.83 |
| ability to handle customer complaints | 3.32 | 3.22 | 3.19 | 2.83 | 2.72 | 3.44 | 3.12 |
| ability to distribute products/ services to customers | 3.12 | 2.83 | 3.12 | 2.89 | 2.61 | 3.44 | 2.97 |
| ability to attract and negotiate with customers to buy the | 3.08 | 3.09 | 3.00 | 2.61 | 2.83 | 3.56 | 2.99 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| products/services | | | | | | | |
| ability to set more attractive prices of products/services | 3.20 | 3.22 | 3.08 | 2.72 | 2.94 | 3.56 | 3.09 |
| ability to design business organizational structure | 3.16 | 2.70 | 2.96 | 2.56 | 2.67 | 2.67 | 2.82 |
| ability to recruit and select employees | 3.24 | 2.87 | 2.73 | 2.44 | 2.89 | 2.56 | 2.83 |
| ability to train and develop staff | 3.28 | 2.91 | 2.77 | 2.33 | 3.00 | 2.78 | 2.87 |
| ability to motivate staff | 3.44 | 3.00 | 2.96 | 2.39 | 3.06 | 3.00 | 3.00 |
| ability to budget business activities | 3.32 | 3.22 | 3.19 | 2.50 | 2.94 | 3.44 | 3.10 |
| ability to prepare financial forecast | 3.16 | 2.70 | 2.96 | 2.50 | 2.89 | 3.33 | 2.90 |
| ability to identify potential sources of funding for investment | 3.28 | 2.43 | 2.69 | 2.61 | 2.83 | 3.00 | 2.80 |
| ability to analyse business transactions | 3.40 | 3.04 | 3.04 | 2.56 | 3.00 | 3.11 | 3.04 |
| ability to prepare financial reports | 3.44 | 3.00 | 3.12 | 2.44 | 3.00 | 3.33 | 3.06 |
| ability to identify strengths, weaknesses, opportunities and threats of a particular business | 3.24 | 2.96 | 3.27 | 2.83 | 3.06 | 3.67 | 3.13 |
| ability to analyse strengths, weaknesses, opportunities and threats of a particular business and make decision | 3.08 | 3.04 | 3.19 | 2.67 | 3.00 | 3.67 | 3.07 |
| ability to form partner or alliance relationship with others | 3.20 | 2.74 | 3.15 | 2.67 | 2.89 | 3.67 | 3.01 |
| ability to network and seek opportunities with other businesses | 3.12 | 2.83 | 3.08 | 2.56 | 2.89 | 3.67 | 2.97 |
| Average | 3.16 | 2.98 | 2.94 | 2.50 | 2.82 | 3.34 | 2.94 |

According to mean of scores depicted in table 6, depicts that MCM scored higher than any other occupation. Mean score for MCM is 3.34, seconded by BL scored 3.16. The least was SEC students who scored an average of 2.50

### *4.2.2 Kruskal-Wallis H test*

The Kruskal-Wallis H test is a rank-based nonparametric test that is used to determine if there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. As indicated, this study sought to establish if there is any significant difference among students in their perceived levels of ESE with respect to their programme of study. Therefore, a Kruskal-Wallis H test was identified as ideal to determine the mean ranks and deduce if there were statistically significant differences among samples. A Kruskal-Wallis H test is applicable when more than two groups of independent samples are contained in one variable.

In order to determine the differences each ESE domain was computed separately to determine how each of the samples scored with respect to their programme of study. Table 7 present the results of a Kruskal-Wallis test.

Table 7 presents results computed to determine if the difference among students' entrepreneurial self-efficacy per programmes of were statically significance on Kruskal-Wallis H test. Accordingly the Kruskal-Wallis test recorded a P value = 0.75 level of significance. Therefore the differences were not statistically significant. The null hypothesis was not rejected as P= 0.075 > 0.05 hence fail to reject the null hypothesis.

Table 7. *Kruskal-Wallis Test- Entrepreneurial self-efficacy among students in respective of programme of study*

| **Test Statistics[a,b]** | | | |
|---|---|---|---|
| | Chi-Square | df | Asymp. Sig. |
| Programme of study | 10.025[a] | 5 | .075 |
| a. Kruskal Wallis Test | | | |
| b. Grouping Variable: Programme of study | | | |

### 4.2.3 Discussion- Entrepreneurial Self-Efficacy among students in respect of programme of study

The first objective was developed to establish whether students pursuing a specific programme of study would score significantly higher on the ESE dimensions than others.

Literature suggests that students pursuing different courses would demonstrate variations in terms of levels of ESE. According to Bager (2013) such variations are due teaching/learning methodologies, the nature of their course and the type of business ventures associated with a particular programme of study. For example, a study conducted by Shaari, Amar, Harun, and Zainol (2015) found that students who were pursuing business programmes demonstrated a significantly higher score in ESE dimensions than those in vocational programmes. For instance, business student significantly scored high at 5% confidence level than any other students pursuing other courses such as construction or engineering.

To assess the differences on ESE levels among students per programme of study, firstly mean of scores for each group of students were compared. According to the results, students pursuing Motorcycle Mechanics (MCM) course had a high mean score on many ESE dimensions than students doing other programmes.

To test if the differences were statistically significant, a Kruskal-Wallis H test was applied. The results from the test revealed that MCM had high mean ranks on 26 ESE factors. However, the differences were not statistically significant at 5% P value. Statistically significant differences in perceived entrepreneurial self-efficacy for MCM students were recorded as follows:

- *Starting business and running a profitable business*: Statistically significant differences in perceived entrepreneurial self-efficacy were found on four entrepreneurial self-efficacy factors (ESE2, Rank= 70.17; ESE4, Rank= 87.28; ESE5, Rank= 73.28 ESE6, Rank = 73). The results indicate that MCM group differed statistically significantly from other groups on their ability to generate and choose the most promising business idea, keep business records and file business records, classify costs and costing products/services and identify new areas for potential growth.
- *Business Planning:* MCM students differed statistically significantly on all the four entrepreneurial self-efficacy factors from the other groups (ESE7, Rank = 77.50; ESE8, Rank= 85.83 ESE9, Rank 83. 61; ESE10, Rank= 80.00). MCM students differed statistically significant from other students on their ability to design viable business plans, write business plans, use a business plan and seek business information from various sources.
- *Coping with unexpected challenges:* Statistically significant differences in perceived entrepreneurial self-efficacy of the MCM students were found on three of the five entrepreneurial self-efficacy factors: (ESE11, Rank= 80.94; ESE12, Rank =89.17;

ESE 14, Rank = 73.94). Thus it seems that MCM respondents had high levels of confidence regarding their abilities to take calculated risks, ability to work productively under continuous stress, pressure and conflict, and tolerate unexpected changes in business conditions.

- *Managing production functions, marketing functions and market opportunities:* The MCM group differed statistically significant by perceived entrepreneurial self-efficacy factors on nine of the 10 factors from other groups as follows: ESE16, Rank= 79.04; ESE17, Rank= 70.22; ESE18, Rank = 71.22; ESE19, Rank = 77.67; ESE21, Rank 73.89; ESE22, Rank= 69.61; ESE23, Rank = 76.00; ESE24, Rank 76.72; ESE25, 75.50. It could, therefore, be deduced that MCM respondents had high levels of confidence in designing production process, locating a business, sourcing appropriate technology and inputs for business, maintaining quality products/services, designing products that solve current problems, handling customer complaints, distributing products/services to the customers, attracting and negotiating with customers to buy the products and services, and setting more attractive prices of products/services.
- *Managing finances:* On this domain, MCM students scored statistically significant by two of the five ESE factors to the other students pursing other programmes: ( ESE30, Rank= 69.28; ESE31, Rank = 72.06). It could therefore be deduced that MCM students had high levels of confidence in their ability to budget business activities and prepare financial forecast.
- *Environmental scanning and building an innovative environment:* Statistically significant differences in perceived entrepreneurial self-efficacy were found on all entrepreneurial self-efficacy factors (ESE35, Rank = 75.67; ESE36, Rank = 78.50; ESE37, Rank = 80.67 ESE38, Rank = 81`). The results indicate that the MCM group differed from other groups on their ability to identify strengths, weaknesses, opportunities and threats of a particular business, analysing strength, weakness, opportunities and threats of a particular business and make a decision, forming partnership or alliance relationship with others and finally networking and seeking opportunities with other businesses.

### 4.2.4 Section Summary

From the findings it can be established that students belonging to a particular programme of study have demonstrated differences in their perceived entrepreneurial self-efficacy than others. However, the differences were not statistically significant. In this case MCM level 3 students have high ESE than other students belonging to different programmes.

The null hypothesis was not rejected P= 0.075 > 0.05 hence fail to reject the null hypothesis. This result can be attributed to the fact that students pursuing different programmes, especially those under TEVETA sponsorship, are exposed to entrepreneurship education.

### 4.3 The difference in entrepreneurial self-efficacy among students exposed to entrepreneurship education against students not exposed to entrepreneurship education

The study also established to determine whether students exposed to entrepreneurship education and those not exposed to entrepreneurship education would significantly differ on self-efficacy dimensions.

The table 8 shows results of the mean scores between normal entry students and parallel entry students. The results establishes that normal entry students (those exposed to entrepreneurship education) had a high average mean score of 3.42 while parallel entry students (those not exposed to entrepreneurship education) had a lower average mean score of 2.42.

Table 8: *Mean statics difference between students exposed to entrepreneurship education and students not exposed to entrepreneurship education*

| | Normal entry | Parallel entry |
|---|---|---|
| ability to see new market opportunities for new products and services | 3.44 | 2.60 |
| ability to generate and choose the most promising business idea | 3.36 | 2.55 |
| ability to conduct need assessment for a business opportunity | 3.26 | 2.38 |
| ability to keep business records and file business records | 3.66 | 2.34 |
| ability to classify costs and costing products/services | 3.43 | 2.47 |
| ability to identify new areas for potential growth | 3.43 | 2.43 |
| ability to design viable business plans | 3.31 | 2.33 |
| ability to write business plan | 3.51 | 2.43 |
| ability to use business plan | 3.59 | 2.41 |
| ability to seek business information | 3.52 | 2.45 |
| ability to take calculated risks | 3.34 | 2.34 |
| ability to work productively under continuous stress, pressure and conflict | 3.15 | 2.28 |
| ability to develop relationships with key people | 3.15 | 2.38 |
| ability to tolerate unexpected changes in business conditions | 3.36 | 2.34 |
| ability to persist in the face of adversity | 3.23 | 2.07 |
| ability to design production process | 3.43 | 2.14 |

| | | |
|---|---|---|
| ability to locate a business | 3.36 | 2.59 |
| ability to source appropriate technology and inputs for business | 3.38 | 2.22 |
| ability to maintain quality of products/services | 3.59 | 2.34 |
| ability to provide what customers want or fulfil customer's unmet needs | 3.44 | 2.59 |
| ability to design products that solve current problems | 3.26 | 2.38 |
| ability to handle customer complaints | 3.54 | 2.67 |
| ability to distribute products/ services to customers | 3.46 | 2.47 |
| ability to attract and negotiate with customers to buy the products/services | 3.43 | 2.53 |
| ability to set more attractive prices of products/services | 3.52 | 2.64 |
| ability to design business organizational structure | 3.28 | 2.34 |
| ability to recruit and select employees | 3.30 | 2.34 |
| ability to train and develop staff | 3.31 | 2.41 |
| ability to motivate staff | 3.43 | 2.55 |
| ability to budget business activities | 3.61 | 2.57 |
| ability to prepare financial forecast | 3.39 | 2.38 |
| ability to identify potential sources of funding for investment | 3.31 | 2.26 |
| ability to analyse business transactions | 3.54 | 2.52 |
| ability to prepare financial reports | 3.54 | 2.55 |
| ability to identify strengths, weaknesses, opportunities and threats of a particular business | 3.69 | 2.55 |
| ability to analyse strengths, weaknesses, opportunities and threats of a particular business and make decision | 3.59 | 2.52 |
| ability to form partner or alliance relationship with others | 3.51 | 2.48 |
| ability to network and seek opportunities with other businesses | 3.49 | 2.43 |
| **Average** | **3.42** | **2.43** |

### 4.3.1 Mann-Whitney Test

The nonparametric Mann-Whitney U test was used to determine whether the respondents differed statistically significant by one another in perceived entrepreneurial self-efficacy based on the mode of admission. The results revealed that these factors had a major effect on the entrepreneurial self-efficacy of the respondents. Normal entry students differed statistically significantly at 5% level of significance to parallel entry students on all entrepreneurial self-efficacy factors.

Table 9 depicts the results obtained on Man-Whitney u test and if they were statistically significant. The test recorded a P value = 0.000 level of significance. Accordingly P value recorded 05 ≥ 0.000 on level of significance hence rejecting the null hypothesis.

Table 9: *Mann Whitney U test- significance level ( Mode of entry)*

| **Test Statistics** | Mann-Whitney U | Wilcoxon W | Z | Asymp. Sig. (2-tailed) | Monte Carlo Sig. (2-tailed) | | |
|---|---|---|---|---|---|---|---|
| | | | | | Sig. | 95% Confidence Interval | |
| | | | | | | Lower Bound | Upper Bound |
| Mode of entry into college | 913.000 | 2624.000 | -4.855 | .000 | .000[b] | .000 | .025 |
| a. Grouping Variable: Mode of entry | | | | | | | |
| b. Based on 119 sampled tables with starting seed 2000000. | | | | | | | |

### 4.3.2 Discussion- Perceived Entrepreneurial Self-Efficacy Based on the mode of Admission into College

The study also developed an objective to determine whether the respondents differed statistically in perceived entrepreneurial self-efficacy based on the mode of admission into college. This objective was developed keeping in mind that there are two modes of entry into national technical colleges in Malawi. This study recoded two groups of students with respect to their mode of entry into the college. Such groups are known as regular (TEVETA sponsored) students recruited through the Ministry of Youth, Labour and Manpower Development in conjunction with TEVETA and parallel entry students recruited by the college itself. TEVETA sponsored students are exposed to entrepreneurship education throughout their period of study while parallel entry students do not have such exposure.

A non-parametric Mann-Whitney U test was used to determine how the groups of respondents differed from one another in perceived entrepreneurial self-efficacy based on their different modes of admission into college.

The Mann-Whitney U results as indicated in Table 9 respectively show that TEVETA sponsored students (who had three years' exposure to entrepreneurship education) were statistically significant different at 5% level of significance from the parallel entry students (who had no exposure to entrepreneurship education) in perceived entrepreneurial self-efficacy on all of the 38 ESE factors.

### 4.3.3 Section Summary

Although this study did not conduct pre and post-tests to see the effectiveness of the entrepreneurship program among TEVETA sponsored students, it still can be argued that these results were influenced by the provision of entrepreneurship education. TEVETA sponsored students in this study had been exposed to entrepreneurship courses starting from their first year to third year unlike parallel entry students. These results support earlier research findings that entrepreneurship education significantly influences perceived entrepreneurial self-efficacy among individuals (Barakat & Mclellan, 2010; Byabashija, Katono, & Isabelija, 2010). The results revealed that respondents who were exposed to entrepreneurship education perceived their own entrepreneurial self-efficacy higher than those without such exposure.

The findings also support the argument that entrepreneurship education enhances perceptions of entrepreneurial self-efficacy as evidenced from a study conducted by Bager (2013) and Garba, Kabir, and Nalado (2014). On the other hand, Hashemi, Hossein, and Rezvantar (2012) study findings are also similar to those of Oyugi (2015) indicating the importance of entrepreneurship education as a valuable tool for developing an entrepreneurial mindset and capability.

This study did not test cause and effect relationships but rather sought to establish if there is a correlation between entrepreneurship education and entrepreneurial self-efficacy by studying ESE levels among students. The use of students with different levels of exposure to entrepreneurship education strengthened the view that entrepreneurship education positively impacts on entrepreneurial self-efficacy. As noted in the study, TEVETA sponsored students with three years' exposure to entrepreneurship education differed significantly in perceived entrepreneurial self-efficacy 5% level of significant from those without such exposure.

As a matter of policy, it can be argued that the TEVET system in Malawi is depriving some students of the opportunity to venture into entrepreneurial activities upon graduating from college. This observation is made because parallel entry students are not exposed to entrepreneurship education which is a great asset for influencing the youth to become potential entrepreneurs amidst high unemployment rate among the youth in Malawi.

### 4.4 Entrepreneurship Self-Efficacy among Students with Respect to Gender Difference

Mann-Whitney u test was used to determine if male students and female students differed statistically significant by 5% confidence interval.

Table 10 below shows whether the results obtained on Man-Whitney u test were statistically significant. The test recorded a P value = 0.008 level of significance. Accordingly P value, 05 $\geq$ 0.008 on level of significance hence reject the null hypothesis.

Table 10: *Statistical significant test on entrepreneurial self-efficacy based on gender*

**Test Statistics**

| | Mann-Whitney U | Wilcoxon W | Z | Asymp. Sig. (2-tailed) |
|---|---|---|---|---|
| Gender | 15.538[a] | 1 | .000 | .008 |

a. Grouping Variable: Gender

### 4.4.1 Discussion- Perceived Entrepreneurial Self-Efficacy Based on Gender difference

The third study objective in the study was aimed to determine whether students differ statistically significant from each other based on gender.

Descriptive statistics earlier indicate that 81 of the 119 students were male while 38 were female. This represents 68.1% and 31.9% participation rates respectively. A non-parametric Mann-Whitney U test was used to determine whether the respondents differed statistically significant from one another in perceived entrepreneurial self-efficacy based on their Gender role orientation. Mueller and Datoon (2008) defined gender as a personal trait or attribute conditioned by a traditional social system in which men are expected to think and behave as men (masculine) and women are expected to think and behave as women (feminine). Within such a social system, some behaviours, roles and careers are stereotyped as masculine while others are stereotyped as feminine (Nwanko et al., 2012).

The results show that male respondents differed statistically significantly at 5% level of significance from female respondents on all entrepreneurial self-efficacy factors, which also represent all the seven entrepreneurial domains. Such results therefore follow to conclude that students perceived differently on ESE factors with respect to their gender role orientation. These findings support the findings of previous research conducted by Sarwako and Nurdiana (2013) and Kurcuzewska and Bialek (2014) who established that factors such as gender play a role in perceptions of entrepreneurial ventures, hence self-efficacy.

### 4.4.2 Section Summary

According to Sarwako and Nurdiana (2013) people who possess masculinity orientation are more inclined towards entrepreneurship compared to those who possess femininity orientation in society. Therefore, according to the findings in this study it can also be deduced that male trainees in TVET sector are more likely to engage in entrepreneurial activities than female trainees. This is with respect to the argument that males in most cultures possess personality characteristics that predispose them to aggressive act, assessments, risk taking and creative attitudes which are the basics of entrepreneurial characteristics (Kumar & Uzkurt, 2013).

Sweida and Reichard (2013) asserted that students who manifest masculinity gender role orientation have masculine attitudes in life activities and are always encouraged by the societal stereotype to be entrepreneurs. On the other hand, Kurcuzewska and Bialek (2014) noted that most people in societies believe that business activities, innovations and risk behaviours are meant for males while domestic chores and more subtle activities and services are meant for the females. However, some studies do not support these findings. For example Tammubua, Ferbrillia, and Warokka (2015) found that gender was not significantly related to entrepreneurial self-efficacy among a broad sample of college students. In a related study Hashemi et al. (2012) also found no differences in ESE between males and females in a sample of nascent entrepreneurs in agriculture.

These studies suggested that times have changed for women and their abilities and career choice with respect to gender role orientation especially in developed countries such as Europe and America over the past decade. In fact, as indicated by Sweida and Reichard (2013) advancement in entrepreneurship among women has been dramatic in most countries in the world in the past decade.

According to some studies such as Yusuft, Akinola, Olagbeni, and Afere (2013) growth in entrepreneurial activity and self-efficacy among females is influenced by the growth of more female role models and mentors than there were just a decade ago. Several other

entrepreneurship theorists propose that self-efficacy plays an influential role in the new venture creation process (Pihie et al., 2013; Pollack et al., 2012; Zwan et al., 2010).

Literature established that perception of self-efficacy is influenced by four factors such as mastery experience, vicarious experience, verbal persuasion and physiological state (Sanna, 2005). In this respect, vicarious experiences which deal with seeing other people performing an activity is of paramount importance if female students are to attain high significant ESE levels just as male students.

Evidently, it is argued that self-efficacy influences the development of entrepreneurial intentions and hence the probability of venture creation. Further, a person will have the intention to create a new venture or act upon an existing entrepreneurial intention, only when self-efficacy is high in relation to the perceived requirements of a specific opportunity (Salas, 2014).

4.5 Summary of Results Table

**Table 11:** Summary Results of the Hypotheses Tests

| **SN** | **Hypothesis statement** | **Df** | **Level of Sign** | **P-Values** | **Decision** |
|---|---|---|---|---|---|
| 1 | There is no significant difference on students' perceived entrepreneurial self-efficacy with respect to their programme of study (Occupation). | 5 | 5% | 0.075 | Fail to Reject |
| 2 | There is no significant difference between students exposed to entrepreneurship education and students not exposed to entrepreneurship education in entrepreneurial self-efficacy. | 1 | 5% | 0.000 | Reject |
| 3 | There is no significant difference between male students and female students in their perceived entrepreneurial self-efficacy | 1 | 5% | 0.008 | Reject |

# CHAPTER 5

# CONCLUSION AND RECOMMENDATIONS

## 5.1 Introduction

This section makes conclusions drawn from the study and the recommendations for policy and practice as well as recommendations for further research.

## 5.2 Conclusion

The findings contribute to the body of knowledge by examining the role of entrepreneurship education in enhancing entrepreneurial self-efficacy in the seven domains of the entrepreneurial venture process. It is argued in many circles that provision of entrepreneurship training influences entrepreneurial behaviour. However, for one to venture into entrepreneurial lifestyle, a person has to demonstrate admirable levels of entrepreneurial self-efficacy. ESE is an important tool to determine a person who can likely become an entrepreneur.

The main purpose of this research study was to assess students' perceived entrepreneurial self-efficacy in relation to modes of entry and programme of study. The background of the study is guided by a 1998 TEVET policy which advocated for the introduction of entrepreneurship education in the TVET system in Malawi. However, since the inception of entrepreneurship education in the TVET system in 2006, trainees in technical colleges have not been assessed on entrepreneurial self-efficacy.

The findings established that there was no statistically significant difference among students pursuing different courses in levels of perceived entrepreneurial self-efficacy. According to the findings, students who were exposed to entrepreneurship education were statistically significant different from those who had no such exposure. The results indicated that entrepreneurship education equips students with skills to perform entrepreneurial tasks in various phases of the entrepreneurial life-cycle and vital to stimulating and improving the entrepreneurial activity. Finally, the results showed that male students scored significantly higher and differed significantly to female students in the way they perceived their own entrepreneurial efficacy.

Therefore, the results of the study reveal that entrepreneurship education and training positively impacts entrepreneurial competencies. It has been found in this study that students

who were exposed to entrepreneurship training for three years statistically scored higher than those students without exposure to entrepreneurship education. However female students in technical colleges lack behind from males which could be influenced by a social phenomenon gender role orientation.

### 5.3 Recommendations

Technical and Vocational Education and Training (TVET) is conceived as a societal innovation system such that entrepreneurship education can be regarded not only as a task of producing entrepreneurially oriented competent students, but also reproducing the social mechanisms that underpin and facilitate the birth and growth of businesses (Kasim, Zulkharnain, Hashim, Ibrahim, & Yusof, 2014).

Therefore, with regard to the finding of this study, the following are the recommendations:

1. Entrepreneurship education in technical colleges should be taught to all students regardless of mode of entry into college. This is in view of literature which support that provision of entrepreneurship education positively impacts on students' entrepreneurial self-efficacy and development of entrepreneurial characteristics. The results have shown that there is significance difference between students exposed to entrepreneurship education and those not exposed to entrepreneurship education. Therefore, all apprentices enrolled in technical colleges should be exposed to entrepreneurship training regardless of the mode of entry into college. This initiative can enhance the increase in the number of potential entrepreneurs who can be capable of identifying and exploiting opportunities in TVET sector in Malawi. According to literature, unemployment rate among the youth is extremely high in Malawi therefore it is necessary to expose the youth to entrepreneurial skills so that they become self-reliant after undergoing TEVET training.

2. The study found that male students perceive their own efficacy higher than female students. Therefore, entrepreneurship education trainers in technical colleges should be encouraged to use strategies which can help develop female students' efficacy. Such strategies can include inviting role models to address female students and share their success stories in their respective entrepreneurship ventures. According to some entrepreneurship studies, role modelling influences development of entrepreneurial self-efficacy especially among female students. On the other hand, trainers should strive to clearly identify the fundamental skills needed for females during the process

of the venture creation process therefore entrepreneurship training can be targeted towards improvement in such skills to effectively raise entrepreneurial self-efficacy in female students.

### *5.3.1 Recommendations for Further Research*

i. A longitudinal study to assess students perceived entrepreneurial self-efficacy when they begin first year through to final year and establish the changes on how students rate their own efficacy by the time they finish their studies. Such a study would provide information on how students perceive their efficacy when they just get introduced to entrepreneurship education and how their efficacy would be changing during the period of study till they reach final year.

ii. A study to investigate how many students actually start their own business after being exposed to entrepreneurship education. Such a study can establish the rate of involvement in entrepreneurship activities when students graduate from a training institution.

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Appendix 1: Tests of Normality (Programme of Study)

| Tests of Normality | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Course of study | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| ability to see new market opportunities for new products and services | BL | .284 | 25 | .000 | .786 | 25 | .000 |
| | CJ | .274 | 23 | .000 | .758 | 23 | .000 |
| | AMM | .252 | 26 | .000 | .836 | 26 | .001 |
| | SEC | .203 | 18 | .048 | .885 | 18 | .032 |
| | GF | .301 | 18 | .000 | .827 | 18 | .004 |
| | MCM | .389 | 9 | .000 | .728 | 9 | .003 |
| ability to generate and choose the most promising business idea | BL | .272 | 25 | .000 | .752 | 25 | .000 |
| | CJ | .339 | 23 | .000 | .750 | 23 | .000 |
| | AMM | .302 | 26 | .000 | .824 | 26 | .000 |
| | SEC | .216 | 18 | .026 | .873 | 18 | .020 |
| | GF | .268 | 18 | .001 | .856 | 18 | .011 |
| | MCM | .414 | 9 | .000 | .617 | 9 | .000 |
| ability to conduct need assessment for a business opportunity | BL | .260 | 25 | .000 | .822 | 25 | .001 |
| | CJ | .283 | 23 | .000 | .798 | 23 | .000 |
| | AMM | .316 | 26 | .000 | .833 | 26 | .001 |
| | SEC | .244 | 18 | .00 | .850 | 18 | .008 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | 6 | | | |
| | GF | .268 | 18 | .001 | .856 | 18 | .011 |
| | MCM | .341 | 9 | .003 | .760 | 9 | .007 |
| ability to keep business records and file business records | BL | .369 | 25 | .000 | .715 | 25 | .000 |
| | CJ | .380 | 23 | .000 | .626 | 23 | .000 |
| | AMM | .267 | 26 | .000 | .848 | 26 | .001 |
| | SEC | .205 | 18 | .044 | .857 | 18 | .011 |
| | GF | .256 | 18 | .003 | .817 | 18 | .003 |
| | MCM | .519 | 9 | .000 | .390 | 9 | .000 |
| ability to classify costs and costing products/services | BL | .260 | 25 | .000 | .804 | 25 | .000 |
| | CJ | .275 | 23 | .000 | .763 | 23 | .000 |
| | AMM | .278 | 26 | .000 | .833 | 26 | .001 |
| | SEC | .313 | 18 | .000 | .828 | 18 | .004 |
| | GF | .252 | 18 | .004 | .799 | 18 | .001 |
| | MCM | .356 | 9 | .002 | .655 | 9 | .000 |
| ability to identify new areas for potential growth | BL | .278 | 25 | .000 | .781 | 25 | .000 |
| | CJ | .305 | 23 | .000 | .767 | 23 | .000 |
| | AMM | .211 | 26 | .004 | .852 | 26 | .002 |
| | SEC | .250 | 18 | .004 | .805 | 18 | .002 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | GF | .260 | 18 | .002 | .875 | 18 | .021 |
| | MCM | .356 | 9 | .002 | .655 | 9 | .000 |
| ability to design viable business plans | BL | .252 | 25 | .000 | .844 | 25 | .001 |
| | CJ | .250 | 23 | .001 | .804 | 23 | .000 |
| | AMM | .242 | 26 | .000 | .801 | 26 | .000 |
| | SEC | .224 | 18 | .018 | .855 | 18 | .010 |
| | GF | .213 | 18 | .030 | .858 | 18 | .011 |
| | MCM | .356 | 9 | .002 | .655 | 9 | .000 |
| ability to write business plan | BL | .238 | 25 | .001 | .824 | 25 | .001 |
| | CJ | .350 | 23 | .000 | .680 | 23 | .000 |
| | AMM | .246 | 26 | .000 | .798 | 26 | .000 |
| | SEC | .213 | 18 | .030 | .858 | 18 | .011 |
| | GF | .287 | 18 | .000 | .838 | 18 | .005 |
| | MCM | .471 | 9 | .000 | .536 | 9 | .000 |
| ability to use business plan | BL | .308 | 25 | .000 | .773 | 25 | .000 |
| | CJ | .352 | 23 | .000 | .679 | 23 | .000 |
| | AMM | .297 | 26 | .000 | .785 | 26 | .000 |
| | SEC | .248 | 18 | .005 | .816 | 18 | .003 |
| | GF | .286 | 18 | .00 | .835 | 18 | .005 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | 0 | | | |
| | MCM | .471 | 9 | .000 | .536 | 9 | .000 |
| ability to seek business information | BL | .262 | 25 | .000 | .812 | 25 | .000 |
| | CJ | .333 | 23 | .000 | .741 | 23 | .000 |
| | AMM | .245 | 26 | .000 | .814 | 26 | .000 |
| | SEC | .248 | 18 | .005 | .816 | 18 | .003 |
| | GF | .242 | 18 | .006 | .827 | 18 | .004 |
| | MCM | .414 | 9 | .000 | .617 | 9 | .000 |
| ability to take calculated risks | BL | .244 | 25 | .000 | .833 | 25 | .001 |
| | CJ | .191 | 23 | .029 | .867 | 23 | .006 |
| | AMM | .245 | 26 | .000 | .782 | 26 | .000 |
| | SEC | .248 | 18 | .005 | .803 | 18 | .002 |
| | GF | .225 | 18 | .016 | .886 | 18 | .033 |
| | MCM | .356 | 9 | .002 | .655 | 9 | .000 |
| a. Lilliefors Significance Correction | | | | | | | |

Appendix 2: Test of Normality (Mode of Entry)

**Tests of Normality**

| | Mode of entry | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| ability to see new market opportunities for new products and services | Normal entry | .314 | 61 | .000 | .718 | 61 | .000 |
| | Parallel entry | .242 | 58 | .000 | .871 | 58 | .000 |
| ability to generate and choose the most promising business idea | Normal entry | .292 | 61 | .000 | .764 | 61 | .000 |
| | Parallel entry | .237 | 58 | .000 | .867 | 58 | .000 |
| ability to conduct need assessment for a business opportunity | Normal entry | .265 | 61 | .000 | .758 | 61 | .000 |
| | Parallel entry | .222 | 58 | .000 | .874 | 58 | .000 |
| ability to keep business records and file business records | TEVET | .422 | 61 | .000 | .555 | 61 | .000 |
| | Parallel entry | .182 | 58 | .000 | .857 | 58 | .000 |
| ability to classify costs and costing products/services | TEVET | .322 | 61 | .000 | .719 | 61 | .000 |
| | Parallel entry | .259 | 58 | .000 | .843 | 58 | .000 |
| ability to identify new areas for potential growth | TEVET | .325 | 61 | .000 | .696 | 61 | .000 |
| | Parallel entry | .201 | 58 | .000 | .865 | 58 | .000 |
| ability to design viable business plans | TEVET | .284 | 61 | .000 | .736 | 61 | .000 |
| | Parallel entry | .201 | 58 | .000 | .860 | 58 | .000 |
| ability to write business plan | TEVET | .375 | 61 | .000 | .692 | 61 | .000 |
| | Paralle | .250 | 58 | .000 | .842 | 58 | .000 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | l entry | | | | | | |
| ability to use business plan | TEVET | .412 | 61 | .000 | .635 | 61 | .000 |
| | Parallel entry | .268 | 58 | .000 | .820 | 58 | .000 |
| ability to seek business information | TEVET | .359 | 61 | .000 | .687 | 61 | .000 |
| | Parallel entry | .188 | 58 | .000 | .845 | 58 | .000 |
| ability to take calculated risks | TEVET | .310 | 61 | .000 | .769 | 61 | .000 |
| | Parallel entry | .196 | 58 | .000 | .851 | 58 | .000 |

Appendix 3: Test of Normality ( Gender)

**Tests of Normality**

| | Gender | Kolmogorov-Smirnov[a] | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|---|
| | | Statistic | df | Sig. | Statistic | df | Sig. |
| ability to see new market opportunities for new products and services | Male | .270 | 81 | .000 | .777 | 81 | .000 |
| | Female | .198 | 38 | .001 | .870 | 38 | .000 |
| ability to generate and choose the most promising business idea | Male | .256 | 81 | .000 | .791 | 81 | .000 |
| | Female | .244 | 38 | .000 | .865 | 38 | .000 |
| ability to conduct need assessment for a business opportunity | Male | .245 | 81 | .000 | .822 | 81 | .000 |
| | Female | .218 | 38 | .000 | .861 | 38 | .000 |
| ability to keep business records and file business records | Male | .319 | 81 | .000 | .737 | 81 | .000 |
| | Female | .192 | 38 | .001 | .840 | 38 | .000 |
| ability to classify costs and costing products/services | Male | .266 | 81 | .000 | .766 | 81 | .000 |
| | Female | .227 | 38 | .000 | .854 | 38 | .000 |
| ability to identify new areas for potential growth | Male | .238 | 81 | .000 | .814 | 81 | .000 |
| | Female | .236 | 38 | .000 | .818 | 38 | .000 |
| ability to design viable business plans | Male | .224 | 81 | .000 | .824 | 81 | .000 |
| | Female | .280 | 38 | .000 | .828 | 38 | .000 |
| ability to write business plan | Male | .283 | 81 | .000 | .745 | 81 | .000 |
| | Female | .191 | 38 | .001 | .862 | 38 | .000 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ability to use business plan | Male | .299 | 81 | .000 | .734 | 81 | .000 |
| | Female | .227 | 38 | .000 | .831 | 38 | .000 |
| ability to seek business information | Male | .283 | 81 | .000 | .777 | 81 | .000 |
| | Female | .247 | 38 | .000 | .823 | 38 | .000 |
| ability to take calculated risks | Male | .213 | 81 | .000 | .846 | 81 | .000 |
| | Female | .218 | 38 | .000 | .802 | 38 | .000 |
| a. Lilliefors Significance Correction | | | | | | | |

Appendix 4: Mann Whitney U test- Mode of Entry

| Ranks | | | | |
|---|---|---|---|---|
| | Mode of entry | N | Mean Rank | Sum of Ranks |
| ability to see new market opportunities for new products and services | TEVET | 61 | 74.03 | 4516.00 |
| | Parallel entry | 58 | 45.24 | 2624.00 |
| | Total | 119 | | |
| ability to generate and choose the most promising business idea | TEVET | 61 | 72.92 | 4448.00 |
| | Parallel entry | 58 | 46.41 | 2692.00 |
| | Total | 119 | | |
| ability to conduct need assessment for a business opportunity | TEVET | 61 | 74.45 | 4541.50 |
| | Parallel entry | 58 | 44.80 | 2598.50 |
| | Total | 119 | | |
| ability to keep business records and file business records | TEVET | 61 | 78.86 | 4810.50 |
| | Parallel entry | 58 | 40.16 | 2329.50 |
| | Total | 119 | | |
| ability to classify costs and costing products/services | TEVET | 61 | 74.70 | 4557.00 |
| | Parallel entry | 58 | 44.53 | 2583.00 |
| | Total | 119 | | |
| ability to identify new areas for potential growth | TEVET | 61 | 75.06 | 4578.50 |
| | Parallel entry | 58 | 44.16 | 2561.50 |
| | Total | 119 | | |

| | | | | |
|---|---|---|---|---|
| ability to design viable business plans | TEVET | 61 | 74.79 | 4562.00 |
| | Parallel entry | 58 | 44.45 | 2578.00 |
| | Total | 119 | | |
| ability to write business plan | TEVET | 61 | 76.23 | 4650.00 |
| | Parallel entry | 58 | 42.93 | 2490.00 |
| | Total | 119 | | |
| ability to use business plan | TEVET | 61 | 77.47 | 4725.50 |
| | Parallel entry | 58 | 41.63 | 2414.50 |
| | Total | 119 | | |
| ability to seek business information | TEVET | 61 | 75.16 | 4584.50 |
| | Parallel entry | 58 | 44.06 | 2555.50 |
| | Total | 119 | | |
| ability to take calculated risks | TEVET | 61 | 74.47 | 4542.50 |
| | Parallel entry | 58 | 44.78 | 2597.50 |
| | Total | 119 | | |
| ability to work productively under continuous stress, pressure and conflict | TEVET | 61 | 72.74 | 4437.00 |
| | Parallel entry | 58 | 46.60 | 2703.00 |
| | Total | 119 | | |
| ability to develop relationships with key people | TEVET | 61 | 71.48 | 4360.00 |
| | Parallel entry | 58 | 47.93 | 2780.00 |
| | Total | 119 | | |
| ability to tolerate unexpected changes in business conditions | TEVET | 61 | 75.17 | 4585.50 |

| | | | | |
|---|---|---|---|---|
| | Parallel entry | 58 | 44.04 | 2554.50 |
| | Total | 119 | | |
| ability to persist in the face of adversity | TEVET | 61 | 77.03 | 4699.00 |
| | Parallel entry | 58 | 42.09 | 2441.00 |
| | Total | 119 | | |
| ability to design production process | TEVET | 61 | 79.22 | 4832.50 |
| | Parallel entry | 58 | 39.78 | 2307.50 |
| | Total | 119 | | |
| ability to locate a business | TEVET | 61 | 71.29 | 4348.50 |
| | Parallel entry | 58 | 48.13 | 2791.50 |
| | Total | 119 | | |
| ability to source appropriate technology and inputs for business | TEVET | 61 | 76.11 | 4643.00 |
| | Parallel entry | 58 | 43.05 | 2497.00 |
| | Total | 119 | | |
| ability to maintain quality of products/services | TEVET | 61 | 77.76 | 4743.50 |
| | Parallel entry | 58 | 41.32 | 2396.50 |
| | Total | 119 | | |
| ability to provide what customers want or fulfil customer's unmet needs | TEVET | 61 | 71.63 | 4369.50 |
| | Parallel entry | 58 | 47.77 | 2770.50 |
| | Total | 119 | | |
| ability to design products that solve current problems | TEVET | 61 | 73.36 | 4475.00 |
| | Parallel entry | 58 | 45.95 | 2665.00 |

| | | | | |
|---|---|---|---|---|
| | Total | 119 | | |
| ability to handle customer complaints | TEVET | 61 | 72.91 | 4447.50 |
| | Parallel entry | 58 | 46.42 | 2692.50 |
| | Total | 119 | | |
| ability to distribute products/ services to customers | TEVET | 61 | 74.19 | 4525.50 |
| | Parallel entry | 58 | 45.08 | 2614.50 |
| | Total | 119 | | |
| ability to attract and negotiate with customers to buy the products/services | TEVET | 61 | 72.32 | 4411.50 |
| | Parallel entry | 58 | 47.04 | 2728.50 |
| | Total | 119 | | |
| ability to set more attractive prices of products/services | TEVET | 61 | 73.17 | 4463.50 |
| | Parallel entry | 58 | 46.15 | 2676.50 |
| | Total | 119 | | |
| ability to design business organizational structure | TEVET | 61 | 73.11 | 4459.50 |
| | Parallel entry | 58 | 46.22 | 2680.50 |
| | Total | 119 | | |
| ability to recruit and select employees | TEVET | 61 | 73.66 | 4493.00 |
| | Parallel entry | 58 | 45.64 | 2647.00 |
| | Total | 119 | | |
| ability to train and develop staff | TEVET | 61 | 72.80 | 4440.50 |
| | Parallel entry | 58 | 46.54 | 2699.50 |
| | Total | 119 | | |
| ability to motivate staff | TEVET | 61 | 72.12 | 4399. |

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|---|---|---|---|---|
| | | | | 50 |
| | Parallel entry | 58 | 47.25 | 2740.50 |
| | Total | 119 | | |
| ability to budget business activities | TEVET | 61 | 75.09 | 4580.50 |
| | Parallel entry | 58 | 44.13 | 2559.50 |
| | Total | 119 | | |
| ability to prepare financial forecast | TEVET | 61 | 74.99 | 4574.50 |
| | Parallel entry | 58 | 44.23 | 2565.50 |
| | Total | 119 | | |
| ability to identify potential sources of funding for investment | TEVET | 61 | 75.52 | 4607.00 |
| | Parallel entry | 58 | 43.67 | 2533.00 |
| | Total | 119 | | |
| ability to analyse business transactions | TEVET | 61 | 74.90 | 4569.00 |
| | Parallel entry | 58 | 44.33 | 2571.00 |
| | Total | 119 | | |
| ability to prepare financial reports | TEVET | 61 | 74.02 | 4515.00 |
| | Parallel entry | 58 | 45.26 | 2625.00 |
| | Total | 119 | | |
| ability to identify strengths, weaknesses, opportunities and threats of a particular business | TEVET | 61 | 77.57 | 4731.50 |
| | Parallel entry | 58 | 41.53 | 2408.50 |
| | Total | 119 | | |
| ability to analyse strengths, weaknesses, opportunities and threats of a particular business and make decision | TEVET | 61 | 76.18 | 4647.00 |
| | Parallel | 58 | 42.98 | 2493. |

| | | | | |
|---|---|---|---|---|
| | entry | | | 00 |
| | Total | 119 | | |
| ability to form partner or alliance relationship with others | TEVET | 61 | 75.44 | 4602.00 |
| | Parallel entry | 58 | 43.76 | 2538.00 |
| | Total | 119 | | |
| ability to network and seek opportunities with other businesses | TEVET | 61 | 76.26 | 4652.00 |
| | Parallel entry | 58 | 42.90 | 2488.00 |
| | Total | 119 | | |

Appendix 5:*Mann-Whitney u test Gender*

| **Ranks** | | | | |
|---|---|---|---|---|
| | Gender | N | Mean Rank | Sum of Ranks |
| ability to see new market opportunities for new products and services | Male | 81 | 65.36 | 5294.00 |
| | Female | 38 | 48.58 | 1846.00 |
| | Total | 119 | | |
| ability to generate and choose the most promising business idea | Male | 81 | 68.45 | 5544.50 |
| | Female | 38 | 41.99 | 1595.50 |
| | Total | 119 | | |
| ability to conduct need assessment for a business opportunity | Male | 81 | 67.65 | 5479.50 |
| | Female | 38 | 43.70 | 1660.50 |
| | Total | 119 | | |
| ability to keep business records and file business records | Male | 81 | 65.98 | 5344.00 |
| | Female | 38 | 47.26 | 1796.00 |
| | Total | 119 | | |
| ability to classify costs and costing products/services | Male | 81 | 66.59 | 5394.00 |
| | Female | 38 | 45.95 | 1746.00 |
| | Total | 119 | | |
| ability to identify new areas for potential growth | Male | 81 | 63.22 | 5121.00 |
| | Female | 38 | 53.13 | 2019.00 |
| | Total | 119 | | |
| ability to design viable business plans | Male | 81 | 63.68 | 5158.00 |
| | Female | 38 | 52.16 | 1982.00 |
| | Total | 119 | | |
| ability to write business plan | Male | 81 | 67.65 | 5479.50 |
| | Female | 38 | 43.70 | 1660.50 |
| | Total | 119 | | |
| ability to use business plan | Male | 81 | 66.35 | 5374.00 |
| | Female | 38 | 46.47 | 1766.00 |
| | Total | 119 | | |
| ability to seek business information | Male | 81 | 64.70 | 5240.50 |
| | Female | 38 | 49.99 | 1899.50 |
| | Total | 119 | | |
| ability to take calculated risks | Male | 81 | 61.12 | 4951.00 |
| | Female | 38 | 57.61 | 2189.00 |
| | Total | 119 | | |

| | | | | |
|---|---|---|---|---|
| ability to work productively under continuous stress, pressure and conflict | Male | 81 | 61.75 | 5001.50 |
| | Female | 38 | 56.28 | 2138.50 |
| | Total | 119 | | |
| ability to develop relationships with key people | Male | 81 | 64.40 | 5216.50 |
| | Female | 38 | 50.62 | 1923.50 |
| | Total | 119 | | |
| ability to tolerate unexpected changes in business conditions | Male | 81 | 63.79 | 5167.00 |
| | Female | 38 | 51.92 | 1973.00 |
| | Total | 119 | | |
| ability to persist in the face of adversity | Male | 81 | 60.55 | 4904.50 |
| | Female | 38 | 58.83 | 2235.50 |
| | Total | 119 | | |
| ability to design production process | Male | 81 | 62.91 | 5096.00 |
| | Female | 38 | 53.79 | 2044.00 |
| | Total | 119 | | |
| ability to locate a business | Male | 81 | 64.99 | 5264.50 |
| | Female | 38 | 49.36 | 1875.50 |
| | Total | 119 | | |
| ability to source appropriate technology and inputs for business | Male | 81 | 62.03 | 5024.50 |
| | Female | 38 | 55.67 | 2115.50 |
| | Total | 119 | | |
| ability to maintain quality of products/services | Male | 81 | 63.48 | 5142.00 |
| | Female | 38 | 52.58 | 1998.00 |
| | Total | 119 | | |
| ability to provide what customers want or fulfil customer's unmet needs | Male | 81 | 64.13 | 5194.50 |
| | Female | 38 | 51.20 | 1945.50 |
| | Total | 119 | | |
| ability to design products that solve current problems | Male | 81 | 62.10 | 5030.00 |
| | Female | 38 | 55.53 | 2110.00 |
| | Total | 119 | | |
| ability to handle customer complaints | Male | 81 | 61.88 | 5012.50 |
| | Female | 38 | 55.99 | 2127.50 |
| | Total | 119 | | |
| ability to distribute products/ services to customers | Male | 81 | 60.56 | 4905.50 |
| | Female | 38 | 58.80 | 2234.50 |
| | Total | 119 | | |
| ability to attract and negotiate with customers to buy the | Male | 81 | 64.69 | 5239.50 |

| | | | | |
|---|---|---|---|---|
| products/services | Female | 38 | 50.01 | 1900.50 |
| | Total | 119 | | |
| ability to set more attractive prices of products/services | Male | 81 | 62.87 | 5092.50 |
| | Female | 38 | 53.88 | 2047.50 |
| | Total | 119 | | |
| ability to design business organizational structure | Male | 81 | 63.33 | 5129.50 |
| | Female | 38 | 52.91 | 2010.50 |
| | Total | 119 | | |
| ability to recruit and select employees | Male | 81 | 64.27 | 5205.50 |
| | Female | 38 | 50.91 | 1934.50 |
| | Total | 119 | | |
| ability to train and develop staff | Male | 81 | 64.25 | 5204.50 |
| | Female | 38 | 50.93 | 1935.50 |
| | Total | 119 | | |
| ability to motivate staff | Male | 81 | 64.54 | 5227.50 |
| | Female | 38 | 50.33 | 1912.50 |
| | Total | 119 | | |
| ability to budget business activities | Male | 81 | 65.60 | 5313.50 |
| | Female | 38 | 48.07 | 1826.50 |
| | Total | 119 | | |
| ability to prepare financial forecast | Male | 81 | 63.14 | 5114.50 |
| | Female | 38 | 53.30 | 2025.50 |
| | Total | 119 | | |
| ability to identify potential sources of funding for investment | Male | 81 | 61.28 | 4963.50 |
| | Female | 38 | 57.28 | 2176.50 |
| | Total | 119 | | |
| ability to analyse business transactions | Male | 81 | 62.19 | 5037.00 |
| | Female | 38 | 55.34 | 2103.00 |
| | Total | 119 | | |
| ability to prepare financial reports | Male | 81 | 62.44 | 5058.00 |
| | Female | 38 | 54.79 | 2082.00 |
| | Total | 119 | | |
| ability to identify strengths, weaknesses, opportunities and threats of a particular business | Male | 81 | 62.21 | 5039.00 |
| | Female | 38 | 55.29 | 2101.00 |
| | Total | 119 | | |
| ability to analyse strengths, weaknesses, opportunities and threats of a particular business and make decision | Male | 81 | 65.21 | 5282.00 |
| | Female | 38 | 48.89 | 1858.00 |

| | | | | |
|---|---|---|---|---|
| | Total | 119 | | |
| ability to form partner or alliance relationship with others | Male | 81 | 61.83 | 5008.00 |
| | Female | 38 | 56.11 | 2132.00 |
| | Total | 119 | | |
| ability to network and seek opportunities with other businesses | Male | 81 | 64.33 | 5211.00 |
| | Female | 38 | 50.76 | 1929.00 |
| | Total | 119 | | |

Appendix 6: Data Collection Instrument


**Introduction**

Dear *Participant*

My name is *Diverson Mtalika*, a student at the Malawi Polytechnic. I am studying towards Master of Technical and Vocational Education (MTVE). I am conducting a research titled ***An Assessment of Entrepreneurial Self -Efficacy among Technical College Students: Case of Nasawa Technical College***

I therefore request for your participation in this research by filling in this questionnaire. The study is purely academic work such that the results of the study will be used for academic purposes only. Therefore you are not required to indicate your name on the questionnaire.

I thank you for your contributions in this study. God Bless

**PART A:** General information

Occupation: E.g., BL

| |
|---|
| |

Year of Study: E.g., Level 3 Or G1

| |
|---|
| |

Mode of Admission: E.g., Parallel or Normal entry

| |
|---|
| |

Gender:

| | |
|---|---|
| Male | Female |

**PART B**

The following table contains statements regarding level of confident in exercising particular entrepreneurial activity. Please mark in a particular box according to your level of confidence in the particular entrepreneurial dimension. Refer to key provided in the box.

| KEY<br>Strongly Disagree (SD) , Disagree (D), Agree (A) and Strongly Agree (SA), | SD<br>1 | D<br>2 | A<br>3 | SA<br>4 |
|---|---|---|---|---|
| **Starting business and running a profitable business** | | | | |
| I have the ability to see new market opportunities for new products and services. | | | | |
| I have the ability to generate and choose the most promising business idea | | | | |
| I have the ability to conduct need assessment for a business opportunity | | | | |
| I have the ability to keep business records and file business records | | | | |
| I have the ability to classify costs and costing products/services | | | | |
| I have the ability to identify new areas for potential growth. | | | | |
| **Business planning** | | | | |
| I have the ability to design viable business plans | | | | |
| I have the ability to write a business plan | | | | |
| I have the ability to use a business plan | | | | |
| I have the ability to seek business information from various sources | | | | |
| **Coping with unexpected challenges** | | | | |
| I have the ability to take calculated risks | | | | |
| I have the ability to work productively under continuous stress, pressure and conflict. | | | | |
| I have the ability to develop relationships with key people who are connected to capital sources. | | | | |
| I have the ability to tolerate unexpected changes in business conditions. | | | | |
| I have the ability to persist in the face of adversity | | | | |
| **Managing production functions, marketing functions and market** | | | | |

| | | | | |
|---|---|---|---|---|
| **opportunities** | | | | |
| I have the ability to design production process | | | | |
| I have the ability to locate a business | | | | |
| I have the ability to source appropriate technology and inputs for business | | | | |
| I have the ability to maintain quality of products/ services | | | | |
| I have the ability to provide what customers want or create products/ services that fulfil customers' unmet needs | | | | |
| I have the ability to design products that solve current problems. | | | | |
| I have the ability to handle customer complaints | | | | |
| I have the ability to distribute products/ services to the customers | | | | |
| I have the ability to attract and negotiate with customers to buy the products/ services | | | | |
| I have the ability to set more attractive prices of products/ services | | | | |
| **Developing critical human resources and Managing human resource** | | | | |
| I have the ability to design business organizational structure | | | | |
| I have the ability to recruit and select employees | | | | |
| I have the ability to train and develop staff | | | | |
| I have the ability to motivate staff | | | | |
| **Managing finances** | | | | |
| I have the ability to budget business activities | | | | |
| I have the ability to prepare financial forecast | | | | |
| I have the ability to identify potential sources of funding for investment | | | | |
| I have the ability to analyse business transactions | | | | |
| I have the ability to prepare financial reports | | | | |
| **Environmental scanning and Building an innovative environment** | | | | |
| I am able to identify strengths, weaknesses, opportunities and threats of a particular business | | | | |
| I have the ability to analyse strength, weaknesses, opportunities and threats of a particular business and make a decision | | | | |
| I have the ability to form partner or alliance relationship with others. | | | | |
| I have the ability to network and seek opportunities with other businesses | | | | |