THE EFFECT OF ENTREPRENEURSHIP EDUCATION ON
THE ENTREPRENEURIAL COMPETENCIES AMONG
GRADUATE STUDENTS IN KENYA

BY

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UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

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A Research Project Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

SUMMER 2017
STUDENTS’ DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution, or university other than the United States International University –Africa in Nairobi for academic credit.

Signed: ____________________ Date: ________________

Robert Gathogo Kimani (ID 642659)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ____________________ Date: ________________

Dr. Joseph Ngugi Kamau

Signed: ____________________ Date: ________________

Dean, Chandaria School of Business
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ABSTRACT

The purpose of the study was to determine the effect of entrepreneurship education on the entrepreneurial competencies among graduate students in Kenya. The study was limited to students in an elective entrepreneurship education program - Global Social Sustainable Entrepreneurship - taught at the United States International University Africa. The study compared the entrepreneurial competencies namely entrepreneurial mindset, core self-evaluation, and entrepreneurial attitude of entrepreneurship students against their colleagues pursuing other electives in the Masters in Business Administration degree program.

This research used a descriptive research design with a control group to pursue the objectives of the study. The study population was drawn from Masters in Business Administration students in the fall of 2016 and was carried out in October and November of 2016. A questionnaires consisting of 17 questions was selected as the data collection tool. Descriptive analysis was done using graphs and tables and inferential statistical analysis was done which included exploratory factor analysis, discriminant, and convergent validity testing and student t-tests.

From the first research question, the study findings revealed a positive substantive significant effect of entrepreneurship education on the entrepreneurial mindset of entrepreneurship students in comparison to their colleagues who did not choose the entrepreneurship elective.

From the second research question, the study findings revealed that there was no statistical nor substantive significant effect of entrepreneurship education on the Core Self-Evaluation of entrepreneurship students in comparison to their colleagues who did not choose the entrepreneurship elective.

From the third research question, the study findings revealed a positive substantive significant effect of entrepreneurship education on the entrepreneurial attitudes among entrepreneurship students in comparison to their colleagues who did not choose the entrepreneurship elective.
The key conclusion derived from the study is that entrepreneurship education has a positive effect on the entrepreneurial competencies of graduate students. This further validates the findings from other researchers that entrepreneurship can be taught, even the seemingly harder non-cognitive aspects of it, by applying a variety of teaching approaches that are experiential.

The recommendations from the research where the continued pursuit by the GSSE faculty of experiential teaching approaches that would promote the development of the competencies discussed. This is due to the findings in research that experiential teaching methods were most effective in teaching competencies of a non-cognitive in nature. Future studies are suggested to incorporate other entrepreneurial competencies such as entrepreneurial skill and knowledge.
ACKNOWLEDGEMENT

I am thankful to God for the wisdom he provided during my entire graduate academic life. I acknowledge the contribution of my supervisor Dr. Joseph Ngugi Kamau for his professional guidance and constructive critique of this project. His contribution went a long way in improving the quality of the work.

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DEDICATION

“Ad Deus, a quo bona cuncta largiris.”

To God, from whom all good thin come.
# TABLE OF CONTENTS

STUDENTS’ DECLARATION ........................................................................................................ ii
COPYRIGHT ........................................................................................................................... iii
ABSTRACT ............................................................................................................................. iv
ACKNOWLEDGEMENT .......................................................................................................... vi
DEDICATION ........................................................................................................................ vii
TABLE OF CONTENTS ......................................................................................................... viii
LIST OF TABLES ................................................................................................................... x
LIST OF FIGURES ................................................................................................................ xi
LIST OF ABBREVIATIONS AND ACRONYMS ................................................................. xii
CHAPETR ONE ................................................................................................................... 1
  1.0 INTRODUCTION ......................................................................................................... 1
     1.1 Background of the Problem .................................................................................... 1
     1.2 Statement of the Problem ..................................................................................... 5
     1.3 Purpose of the Study ............................................................................................ 6
     1.4 Research Questions .............................................................................................. 6
     1.5 Importance of the Study ..................................................................................... 6
     1.6 Scope of the Study ............................................................................................... 7
     1.7 Definition of Terms ............................................................................................. 7
     1.8 Chapter Summary ............................................................................................... 8

CHAPTER TWO .................................................................................................................. 9
  2.0 LITERATURE REVIEW ............................................................................................... 9
     2.1 Introduction ........................................................................................................... 9
     2.2 Entrepreneurial mindset and Entrepreneurship Education .................................... 9
     2.3 Core Self-Evaluation and Entrepreneurship Education ........................................ 13
     2.4 Entrepreneurial Attitude and Entrepreneurship Education .................................. 19
     2.5 Chapter Summary ............................................................................................... 22

CHAPTER THREE ............................................................................................................. 23
  3.0 RESEARCH METHODOLOGY ................................................................................... 23
     3.1 Introduction .......................................................................................................... 23
3.2 Research Design ........................................................................................................... 23
3.3 Population and Sampling Design .................................................................................. 23
3.4 Data Collection Method ............................................................................................... 25
3.5 Research Procedures .................................................................................................... 25
3.6 Data Analysis Methods ............................................................................................... 26
3.7 Chapter Summary ......................................................................................................... 27

CHAPTER FOUR ................................................................................................................. 28
4.0 RESULTS AND FINDINGS ............................................................................................ 28
  4.1 Introduction ................................................................................................................. 28
  4.2 Response Rate ............................................................................................................ 28
  4.3 Demographic Characteristics ..................................................................................... 28
  4.4 Descriptive Analysis of Study Variables ...................................................................... 31
  4.5 Inferential Statistics .................................................................................................... 33
  4.6 Chapter Summary ....................................................................................................... 37

CHAPTER FIVE ..................................................................................................................... 39
5.0 SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS .. 39
  5.1 Introduction ............................................................................................................... 39
  5.2 Summary ................................................................................................................... 39
  5.3 Discussion .................................................................................................................. 40
  5.4 Conclusion ............................................................................................................... 40
  5.5 Recommendations .................................................................................................... 46

REFERENCES ..................................................................................................................... 48
APPENDIX ............................................................................................................................ 66
  Data Collection Instrument ............................................................................................ 66
LIST OF TABLES

Table 3.1 Sample Size........................................................................................................25
Table 4.1 Response Rate.....................................................................................................28
Table 4.2 Allocations of Respondents by Area of Concentration .................................28
Table 4.3 Breakdown of Respondents by Gender Distribution and Area of Study .......29
Table 4.4 Entrepreneurial Mindset ..................................................................................31
Table 4.5 Core Self-Evaluation........................................................................................32
Table 4.6 Entrepreneurial Attitude ..................................................................................33
Table 4.7 Principle Component Analysis ........................................................................34
Table 4.8 Convergent Validity .........................................................................................35
Table 4.9 Discriminant Validity ......................................................................................35
Table 4.10 T-test statistics...............................................................................................37
LIST OF FIGURES

Figure 4-1 Age Distributions of Respondents by Gender Comparison ........................................ 29
Figure 4-2 Years of Full-Time Work Experience Comparison ............................................... 30
Figure 4-3 Close Relationship with an Entrepreneur Comparison ........................................ 30
Figure 4-4 Economic Status Comparison ............................................................................... 31
# LIST OF ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTEE</td>
<td>Assessment Tools and indicators for Entrepreneurship Education</td>
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<td>CSE</td>
<td>Core Self-Evaluation</td>
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<td>EA</td>
<td>Entrepreneurial Attitude</td>
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<tr>
<td>EE</td>
<td>Entrepreneurship education</td>
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<tr>
<td>EM</td>
<td>Entrepreneurial mindset</td>
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<td>ET</td>
<td>Entrepreneurship training</td>
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<td>GSSE</td>
<td>Global Social Sustainable Entrepreneurship</td>
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<tr>
<td>MBA</td>
<td>Masters in Business Administration</td>
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<tr>
<td>OECD</td>
<td>The Organization for Economic Co-operation and Development</td>
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<tr>
<td>USIU-A</td>
<td>United States International University – Africa</td>
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Entrepreneurship is an internationally recognized phenomenon that lacks a universally acceptable definition. Joseph Schumpeter, an economist, was amongst the first scholar to in 1934 mention the term and discuss the role of entrepreneurship in promoting innovation and implementing change in an economy by introducing new products or processes. Kirzner (1973) defined entrepreneurship as a process of discovery where the actors act and benefit from previously undiscovered profit opportunities. Drucker (1985) defined entrepreneurship as innovation in a business setting while Shane and Venkataraman (2000) defined the term as the development, evaluation, and exploitation of an opportunity. Klapper, Amit, and Guillen (2010) describe it as a wealth creation process while Hattab (2014) views entrepreneurship as a process, action or activity to convert an idea into a value-added product or service. Mishra and Zachary (2014) echoed the emphasis on value creation; they however added that this process is lead on by entrepreneurs in uncertain environments.

Most definitions though acknowledging entrepreneurship as a process, fail to recognize the environmental uncertainty that these opportunities are pursued under and the required level of skill and risk bearing on the part of the decision-maker. This risk-bearing factor helps us distinguishes whom this decision maker is (Mill, 1848). The definition of entrepreneurship is incomplete without recognition of its leading actor, the entrepreneur who through effort drives this process of opportunity recognition, resource gathering, and allocation to create value for self and society, in the situational context of uncertainty.

The entrepreneur, Kirtzner (1973), adds is also the agent at the core of the market process, though his/her activities are mostly exploitative. He/she identifies and exploits market opportunities; is an opportunist who takes advantage of the markets failures to disseminate knowledge and information appropriately. In the developed world, specifically Europe and the United States, policymakers believe that higher levels of economic growth and innovation are attainable through more entrepreneurship activity. Van Praag and Versloot (2007) through their research, point to the positive links between entrepreneurial actions and economic outcomes such as economic growth and innovation,
further advancing Joseph Schumpeter’s theories of economic growth lead by entrepreneurship. Entrepreneurship is important because of its impact on increasing economic efficiencies and innovation to market, creating new jobs and by so doing raising employment levels (Shane & Venkataraman, 2000). Entrepreneurship is said to be crucial for economic recovery, growth, job creation, inclusion, poverty reduction and for innovation and competiveness. It has become a policy priority in Europe with European Union member states taking measures to incorporate entrepreneurship into different policy fields (Komarkova, Conrads, & Collado, 2015).

Internationally, the rate of self-employment, business ownership or the rate of new start-ups are used to measure the entrepreneurship (Naudé, 2010). The International Labor Organization (ILO) publishes data on self-employment rates across countries. The Global Entrepreneurship Monitor (GEM) publishes data on new firm start-up rates across a sample of countries, both developed and developing said to be sixty at present. The GEM also makes a distinction between the motivations of entrepreneurs as a classification, with “necessity” entrepreneurs, and “opportunity” entrepreneurs. The former is self-employed because of the lack of wage employment, the latter on the other hand is self-employed by choice, with the intention of exploiting some “opportunity” they have perceived.

Frederic Sautet has described one of the most perplexing challenges in the field of international development when he noted the distinction between ‘local’ and ‘systemic’ entrepreneurship and the absence of any empirical evidence for the impact of entrepreneurship on development in less developed countries (Sautet, 2011). Citing evidence from De Soto (2000) and others, Sautet noted that that becoming a successful entrepreneur may be too expensive or may even require illegal activity in many less developed country jurisdictions. As the World Bank ‘Doing Business’ Reports (World Bank, 2012) and the United Nations Development Program Growing Inclusive Markets research has shown (United Nations Development Program, 2008), supportive enabling conditions matter a great deal for business formation and growth.

Conversely, institutional, social, political, and other constraints may severely inhibit entrepreneurialism and indeed may drive many nascent entrepreneurs into the informal sector. Sautet concluded that many countries are quite possibly into a form of
‘unproductive’ or localized entrepreneurship – often but not exclusively populated by individuals motivated by ‘necessity entrepreneurship’ rather than ‘opportunity entrepreneurship’.

Education has been identified as the path to increased levels of economic growth (European Commission, 2006) specifically entrepreneurship education. The underlying thinking is that entrepreneurship skills are teachable and are not a preserve of personal characteristics. Research has shown that there is a positive effect of education on entrepreneurial performance (Van der Sluis and Van Praag, 2007). Empirical studies have indicated that entrepreneurship can be taught and that education can foster entrepreneurship (Wang and Verzat, 2011).

Entrepreneurship Education is a structured formal conveyance of entrepreneurial competence, (concepts, skills, and mental awareness) used by individuals during the process of starting and developing ventures (Alberti, Sciascia and Poli, 2004). According to Kent (1990), EE can be viewed from two perspectives; creation of awareness and inculcation of entrepreneurial skills and knowledge both of which are pursued together to create the effective entrepreneur. In an attempt to define EE, Curran and Stanworth (1989) termed it as training purposed to change the existing situation by creating new products and services that create economic value. Gibb (1992) concurred with Kent (1990) that indeed EE has to raise awareness. He went further to singled out the following as associated with the behavioral aspects of entrepreneurship skill: "opportunity seeking, initiative taking, problem-solving and risk-taking, ability to cope with or enjoy uncertainty and ambiguity, self-awareness, self-confidence, creativity, perseverance, persuasiveness, resourcefulness amongst others."

According to a World Bank report (2014), there are two distinct types of entrepreneurship and training programs both aimed at stimulating entrepreneurship but distinguished by their variety of objectives and outcomes. The first, Entrepreneurship Education programs, focus on building knowledge and skill for the purpose of entrepreneurship. The second, Entrepreneurship Training programs, concentrate on developing knowledge and skills aimed at enterprise start-up or operation. Despite the distinction, in practice, there are instances where the characteristics are part of a single program. The academic nature of
EE programs means that they target secondary school students and graduate students - both graduate and undergraduate- in degree programs. Entrepreneurship training programs are associated with a wider range of scope from vulnerable, unemployed, inactive individuals, or necessity-driven potential entrepreneurs, to highly skilled, innovation-led, or opportunistic potential entrepreneurs.

Globally, EE programs were introduced at the tertiary level first at Kobe University in Japan in the year 1938 and subsequently at Harvard Business School in the United States of America in 1947 (Katz, 2003). The supply and demand of EE programs has grown considerably in the developed world from these earlier beginnings. The number of these programs exceeded 500 by the year 2000 in the US (Vesper & Gartner, 2001), and has continued growing ever since. Other developing countries have had growth though the pace and patterns have not been the same (Fayolle, 2003). Several initiatives in Europe such as the Lisbon Strategy (European Union, 2000) have entrenched EE in school curricula in many European Union member countries (European Commission, 2006) to ensure continued growth. There are far fewer EE programs at the university level in developing countries. There are, for example, only twelve EE degree programs in the thirty-three universities present in Kenya as at 2013 (Kaijage & Wheeler, 2013).

The proliferation of EE programs around the globe across both developed and developing countries brings with it challenges related to the impact and quality of this education. That is, is the education program producing the results it was intended to produce, how do we know it when it does and how can we gauge one EE program against another.

According to the OECD (2015), there are different stakeholder involved in influencing the quality of EE. These stretch from international, national, regional, local, and institute/school. At the international level, they devise guidelines, targets, and policies. These include the European Union, the OECD, the United Nations, and UNESCO. Their impact mainly manifests itself as a need to modify national steering as well as standardized competence frameworks. In addition, they collect information on good practices, such as the Educators Guide, published by the European Commission in 2014. Governments, ministries, and national decision-makers in the field of education are at the national level. They work individually and collectively together to define targets,
strategies, and programs to promote entrepreneurship education. A wide variety of these international bodies, bilateral development agencies and civil society organizations have called for a significant uplift in entrepreneurial activity internationally in order to reduce global poverty.

1.2 Statement of the Problem

Nabi, Holden, and Walmsley (2010) state that few studies have focused on the impact of EE in higher education, a sentiment echoed by research by the Directorate-General of Enterprise and Industry in European Union (European Commission, 2012). According to Pittaway and Cope (2007), the link between EE and outcomes is not well researched and so to the outcomes of EE (Fayolle, 2006). Martin, McNally, and Kay (2013) meta-analytical review of the outcomes of 42 studies in the EE and ET found that there is support for the value of EE and ET programs and by extension, entrepreneurship learning outcomes.

They concluded that there is a stronger relationship between EE and entrepreneurship outcomes than between ET programs and entrepreneurship outcomes. It implies more impactful learning outcomes occur in the academic setting such as in universities. There has been an increased growth in demand and supply of EE programs despite the fact that there has been a lack of rigor in past research studies to prove their effectiveness (Martin et al., 2013). These gaps are due partly to the sheer heterogeneity of entrepreneurship programs. The corresponding lack of comparable data makes gauging the impacts across programs a challenge and complicates understanding their cost and effectiveness.

Some other reasons for the ambiguous results are due to methodological limitations. Few studies employ a pre-post design, and fewer still involve a control group (Block & Stumpf, 1992). The majority of the studies sample self-selected participants with some existing predisposition towards entrepreneurship, thus biasing the results for educational interventions (Gorman, Hanlon, & King, 1997). Of notable mention due to their strong empirical approach of use of using pre-test-post-test control group designs methodology are studies by Peterman and Kennedy (2003), Souitaris, Zerbinati, and Al-Laham (2007) and Oosterbeek, van Praag, and Ijsselstein, (2010).
To address these methodological challenges, researchers have developed tools to measure various aspects of entrepreneurship outcomes, such as Moberg Entrepreneurial Spirit Indicator (FFE-YE, 2014) used in Denmark and the more comprehensive ASTEE Project tool (2014) used in European Union member countries. Even with this growing debate in the research body on the ambiguity of the outcomes, impact studies in the field of graduate entrepreneurship in the developing world have been lacking (Nabi & Linan, 2011). It was thus of theoretical and practical relevance to fill this research gap. This study looked into the effect of EE in graduate education in Kenya, and research questions were formulated accordingly.

1.3 Purpose of the Study
The purpose of the study was to examine the effect of entrepreneurship education on the entrepreneurial competencies among graduate students in Kenya.

1.4 Research Questions

1.4.1 What is the effect of Entrepreneurship education on the entrepreneurial mindset of students?

1.4.2 What is the effect of Entrepreneurship education on the core self-evaluation of students?

1.4.3 What is the effect of Entrepreneurship education on the development of entrepreneurial attitude of students?

1.5 Importance of the Study

1.5.1 Potential Entrepreneurs
These studies aimed to guide aspiring entrepreneurs understand the value of entrepreneurship to the economic growth of countries around the world. It also assisted in helping them understand how such programs improve their competencies, tooling them up to becoming successful entrepreneurs. By indentifying competencies, it helped demystify the areas they can expect to develop in their academic journey.

1.5.2 Researchers
The theoretical study, findings, conclusion, and recommendations provided useful
information to the researchers on entrepreneurship education at the graduate level in developing countries specifically Kenya. This will help raise awareness on the existing gaps for further studies in the future.

1.5.3 **Policymakers**

This study advanced the theme of policy interventions to increase entrepreneurship education in developing countries. This was due to evidence from research that EE has a pivotal role in the entrepreneurship process in all economies. Interventions to increase and monitor the impact of such programs over a longer duration for purposes of improvement will fast track the development of the nascent economies in the developing world.

1.6 **Scope of the Study**

This study focused on the effect that EE has on the entrepreneurial competencies; entrepreneurial mindset, core self-evaluation and entrepreneurial attitude among graduates students in Kenya. It focused on students of the GSSE program, a graduate EE program at USIU-A, studying from September to December 2016 as the study group. Their counterparts in other MBA electives were the control group.

1.7 **Definition of Terms**

1.7.1 **Entrepreneur**

These persons (business owners) seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes, or markets. (Ahmad & Hoffman, 2007)

1.7.2 **Entrepreneurship**

This is the discovery, evaluation, and exploitation of an opportunity. (Shane & Venkataraman, 2000)

1.7.3 **Entrepreneurship Education**

This is the structured formal conveyance of entrepreneurial competence (concepts, skills, and mental awareness) used by individuals during the process of starting and developing ventures. (Alberti, Sciascia, & Poli, 2004)
1.7.4 Entrepreneurial Competencies
This is the knowledge, skills, and attitudes that affect the willingness and ability of a person to perform the entrepreneurial job of new value creation (Lackeus, 2015).

1.8 Chapter Summary
This chapter began with a background to the study that introduced entrepreneurship, entrepreneurs, and entrepreneurship education. It further presented the statement of the problem and went on to state the research questions, the importance of the study and scope of which the study will cover. It concluded with a definition of terms as will be used in this paper. Chapter two will present the literature review. This is a review of existing literature on the study of entrepreneurship education from across the world that will provide a background to the study. Chapter three will present the research methodology used in this study. It will detail the research design, population and sampling, data collection methods, research procedures and how data collected was analyzed. Chapter four will present the results and findings of the study. This will include presentation of the findings and a brief interpretation of the findings. Chapter five will present the discussion of the findings with close reference to previous studies and literature, conclusion, and recommendations for practice and further areas of research.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction
This chapter presents a review of literature of EE on the study variables entrepreneurial mindset, core self-evaluation, and entrepreneurial attitude.

2.2 Entrepreneurial mindset and Entrepreneurship Education
Some scholars such as Mitchell, Busenitz, Bird, Marie, & Smith (2007) suggest that entrepreneurs think differently than the general population. This different way of thinking is the entrepreneurial mindset. McGrath and MacMillan (2000) defined entrepreneurial mindset as a way of thinking about business that focuses on and captures the benefits of uncertainty (the inability to assign probabilities to future events). Lamberton (2005) defined it as a habitual or characteristic mental attitude that determines how you will interpret and respond to situations. Haynie, Shepherd, Mosakowski, and Earley (2010) defined it as the ability to be dynamic, flexible, and self-regulating in one’s cognitions given dynamic and uncertain task environments. These cognitive differences, according to Krueger, Reilly and Carsurd (2000) are discussed in terms of their positive consequences because they facilitate the initiation of entrepreneurial action.

Haynie and Shepherd (2009) argue that cognitive adaptability defined as “the ability to effectively and appropriately change decision policies (that is to learn) given feedback (inputs) from the environmental context in which cognitive processing is embedded” is positively related to performance in contexts that are characterized as complex, dynamic, and inherently uncertain (Earley & Ang, 2003). The entrepreneurship context best exemplifies this environment and is thus an important cognitive process (Haynie & Shepherd, 2009). This cognitive distinction that entrepreneurs are said to have can be attributed to individual differences between populations and are usually assumed to be a cause rather than an effect of the entrepreneurial action (Grégoire, Corbett, & McMullen, 2011). EM is thought to be not only distinct, but also learnable and able be developed by deliberate practice (Baron & Henry, 2006) although Hindle & Cutting (2002) point out that empirical evidence of these are few.
2.2.1 Effectuations and Causation

According to Sarasvathy (2001), there are two ways of thinking in entrepreneurship; effectuation and causation. The two contrast in their approach to problem solving. Causation begins with the end in mind by setting goals and thereafter assembling an array of means to achieve those goals. In contrast, effectuation begins with the means in mind and iterates the assembly of these means towards possible goals thereafter. Effectuation therefore states that entrepreneurs learn to make decisions based on the means available to them, rather than objective goals (Sarasvathy, 2001). In contrast, causal rationality begins with a pre-determined goal and a given set of means and seeks to identify the optimal alternative to achieve the given goal. Effectuation, we infer, is the most effective problem solving approach strategy when operating in uncertainty and unpredictable circumstances. It is proposed as an alternative (not a replacement) to causation, which base decision making on the ability to select and predict actions towards a specific goal (Sarasvathy, Dew, Read, & Wiltbank, 2008).

Effectuation means are categorized into (1) Who they are – their traits, tastes, and abilities; (2) What they know – their education, training, expertise, and experience; and, (3) Whom they know – their social and professional networks. They use this to begin to imagine and pursue possible ends that they can create with these means. With this, they execute often in a small scale without much planning. This approach hinges on five core principles: the bird in hand principle emphasizes acting with the means available to one, affordable loss, alliances with committed stakeholders, leverage environmental contingencies, and focus on the things one can control to shape the future when it is seen as unpredictable (Sarasvathy, 2008). The underlying logic of effectuation is that to the extent one can control the future, they need not predict it. Sarasvathy contends that effectuation is how expert entrepreneurs think and that makes them entrepreneurial.

2.2.2 Effectuation in Developing Entrepreneurial Mindset

Causation is useful in teaching students theories and certain technical tools for management. Traditional teaching methods such as lectures, exercises, case studies, and business plans are common in this type of entrepreneurship education (Heinonen & Poikkijoki, 2006) and assist in delivering knowledge. The business plan, for instance, offers a clear causal model for covering the different elements of the planning process, operations and strategies associated with starting a new business. There is however little
proof of its role in developing entrepreneurial skills or its influence on the performance of the established new venture (Honig & Karlsson, 2004).

According to Honig (2004) entrepreneurship is rather an inductive process where various products, services and ideas are examined, modified and delivered. The purpose of using effectuation is to find creative ways to apply an individual’s abilities to problem solving. In addition, effectuation emphasizes the need to build networks. Thus, at the beginning of the process, it is important to analyze the existing networks and to create new ones.

2.2.3 Approaches to Teaching Entrepreneurial Mindset

It is apparent that teaching entrepreneurship mindset requires a different kind of teaching approach to be effective. One such approach is experiential learning. Experiential learning is a process of learning through reflection on experience. Through this process, knowledge is generated. This is a powerful form of learning because it involves the direct experience of the phenomenon being studied rather than simply reading or thinking about it (Kickul, Griffiths & Bacq, 2010), thus creating meaning from the encounter (Kolb, 1984). Types of experiential learning include internships (Severance & Starr, 2011), field placements (Elrod & Simon, 2008), apprenticeships, as well as short-term live projects working with real people in real roles. The choice of approach depends on the types of learning needs or social context of the student.

There are two main types of experiential learning environments: simulated and real life. The simulated domain includes business games and case studies, both in common use in entrepreneurship education in business schools. Pittaway and Cope (2007), however, argue that although it is possible to simulate some aspects of entrepreneurship such as emotional exposure and situated learning, this is not possible for other aspects, including the holistic entrepreneurial process and the problems that entrepreneurs face, for example, resource mobilization, exposure to financial risk and performance management. Important aspects of learning are feelings and emotions (Gibb, 2002). In Gibb’s view, cognitive and affective developments are highly driven by personal motivations and emotional intelligence, factors that are heightened in real situations. Entrepreneurship education appears to be adopting more experiential forms of learning than traditional classroom teaching. This method of learning focuses on the development of an individual’s practical skills and attributes as well as both tacit and explicit knowledge.
Gibb, 2002) within real situations in which the learner is an active participant (Revans, 1982). The Global Entrepreneurship Monitor’s (GEM, 2008) survey of 38 countries found that experiential learning was an effective way of developing entrepreneurs, confirmed by studies in Singapore (Tan & Ng, 2006), Finland (Heinonen & Poikkijoki, 2006); and the UK (Rae, 2003). Similar studies found that participating in education programs while working in their businesses helped entrepreneurs improve their business-related skills (Clarke, Sturdy & Fincham, 2006). Experiential learning is, therefore, a potentially important component of an entrepreneurship curriculum (Tracey & Phillips, 2007), where learning comes about as the result of the accumulation of transforming experiences (Sarasvathy, 2001).

A major benefit of experiential learning is the acquisition of tacit knowledge (Armstrong and Mahmud, 2008). Evidence suggests that students who have experienced start-up procedures are more likely to have entrepreneurial intentions than those without prior exposure (Peterman & Kennedy, 2003). Corbett (2005) also discovered that experiential learning facilitates the development of opportunity recognition. Focusing on social or contextual issues strongly influence the learning process. One of the biggest problems with simulated learning is the absence of trade-off, the need to commit to specific courses of events and the concomitant lack of commitment to others. These are important, and tricky, features of the entrepreneur's life. Experiential learning projects can help nascent entrepreneurs to develop the understanding of features such as financial risk and the importance of mobilization of resources in generating real income (Pittaway, Rodriguez-Falcon, Aiyegbayo, & King, 2011).

According to a study by Alsos, Isaksen and Ljunggren (2006) projects helped to develop students’ awareness of the value of money. Chang, Benamraoui, & Rieple (2014) used a form of experiential learning that engaged students in generating real funds for real social enterprises to assess students learning about social enterprise. They found evidence that the approach yielded positive effects on acquiring entrepreneurial skills such as reflection, conceptualizing new business ideas, managing resources and motivating people.

What emerged from this pedagogic approach is that students became more passionate about their social enterprises and remained enthusiastic about promoting their cause throughout the program. The data indicated that many of the students felt that the
experiential process was a superior type of learning compared to the traditional forms of their normal curriculum. Their experiences engaged them, and when combined with the reflection, made for what appeared to be a more meaningful experience. Working with limited resources and under a high level of uncertainties stimulated students to use their intellect and relationships to build capacity and transform their ideas into real income generating activities. These findings further strengthen the arguments that experiential learning provides an environment for learning about different aspects of entrepreneurship, including emotional exposure and reflection (Pittaway & Cope, 2007). Students encountered the emotional consequences of loss (of time, effort and hope), although not obvious to the same degree as a real entrepreneur would face. The process allowed students to learn from failure, and that not all ideas are workable or actionable. These helped students to learn that periods of crisis can be emotional and demanding and that they must anticipate these (Cope, 2003): they need to be flexible and adaptable.

The limited resources act as the catalyst to creativity. The reflective pedagogy enabled students to improve their critical insights into both their own performance and that of their colleagues. The need to make weekly entries into the wikis necessitated judgment of what had worked and what had not, and this provided enhanced inputs into the negotiation processes concerning what should be done next. Solesvik, Westhead, Matlay & Parsyak (2013) studied the relationship of EE and entrepreneurial assets and mindset survey information from 189 students from three universities in Ukraine. They found student participation in EE was positively associated with higher intensity of EM against a control group. They further suggested that EM increases in students in who had, according to them, accumulated more connection with entrepreneurial alertness asset.

2.3 Core Self-Evaluation and Entrepreneurship Education

Judge, Locke and Durham (2005) defined core self-evaluation (CSE) as the fundamental assessments that people make about their worthiness, competence, and capabilities. It is otherwise termed positive self-concept. CSE is a higher order constructs that is indicated by four traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability (low neuroticism). Of these, self-esteem is the most fundamental manifestation of CSE as it represents the overall value that one places on oneself as a person. Generalized self-efficacy—one's estimate of one's fundamental ability to cope, perform, and be successful—was viewed as the second most important indicator. Internal locus of
control – ones belief that they can control a broad array of factors in their lives was given the third weighting whilst emotional stability - the tendency to be confident, secure and steady the fourth weighting.

According to Judge et al. (1997), these four traits are saturated with the underlying CSE construct, which implies that they are interrelated and share similar relations with other variables. In support of this view, empirical findings have verified that the traits are highly correlated (Judge & Bono, 2001), they load on a higher order factor and they have similar relations with job satisfaction and performance.

Research suggests that employees with high core self-evaluations tend to have high self-esteem, self-efficacy, beliefs in personal control, and emotional stability (Judge et al., 1997). They are motivated to achieve higher performance. Because they feel capable of succeeding and view themselves as more worthy and in control, employees with high core self-evaluations engage in more frequent goal-setting, display greater effort and persistence toward achieving their goals, and capitalize more effectively on their opportunities and resources (Judge & Bono, 2001). From an entrepreneurial perspective, those having positive CSEs may be predisposed to feel more secure and more able to see and seize opportunities for themselves.

2.3.1 Core Self-Evaluation Traits

According to Sehgal and Khandelwal (2015), CSE research is still nascent and majorly focused on non-entrepreneurial context. Due to this, we will delve into academic literature on each of the four core traits of CSE independently in the context of entrepreneurship. The relationships of the four core traits of CSE in the entrepreneurial domain are detailed as below.

2.3.1.1 Self-Esteem

Self-esteem is a subjective evaluation of oneself worth, that is a feeling of self-acceptance and self-respect (Orth & Robins, 2014). High levels of self-esteem have long been associated with success and well-being in life domains such as work, relationships, and health. According to Orth & Robins (2014), there is evidence to suggest that self-esteem increases with age from adolescence to middle adulthood, peaking at about the age of fifty to sixty before decreasing in old age.
There is evidence to suggest that entrepreneurship education improves the rate at which self-esteem develops. Basardien, Friedrich, and Twum-Darko (2016) studied undergraduate commerce students from the University of the Western Cape (UWC) in South Africa to study the impact of an entrepreneurship program designed to stimulate change in cognitive mechanisms of the students. The program, named the HYTTI model, is an action-based entrepreneurship program based on three dimensions; understanding entrepreneurship, becoming more entrepreneurial and becoming an entrepreneur. The cognitive mechanisms the program meant to affect included beliefs, values, and attitudes; which have a profound influence on students’ perception of their abilities and skills. The results indicated it is possible to influence achievement, innovation, and self-esteem of University students through entrepreneurship education. The HYTTI model was successful in introducing students to entrepreneurship as well as becoming more entrepreneurial. The participants in the program learned about Entrepreneurship as the awareness of the discipline was created. In addition, the participants also learned entrepreneurial skills as well as becoming more entrepreneurial.

The findings in this study support similar findings (Gielniek et al., 2015) where action-based entrepreneurship training influences action principles and entrepreneurial intentions. The findings also support previous research studies suggesting that entrepreneurship can be taught and that EE can enhance entrepreneurial skills, aptitudes and attitudes (Hisrich, Peters & Shepherd, 2002). In the application of the HYTTI model, it is evident that certain variables of entrepreneurial orientation can be increased through an EE module at a University. Based on the evidence it is possible to improve achievement orientation, innovation, and self-esteem of the students. Participants did not only acquire business skills on starting and managing a business but also improved their entrepreneurial orientation that is learning about action principles toward becoming more entrepreneurial compared to the control group. The training showed an increase of achievement orientation, which supports previous research with different groups of entrepreneurs (McClelland, 1987). Rasheed and Rasheed (2003) site similar positive effects on EE on self-esteem and personal control in their study of intermediate level students using a control group.
2.3.1.2 Self-Efficacy

According to Bandura (1997), Self-efficacy is a person's belief that they can successfully perform certain tasks. This idea embodies self-assurance, self-awareness and a feeling of empowerment (Economic Commission, 2012). Bandura (1997) further adds that individuals with high self-efficacy for a particular task are more likely to pursue and then persist in that task than those people who possess low self-efficacy. Entrepreneurial self-efficacy is self-efficacy as directed to works of entrepreneurship. Because entrepreneurial initiative entails substantial risks and difficulties, it seems clear that entrepreneurs need high levels of self-efficacy (Sanchez, 2011). Research shows that entrepreneur’s score significantly higher on self-efficacy than non-entrepreneurs (EC, 2012). Entrepreneurs have the conviction that they can succeed in every activity and that they are in control of their success, which is not dependent on other persons. Entrepreneurial self-efficacy helps determine how much effort entrepreneurs will apply to an activity, for how long they will pursue their goal despite obstacles, and how they will come to terms with adverse situations.

Wilson, Kickul, and Marlino (2007) surveyed 933 MBA students across a range of business schools in the United State of America and compared results for those who had undertaken entrepreneurship modules against those who did not. They found that those who had had significantly higher self-efficacy (greater self-confidence in their own skills for entrepreneurship). This study however did not control intention and attitudes prior to participation. It perhaps may be that persons that are more self-confident chose to take the courses, while those with less did not. The study also tested whether the strength of the relationship was different for male and female students and found that the effect of enterprise and entrepreneurship education on women MBA students were substantially higher than for men.

Noel (2001) studied the impact of entrepreneurship training on the development of entrepreneurial intentions and the perception of self-efficacy. His study sample consisted entirely of graduates of entrepreneurship, management, and other disciplines who had enrolled in an entrepreneurship education program. His findings confirmed to some extent that entrepreneurship graduates had a higher level of intention and a better perception of their self-efficacy than other students did. In another study of final-year commerce students from two South African universities, Malebana and Swanepoel, (2014) found
similar positive effects. They found that respondents with exposure to entrepreneurship education perceived their entrepreneurial self-efficacy differently from those lacking such exposure. They also found statistical significance suggesting longer exposure to entrepreneurship education – three years versus six months improved perceptions of self-efficacy.

Other studies have on the contrary reached different conclusion. In their 2012 study of the impact of entrepreneurship education on university alumni of various universities in Europe, the European Commission did not find significant differences in self-efficacy between the alumni from entrepreneurship courses and those who did not attend these courses. They, however, found that male alumni had a higher level of self-efficacy than women did and that older alumnus had higher levels of self-efficacy. It suggests that gender and age are mitigating factors in the case of self-efficacy.

2.3.1.3 Locus of Control
This as earlier mentioned is ones belief that they can control a broad array of factors in their lives or as Azjen (2002) defined it, perceived behavior control over outcomes. According to Rotter (1966), the concept suggested two polar views of the same phenomena. These are internal and external loci of control. While an external locus of control implies the belief that all events depend on luck, fate, or powerful actors that are beyond the individual’s control, an internal locus of control speaks to the belief that events are the results of a person’s behaviors or characteristics. Anderson (1977) found the higher internal locus of control among business owner who rebuilds their businesses following major disasters. Brockhaus, Hills, Klandt & Welsch(2001) consistently found the more internal locus of control among students with entrepreneurial intentions as well as those entrepreneurs whose businesses had succeeded after several years as opposed to those that had failed.

Evans and Leighton (1989) found that men who believe their performance depends largely on their own actions have a greater tendency to start businesses. When comparing entrepreneurs to managers, Rahim (1996) found that entrepreneurs report higher internal locus of control than managers and can, therefore, manager stress more effectively. On the other hand, some researchers have found no significant difference between

2.3.1.4 Emotional Stability – Low Neuroticism
Neuroticism represents individual differences in adjustment and emotional stability. Individuals high on Neuroticism tend to experience a number of negative emotions including anxiety, hostility, depression, self-consciousness, impulsiveness, and vulnerability (Costa & McCrae, 1992). People who score low on neuroticism are characterized as self-confident, calm, even tempered, and relaxed. Managers, by definition, work within an established business organization with work processes supported by established organizational procedures and practices.

Entrepreneurs, on the other hand, work within a relatively unstructured environment where they have primary responsibility for all aspects of a venture. They work more hours than do managers’ work and often lack the level of separation between work and life spheres typical of managerial work (Dyer, 1994). They also typically have a substantial financial and personal stake in the venture and lack the security of benefits typically provided to middle- and upper-level managers, such as a severance package or an independently funded retirement program. The work environment, workload, work–family conflict, and financial risk of starting and running a new business venture can produce physical and psychological stress beyond that typical of managerial work. Remarkable self-confidence and resilience in the face of stress, therefore, appear to be much more important for entrepreneurs than managers. These traits define low levels of neuroticism. We therefore expect entrepreneurs to have a lower level of neuroticism than managers have in line with findings by Zhao and Seibert (2006).

2.3.2 Approaches to measuring Core Self-Evaluation
According to Chang, Ferris, Johnson, Rosen, and Tan, J. A. (2012), different approaches are in use to measure the shared variance among these four traits above. One way it to measure the CSE traits (indirect approach) or the CSE construct itself (direct approach). The best methods in indirect approaches involve measuring the all four CSE traits separately and aggregating the item level data into a CSE score. This should consider weighting of the traits because as earlier indicate, some traits bear more importance to CSE than others namely self-esteem and self-efficacy. The alternate direct approach
measures the trait itself and is in common use with a tool known as the Core Self Evaluation scale. This scale has been found to have acceptable internal consistency, test–retest reliability, and convergent and discriminant validity. A noted advantage of indirect measures is that they preserve the trait structure of CSE, whereas the advantage of direct measures is their shorter length thus practicality when used in surveys.

2.4 Entrepreneurial Attitude and Entrepreneurship Education

2.4.1 Entrepreneurial Attitude Perspectives

Attitude is the predisposition to respond in a generally favorable or unfavorable manner with respect to the object of the attitude (Azjen, 1982). Every attitude has an object, be it a specific person, place, thing, event, activity, mental concept, cognitive orientation, lifestyle, or even combinations of these categories. According to Hawkins, Best and Corney (1983) attitude is first a state of readiness leading the individual to perceive things and individual around him in certain ways; that is to be more ready with certain categories and interpretations than with others. Secondly, it is not innate; one learns, develops, and organizes attitudes through experience. These states of readiness are relatively enduring but they are modifiable and subject to change. Thirdly, attitude is dynamic. Attitude is not merely latent states of preparedness awaiting the presentation of an appropriate object for their activation. They have motivational qualities and can lead an individual to seek (or avoid) the objects about which they are organized.

There are two perspectives of findings in research on entrepreneurial attitude. In the first case, it describes those personal traits that are deemed necessary in carrying out the tasks involved in entrepreneurship and as such predisposes people to take action, including taking responsibility for their learning which is integral in their career and by extension their lives as entrepreneurs. The European Commission (2006) entrepreneurship competence framework identifies the following as falling under the umbrella of entrepreneurial attitude: Initiative; Independence & Innovation in all aspects of life; motivation; the determination to meet objectives; risk propensity; drive; persistence & commitment amongst others. Accordingly, most of these attitudes revolve around the individual’s belief in their capability of taking on and succeeding in challenging tasks. The teaching of entrepreneurial attitude is termed more an ‘art’ (Akola and Heinonen 2006) only learned from practical experiences making teaching it a challenge.
Cromie and O’Donoghue (1992) conducted a comparative study on 194 managers and 661 first year degree undergraduate students with a group of entrepreneurs. They found that managers had showed high levels of entrepreneurial attitudes. This was through exhibiting characteristics such as achievement, internal self-control, need for autonomy, creativity, risk taking as well as higher self-confidence as compared with the first year undergraduate students. Matthews and Moser (1996) study on 89 ex-business administration students, found that gender and families that own businesses influenced entrepreneurial attitudes among the respondents. This finding supported the finding by Scherer and Brodzinski (1990), which found gender, influenced the choice of entrepreneurship career among the respondents. The responsibility factor also influenced individuals when indulging in the field of entrepreneurship. The evidence of this is in research conducted by Buttner and Moore (1997) on 129 professional women and executives who have left their careers in major firms to become entrepreneurs by establishing their own companies. This course of action fulfills the movement factors (motivation) such as challenge, personal needs as well as balancing family and social responsibilities.

Other than the factors stated above, the factor of actually going through a relevant program also influenced an individual to become an entrepreneur. This is in line with research conducted by Hatten and Ruhlan (1995) on 220 college students who were following a program sponsored by the Small Business Institute in the USA. The research found that students inclination to become entrepreneurs was higher after completing the program and it could be linked to high internal self-control as well as age. Research conducted by Barcelona and Valida (1992) on 800 final year students at Universiti Utara Malaysia also found significant correlative existence between the respondents' personality and the characteristics of entrepreneurial attitudes.

The second perspective of entrepreneurial attitude can be termed as one's attitude toward the entrepreneurship process and its outcomes, which would, in this case, are either positive or negative and thus truer to the earlier definition. Individuals work with what they are expecting at the end of the day will bring benefit to them. In other words, if they perceive entrepreneurship will help them in achieving their goals, aims and objectives, they will tend to develop a positive attitude towards it. Moreover, reverse will be the case when the opposite occurs. Therefore, attitude towards the entrepreneurship refers to the
degree to which an individual has a desirable or undesirable assessment of the entrepreneurial behavior. Beliefs related to perceived high entrepreneurial motivation on a countrywide level might promote individuals' entrepreneurial attitude (Lent, Brown & Hackett, 2000). There has been evidence of an improved positive cultural attitude towards the concept of entrepreneurship within France (Le´ger-Jarniou, 2002). This is in part due to government efforts of introducing a range of initiatives such as new legislation, the creation of business support agencies and increased entrepreneurship education provision to encourage and simplify the enterprise start up process (Klapper and Le´ger-Jarniou, 2006). This can be linked to a positive attitude towards entrepreneurship by French students as found by Packham, Jones, Miller, Pickernell and Thomas (2010) in their comparative study of attitudes toward entrepreneurship in France, Germany and Poland. Yaqub, Ali, & Khaleeq (2015) ventured to study the relationship between attitude towards entrepreneurship and entrepreneurship education in Pakistan. Their study focused on universities and collected data from 10 different universities in which EE was available as a course or discipline with a sample of 329 students tested. They reported as finding a strong relationship and positive correlation existing between attitude towards entrepreneurship and entrepreneurship education.

2.4.2 Components of Entrepreneurial Attitude

2.4.2.1 Cognitive

This consists of students’ beliefs, thought and knowledge about an attitude object (EE). Belief may be correct or incorrect, true or not true, needed is only for the belief to exist. Similarly, beliefs are descriptive thoughts that an individual hold about something. According Amdam (2011) belief reflects an individual’s knowledge and assessment of attitude object. He further explained that belief is the accumulated feelings and priorities that individuals have about something. Kotler (2000) maintains that the belief and values in a society have high degree of persistence, they shape and color attitudes and behaviors of individuals. An individual forms belief as he/she grow up into the society or associate with a reference group. As the relationship of interaction continues to exist cordially, an individual will learn and formulate beliefs. The social environment of an individual that is family, reference group, influences ones beliefs. The belief a student is having towards EE course will help him/her to develop a favorable component of this attitude in due course.
2.4.2.2 Affective
It is the student’s emotional reaction and feelings to an attitude object (EE). This concurs with Bird (1988) who states that perceived desirability of entrepreneurship and its education can formed through intuitive thinking. That means perceived desirability of entrepreneurship forms through affective attitudinal judgment (Mitchell, Smith, Morse, Seawright, et al. 2002). The expression “I like EE course” or “I hate EE course,” is the expression of the emotional evaluation of the EE to the student. That means some individuals may have positive feelings towards the EE, while others could respond with a negative reaction.

2.4.2.3 Behavioral
This is the way in which individuals respond or react to a specific set of attitudinal object. According to Mani (2008), this component reflects the willingness of students’ behavioral intentions in form goals, objectives and aspiration and expected responses to the attitude object (EE). For example, a student who intends to become an Entrepreneur before or after graduation may form and plan behavior towards attending and having a keen interest in Entrepreneurship and its Education.

2.5 Chapter Summary
This chapter has reviewed the entrepreneurial competencies that are the focus of this study. The chapter discussed each of the specific competencies and explored findings of the effect of EE from previous studies. The competencies studied where entrepreneurial mindset, core self-evaluation and entrepreneurial attitude. The next chapter presents the research methodology. This includes research design, population and sampling design, data collection methods, research procedures and data analysis methods that was used in the study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction
This chapter describes the methodology used in this study. It discusses the research design, the population of study, sample, sampling techniques, data collection methods, as well as data analysis and data presentation methods employed in this study.

3.2 Research Design
According to Cooper and Schindler (2014), the strategy and the plan by which it is executed is known as the research design. It describes the methods and procedures for the collection, measurement, and analysis of data. This research used a post-test descriptive research design with a control group to pursue the objectives of the study. This methodology describes characteristics associated with a sample of the subject population by gathering information after the application of an effect on the study group and control group and comparing the results for statistically significant variances. The study employed an independent variable – EE and the dependent variables being the entrepreneurial mindset, core self-evaluation, and entrepreneurial attitude referred collectively as the entrepreneurial competencies.

3.3 Population and Sampling Design

3.3.1 Population
The elements about which we wish to make inferences are what are termed the population (Cooper and Schindler, 2014). The population encompassed all the MBA students pursuing an elective concentration in the GSSE as the study group and their colleagues pursuing other concentrations as the control group. The total population of MBA students comprised of 771 students among them 75 had chosen this GSSE elective. The information was sourced from the office of the dean of Chandaria School of business.

3.3.2 Sampling Design
This section describes the sampling frame, technique, and actual sample size drawn from the target population.
3.3.2.1 Sampling Frame

According to Quinlan (2011) a sampling frame is a complete list or chart of every individual, unit or case within the population. In this study, the sampling frames consisted of students enrolled to pursue a MBA degree course and were in session in the fall of 2016. The sampling frame was obtained through the assistance of the dean’s office and research offices of the USIU-A.

3.3.2.2 Sampling Technique

The method used to generate a sample from the entire population is termed the sampling technique. Lind, Marchal and Wathen (2008) observed that researchers use samples which is a subgroup of the population to get information about population of interest and to draw inferences about the population. Using a sample saves resources of time and money enabling the researcher gets information that may not be available otherwise (Bluman, 2009).

There are two major categories of sampling techniques: probability sampling and non-probability sampling techniques. Fox and Bayat (2007) observed that probability sampling is used when every element of the population has a known and non-zero chance of being included in the sample. Non-probability sampling is subjective in nature. It refers to range of techniques where the probability of selection each sampling unit is not known and the selection of sampling units is done according to the researchers’ judgment or knowledge (Cooper & Schindler, 2006).

This study adopted a judgmental (purposive) sampling technique. This is a non-probability sampling technique, which requires researcher to use his personal judgment to select cases that he thinks will best answer his research questions and meet his research objectives (Saunders, Lewis & Thornhill, 2009). This type of sampling technique is used when the sample is selected according to a researcher’s conviction that they have appropriate characteristic of the sample members and would generate data which meets the requirements of the study. A purposive sampling technique was used since the study focused on getting data from only the MBA students registered as being in session at USIU-A between September and December 2016.
3.3.2.3 Sample Size

A sample size is a subset of a population. A sample size was determined as representative of the population of the study and control group as below. Sample size was estimated using the sample size estimation tables (Research advisors, 2006) available from tool that is based on scientific sample size guidelines developed by Cochran (1963) whose formulae is as below:

\[
n = \frac{X^2 \times N \times P(1-P)}{(ME^2 \times (N-1)) + X^2 \times N \times P(1-P)}
\]

Where:
- \( n \) = sample size
- \( X^2 \) = Chi-Square for the specified confidence level at 1 degree of freedom
- \( N \) = population size
- \( P \) = population proportion
- \( ME \) = desired margin of error (expressed as a proportion)

<table>
<thead>
<tr>
<th>Table 3.1 Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
</tr>
<tr>
<td>Entrepreneurship Students</td>
</tr>
<tr>
<td>Non-Entrepreneurship students</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

3.4 Data Collection Method

Primary data collection method was used in this study using a questionnaire. The questionnaire was adopted from the ASTEE Project that is in current use in European Union countries. The questions comprised structured questions divided into the four sections; one to capture demographic information, the others aligned to the research questions. In the questionnaires distributed to respondents, the researcher employed likert scale of measurement.

3.5 Research Procedures

The researcher planned the field activities in a systematic way to ensure that the data collection procedure was thorough and exhaustive. Data was collected in two ways; hand administered hard copy questionnaires and electronically administered means. The hand-
administered questionnaires were handed out in MBA classes. To ensure a high response rate, issuing and collection of questionnaires was on the same day. The electronically administered version of the questionnaire used the Survey Monkey software survey platform. Here the researcher used both email and social media application WhatsApp to administer the questionnaire. The WhatsApp platform proved to be a more effective platform as it was easier for follow. The researcher effectively used the snowballing approach to increase responses using the WhatsApp platform.

3.6 Data Analysis Methods
According to Cooper and Schindler (2014), data analysis is a process of editing and reducing accumulated data to a manageable size, after which developing summaries, looking for patterns and applying statistical techniques. After collection of questionnaire from the respondents, they were screened and numbered, then coding was done by assigning each variable in the questionnaire a numerical representation and the response from every respondent coded using a defined coding system. Data entry was done into the Statistical Package for Social Sciences (SPSS) – statistical software that quantitatively analyzes the data using both descriptive and inferential statistics.

Descriptive data analysis techniques that describe the nature of the respondents were used to test the frequencies and percentages of the variables under consideration. Inferential statistics was used to draw inferences about a population from the selected sample. This included exploratory factor analysis to identify the variables that cluster together (Bordens & Abbot, 2014), Kaiser-Meyer-Olkin (KMO) to assess the factorability of data whereby high values (close to 1.0) generally indicate that a factor analysis may be useful with the data. Principal component analysis (PCA) with promax rotation was then used to assess the dimensionality of each dimension. All items were then evaluated for reliability using Cronbach’s Alpha. The final analysis report was presented using tables, bar graphs and pie charts for ease of understanding and clarity.

This study employed quantitative techniques in the form of descriptive statistics to identify general trends and relationships in the data. This was to done to align the research design with the primary data collection method. The quantitative data collected was coded for easy of analysis thus the likeart scale was used. The statistical package of social
science (SPSS) was the analysis tool of choice and the data that displayed using visual data presentation methods during the presentation phase.

3.7 Chapter Summary
The chapter covered methods for data collection using appropriate design. The population under research was Masters of Business Administration students at the USIU-A. The section also described the data collection instruments that were employed in the form of questionnaires. A pilot test was carried out to verify the relevance of the survey. The sample frame used was a list of MBA students in session between September and December 2016. Chapter four focuses on presenting the results and findings of the study.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

The purpose of the study is to examine the effect of EE on the entrepreneurial competencies among graduate students in Kenya by comparing its outcome on entrepreneurship and non-entrepreneurship students at USIU-A. This chapter presents the analysed results and findings of the study on the research questions concerning the data collected from the respondents. The first section covers the response rate. The second section is about the background information, which presents demographic presentation of the respondents. The other section deals with the objective questions as answered and the final section will discuss the summary of the whole chapter.

4.2 Response Rate

A response rate is the total number of respondents or individuals participated in a study commonly presented in the form of percentage. This study had a population size of 771 students of from which a sample size of 311 was extracted. Table 4.1 shows the response rate of the study. From the study, it is clear that 97 of entrepreneurship and 38 non-entrepreneurship students took part in the study. The results, therefore, imply that the response rate adequate for use in the study.

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Sample</th>
<th>Responses</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>63</td>
<td>61</td>
<td>97</td>
</tr>
<tr>
<td>Non - Entrepreneurship</td>
<td>248</td>
<td>93</td>
<td>38</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>311</strong></td>
<td><strong>154</strong></td>
<td></td>
</tr>
</tbody>
</table>

4.3 Demographic Characteristics

4.3.1 Area of Concentration

The distribution of responses from both groups in the study are summarized as below

<table>
<thead>
<tr>
<th>Area of Concentration</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>61</td>
<td>40</td>
</tr>
<tr>
<td>Non-Entrepreneurship</td>
<td>93</td>
<td>60</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>154</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
4.3.2 Gender Distribution

The majority of the overall respondents were female contributing 57 percent of all the responses versus 43 percent for the male respondents. Majority of the respondents in both groups were female as seen below in table 4.3.

Table 4.3 Breakdown of Respondents by Gender Distribution and Area of Study

<table>
<thead>
<tr>
<th>Gender</th>
<th>Entrepreneurship</th>
<th>Non-Entrepreneurship</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>24</td>
<td>42</td>
<td>66</td>
<td>43%</td>
</tr>
<tr>
<td>Female</td>
<td>37</td>
<td>51</td>
<td>88</td>
<td>57%</td>
</tr>
<tr>
<td>Total</td>
<td>61</td>
<td>93</td>
<td>154</td>
<td></td>
</tr>
</tbody>
</table>

4.3.3 Age of Respondents

The majority of respondents, over 50 percent in both groups age of 35 years. A further analysis of the groups reveal that age distribution 25-34 years represented the median age for both groups; 61 percent of graduate entrepreneurship fell into this group, whilst 71 percent of non-entrepreneurship students fell into this age group. The implication of this findings show the age rage that find a graduate education intervention as being key in career development.

Figure 4-1 Age Distributions of Respondents by Gender Comparison

4.3.4 Years of Full-Time Work Experience

The majority of students pursuing entrepreneurship education, 85 percent, reported to having less than two years of full time work experience. In contrast, majority of non-entrepreneurship students, 38 percent, reported as having three to five years of full time work experience. The implication on the study is that EE appeals more to persons having
less than two years work experience whilst other concentrations seem to draw interest from persons with more than two years of work experience who, we can speculate, are studying to further their career prospects in their chosen fields.

![Figure 4-2 Years of Full-Time Work Experience Comparison](image)

**4.3.5 Close Relationship with an Entrepreneur**

From the results, majority of students in both groups report of knowing someone close to them who is an entrepreneur. It is noteworthy that in each cluster, the most reported was of knowing a friend who is an entrepreneur. In comparing the influence from persons close to them, a higher percentage of entrepreneurship students reported to having an entrepreneurial mother than their non-entrepreneurship counterparts (43 against 24 percent). The rest of the reporting on influencers appears similar, with a deviation of less than 5 percentage points, with the exception of 22 percent of non-entrepreneurship students who did not know anyone close to them as being an entrepreneur.

![Figure 4-3 Close Relationship with an Entrepreneur Comparison](image)
4.3.6 Economic Status

The highest number of participants in both groups reported being from a mid-income family background as seen below.

Figure 4-4 Economic Status Comparison

4.4 Descriptive Analysis of Study Variables

4.4.1 Entrepreneurial Mindset

The study sought to examine the effects of entrepreneurial education on the entrepreneurial mindset of students. From the findings in table 4.4, 90% of entrepreneurship students show some form of agreement with the first statement, “I am often the first one to suggest a solution to a problem” against 78% of non-entrepreneurship students. In response to the second statement, 89% of entrepreneurship students showed some form of agreement against 79% for non-entrepreneurship students. In response to the third statement, 82% of entrepreneurship students showed some form of agreement against 79% of non-entrepreneurship students.

Table 4.4 Entrepreneurial Mindset

<table>
<thead>
<tr>
<th>Likert Scale</th>
<th>SD</th>
<th>D</th>
<th>DS</th>
<th>U</th>
<th>AS</th>
<th>A</th>
<th>SA</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentration</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am often the first one to suggest a solution to a problem</td>
<td>2 5 0 2 2 7 12 33 25 36 35 21 18</td>
<td>5.42</td>
<td>1.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I keep trying until I find the solution to a problem</td>
<td>2 3 2 1 3 9 5 8 13 17 43 33 33 29</td>
<td>5.64</td>
<td>1.43</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I see possibilities where others see problems</td>
<td>0 3 2 1 2 6 15 11 18 25 33 26 31 28</td>
<td>5.54</td>
<td>1.38</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: SD- Strongly disagree, D- disagree, DS- disagree somewhat, U –undecided, AS- agree somewhat, SA- Strongly agree, E – entrepreneurship, NE- Non-entrepreneurship
Further analysis of the variable entrepreneurial mindset created a clustered score based on the three statements above. The entrepreneurship students (N = 61) were associated with a numerically higher mean score on entrepreneurial mindset of M = 5.73 (SD = 0.96) in comparison to that of non-entrepreneurship students (N = 93) of M = 5.40 (SD = 1.31).

4.4.2 Core Self-Evaluation

The study sought to examine the effects of entrepreneurial education on the core self-evaluation entrepreneurial of students. From the findings in table 4.5, 94% of entrepreneurship students show some form of agreement with the first statement, “I am confident I will succeed in life” against 93% of non-entrepreneurship students. In response to the second statement, 87% of entrepreneurship students showed some form of agreement against 86% for non-entrepreneurship students. In response to the third statement, 95% of entrepreneurship students showed some form of agreement against 91% of non-entrepreneurship students. In response to the fourth statement, 82% of entrepreneurship students showed some form of agreement against 83% of non-entrepreneurship students. In response to the fifth statement, 80% of entrepreneurship students showed some form of agreement against 86% of non-entrepreneurship students.

<table>
<thead>
<tr>
<th>Table 4.5 Core Self-Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likert Scale</td>
</tr>
<tr>
<td>Concentration</td>
</tr>
<tr>
<td>I am confident I will succeed in life</td>
</tr>
<tr>
<td>When I try, I generally succeed</td>
</tr>
<tr>
<td>I complete tasks successfully</td>
</tr>
<tr>
<td>Overall, I am satisfied with myself</td>
</tr>
<tr>
<td>I feel I can determine what happens in my life</td>
</tr>
</tbody>
</table>

Note: SD- Strongly disagree, D- disagree, DS- disagree somewhat, U –undecided, AS- agree somewhat, SA- Strongly agree, E –entrepreneurship, NE- Non-entrepreneurship

Further analysis of the variable core self-evaluation created a clustered score based on the five statements above. The entrepreneurship students (N = 61) were associated with a numerically higher mean score on core self-evaluation of M = 5.80 (SD = 1.05) in comparison to that of non-entrepreneurship students (N = 93) of M = 5.79 (SD = 1.04).
4.4.3 Entrepreneurial Attitude

The study sought to examine the effects of entrepreneurial education on the entrepreneurial attitude of students. From the findings in table 4.6, 97% of entrepreneurship students show some form of agreement that starting a business is worthwhile against 96% of non-entrepreneurship students. In response to the second statement, 93% of entrepreneurship students showed some form of agreement that starting a business is rewarding against 88% for non-entrepreneurship students. In response to the third statement, 90% of entrepreneurship students showed some form of agreement that starting a business is positive against 90% of non-entrepreneurship students.

Table 4.6 Entrepreneurial Attitude

<table>
<thead>
<tr>
<th>Likert Scale</th>
<th>SD</th>
<th>D</th>
<th>DS</th>
<th>U</th>
<th>AS</th>
<th>A</th>
<th>SA</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Starting a business is…</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worthless /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worthwhile</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Disappointing /</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rewarding</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>5</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>Negative / Positive</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>7</td>
<td>5</td>
<td>13</td>
<td>28</td>
</tr>
</tbody>
</table>

Note: SD- Strongly disagree, D- disagree, DS- disagree somewhat, U -undecided, AS- agree somewhat, SA- Strongly agree, E – entrepreneurship, NE- Non-entrepreneurship

Further analysis of the variable entrepreneurial attitude created a clustered score based on the three statements above. The entrepreneurship students (N = 61) were associated with a numerically higher mean score on entrepreneurial attitudes of $M = 6.45$ ($SD = 0.91$) in comparison to that of non-entrepreneurship students (N = 93) of $M = 6.13$ ($SD = 1.08$).

4.5 Inferential Statistics

4.5.1 Exploratory Factor Analysis

Exploratory factor analysis (EFA) is used at the early stages of research in order to identify the variables that cluster together (Bordens & Abbot, 2014), and involves conducting the following steps, the computation of factor loading matrix and principal components analysis (PCA).

Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy is used to assess the factorability of data whereby high values (close to 1.0) generally indicate that a factor analysis may be useful with your data (Pallant, 2010). It is evident that KMO value of

33
0.828 is close to 1. Principal component analysis (PCA) with promax rotation was then used to assess the dimensionality of each dimension. Based on Kaiser’s criterion, three (3) factors out of ten factors were imputed. In this case, two factors in the initial solution had eigen values greater than 1.00 and together, they accounted for 62.37% of the variability in the original variables with core self-evaluation emerging dominant and accounted for 44.55% of the variance in the original variables data. All items were evaluated for reliability using Cronbachs’ Alpha. Table 4.8 indicates that reliability was achieved (Entrepreneurial Mindset, α=0.815), (Core self-evaluation, α =0.815) and (Entrepreneurial Attitude, α =0.835).

Table 4.7 Principle Component Analysis

<table>
<thead>
<tr>
<th>Item</th>
<th>Entrepreneurial Mindset</th>
<th>Core Self-Evaluation</th>
<th>Entrepreneurial Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>EM1</td>
<td>.774</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM2</td>
<td>1.002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM3</td>
<td>.680</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS1</td>
<td></td>
<td>.610</td>
<td></td>
</tr>
<tr>
<td>CS2</td>
<td></td>
<td></td>
<td>.658</td>
</tr>
<tr>
<td>CS4</td>
<td></td>
<td></td>
<td>.906</td>
</tr>
<tr>
<td>CS5</td>
<td></td>
<td></td>
<td>.860</td>
</tr>
<tr>
<td>EA1</td>
<td></td>
<td></td>
<td>.769</td>
</tr>
<tr>
<td>EA2</td>
<td></td>
<td></td>
<td>.905</td>
</tr>
<tr>
<td>EA3</td>
<td></td>
<td></td>
<td>.905</td>
</tr>
<tr>
<td>Eigen Values</td>
<td>0.855</td>
<td>4.55</td>
<td>1.782</td>
</tr>
<tr>
<td>Variances</td>
<td>8.55</td>
<td>44.55</td>
<td>17.82</td>
</tr>
<tr>
<td>Explained</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cronbachs’ Alpha</td>
<td>0.815</td>
<td>0.815</td>
<td>0.835</td>
</tr>
<tr>
<td>KMO test</td>
<td>0.828</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.5.2 Convergent Validity

Convergent validity measures the degree to which a set of variables converge in measuring the concept on construct. If all the items are significantly important in measuring their constructs, composite reliability values are at least 0.7 and the average variance extracted (AVE) are at least 0.5 then the convergent validity can be confidently confirmed. From the table 4.8 below, the study variables show convergent validity having met the above criteria.
### Table 4.8 Convergent Validity

<table>
<thead>
<tr>
<th>Variables</th>
<th>Composite reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Mindset</td>
<td>0.866</td>
<td>0.689</td>
</tr>
<tr>
<td>Core Self-Evaluation</td>
<td>0.796</td>
<td>0.591</td>
</tr>
<tr>
<td>Entrepreneurial Attitude</td>
<td>0.749</td>
<td>0.743</td>
</tr>
</tbody>
</table>

#### 4.5.3 Discriminant Validity

Discriminant Validity is the extent to which items measuring one construct differentiate from items measuring other constructs. There are two criteria to assess the discriminant validity. The first criterion is that the inter-construct correlation should not be higher than 0.9. The second criterion is the square root of the Average Variance Extracted (AVE) of the construct should be larger than its correlation with the other constructs. As in the correlation matrix illustrated in Table 4.9, the diagonal elements are the square root of the average variance extracted of all the latent constructs. The discriminant validity is assumed if the diagonal elements are higher than other off-diagonal elements in their rows and columns. The results in Table 4.9 satisfy the criteria above thus discriminant validity is confirmed.

### Table 4.9 Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>Entrepreneurial Mindset</th>
<th>Core Self-Evaluation</th>
<th>Entrepreneurial Attitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurial Mindset</td>
<td><strong>0.830</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Core Self-Evaluation</td>
<td>0.562</td>
<td><strong>0.769</strong></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Attitude</td>
<td>0.351</td>
<td>0.243</td>
<td><strong>0.862</strong></td>
</tr>
</tbody>
</table>

#### 4.5.4 T-test Statistics

To test the hypothesis that EE has statistically significant effects, independent t-tests were run on the study variables with a 95% confidence interval (CI) for the mean difference.

##### 4.5.4.1 Entrepreneurial Mindset

From the table 4.10 below, the Entrepreneurship and Non-entrepreneurship distribution of results was sufficiently normal for conducting a t-test (i.e., skew < | 2.0 | and kurtosis < | 9.0 |; Schmider, Ziegler, Danay, Beyer & Buhner, 2010). Additionally, the assumption of homogeneity of variance was tested and satisfied via Levene's F-test, $F(152) = 3.157, p = .08$. The independent sample $t$-test was associated with an effect that was not statistically significant, $t(152) = 1.7$, $p = .093$. Thus, Entrepreneurship students were associated with
an entrepreneurship mindset mean that was not statistically larger than that of non-entrepreneurship students. Cohen’s $d$ was estimated at 0.28, which is a small positive effect based on Cohen’s(1977) guidelines while according to Wolf(1986) the difference was positive and educationally significant.

4.5.4.2 Core Self-Evaluation

From the table 4.10 below, the Entrepreneurship and Non-entrepreneurship distribution of results was sufficiently normal for conducting a t-test (i.e., skew $< | 2.0 |$ and kurtosis $< | 9.0 |$; Schmider, Ziegler, Danay, Beyer & Buhner, 2010). Adjustments were made to correct skewness. Additionally, the assumption of homogeneity of variance was tested and satisfied via Levene's $F$-test, $F (152) = .002, p = .96$. The independent sample $t$-test was associated with an effect that was not statistically significant, $t(152) = .08, p = .94$. Thus, Entrepreneurship students were associated with a core self-evaluation mean that was not statistically larger than that of non-entrepreneurship students. Cohen's $d$ was estimated at 0.01, which has no effect based on Cohen's (1977) guidelines. Similarly, according to Wolf (1986) there was no difference in the means.

4.5.4.3 Entrepreneurial Attitude

From the table 4.10 below, the Entrepreneurship and Non-entrepreneurship distribution of results was sufficiently normal for conducting a t-test (i.e., skew $< | 2.0 |$ and kurtosis $< | 9.0 |$; Schmider, Ziegler, Danay, Beyer & Buhner, 2010). Additionally, the assumption of homogeneity of variance was tested and satisfied via Levene's $F$-test, $F (152) = .871, p = .35$. The independent sample $t$-test is associated with an effect that was not statistically significant, $t(152) = 1.88, p = 0.06$. Thus, Entrepreneurship students were associated with an entrepreneurship attitude mean that was not statistically larger than that of non-entrepreneurship students. Cohens $d$ was estimated at 0.32, which is a small positive effect based on Cohen’s(1977) guidelines while according to Wolf(1986) the difference was positive and educationally significant.
<table>
<thead>
<tr>
<th>Area of Concentration</th>
<th>M</th>
<th>SD</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 61</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>5.73</td>
<td>0.96</td>
<td>-1.381</td>
<td>4.143</td>
</tr>
<tr>
<td>CS</td>
<td>5.80</td>
<td>1.05</td>
<td>.059</td>
<td>-.382</td>
</tr>
<tr>
<td>EA</td>
<td>6.45</td>
<td>0.91</td>
<td>-1.960</td>
<td>3.270</td>
</tr>
<tr>
<td>Non-entrepreneurship</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N = 93</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EM</td>
<td>5.40</td>
<td>1.31</td>
<td>-1.460</td>
<td>2.600</td>
</tr>
<tr>
<td>CS</td>
<td>5.79</td>
<td>1.04</td>
<td>.031</td>
<td>-.431</td>
</tr>
<tr>
<td>EA</td>
<td>6.13</td>
<td>1.08</td>
<td>-1.987</td>
<td>5.009</td>
</tr>
</tbody>
</table>

Note: EM – Entrepreneurial Mindset CS – Core Self-Evaluation EA –Entrepreneurial attitude

<table>
<thead>
<tr>
<th>Levene's Test for Equality of Means</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>3.157</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.804</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.002</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>.082</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.871</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>1.948</td>
</tr>
</tbody>
</table>

4.6 Chapter Summary

The research results and findings indicated that entrepreneurship students constituted forty percent against sixty percent of non-entrepreneurship students. There were overall more female (57%) students than male (43%) respondents. The majority of the respondents fell within the age of 25-34 years. There was however a stark difference in comparisons on the years of work experience. Eighty five percent of entrepreneurship students reported as having less than two years work experience while eighty-six percent of non-entrepreneurship students had over two years work experience. In comparing having or knowing an entrepreneur close to them, having a mother who is an entrepreneur stood out for entrepreneurship students( 41%) in comparison to their non-entrepreneurship counterparts (24%). Majority of the respondents from both groups were
from a middle-income background. A larger percentage of entrepreneurship students showed some form of agreement to the questions measuring the variables than non-entrepreneurship students. This was also reflective in their numerically higher means in the composite variables; entrepreneurial mindset, core self-evaluation and entrepreneurial attitude. The inferential statistics t-test did not show any statistical significant differences in the means of the two groups on all variables in the study. There were however, there was substantive significance shown by small positive effects (Cohen, 1977) that were educationally significant (Wolf, 1986) in the results on entrepreneurial mindset and entrepreneurial attitude showing EE does have an effect on entrepreneurial mindset and attitude of MBA students. Chapter five presents the discussion, conclusions and recommendations of the findings.
CHAPTER FIVE

5.0 SUMMARY, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
The purpose of the study is to examine the effect of entrepreneurship education on the entrepreneurial competencies among graduate students in Kenya by comparing its outcome on entrepreneurship and non-entrepreneurship students at USIU-A. The chapter will also draw conclusions from the findings and make appropriate recommendations.

5.2 Summary
The purpose of the study is to examine the effect of EE on the entrepreneurial competencies among students in Kenya by comparing its outcome on entrepreneurship and non-entrepreneurship students at USIU-A. The effect was investigated by seeking to answer the following research questions; what is the effect of EE on the development of entrepreneurial mindset of students? what is the effect of EE on the core self-evaluation of students?, what is the effect of EE on the entrepreneurial attitude of students?

The research was done using post-test descriptive research design with a control group to pursue the objectives of the study, with no influence on the sample. This was helpful in gathering information about the variables and to determine the effect on EM, CSE and EA by entrepreneurship education. A questionnaire with 17 questions was distributed to the selected sample of respondents using hard paper copies by hand and through email and social media platform WhatsApp using survey software Survey Monkey. Responses were collected between October and November 2016. Descriptive analysis was performed on the data collected for each of the research question and then inferential statistical analysis was done thereafter. This included exploratory factor analysis, discriminant and convergent validity testing and t-tests.

On EM, the study showed that EE showed no statistical significance between the means of both groups $p = .08$ despite the fact that the entrepreneurship students mean was numerically larger. There was however a small positive substantive significant effect at an effect size of $d = .28$ that also showed educational significance. This is proof that the entrepreneurship students’ mindset is impacted by EE and that the presence of EE is a substantive significant indicator of EM.
On CSE, the study showed that EE showed no statistical significance between the means of both groups $p = .94$ despite the fact that the entrepreneurship students mean was numerically larger. There was also no substantive significant effect $d = .01$. There was therefore no proof that the entrepreneurship students’ CSE was impacted by EE.

On EA, the study showed that EE showed no statistical significant between the means of both groups $p = .06$ despite the fact that the entrepreneurship students mean was numerically larger. There was however a small positive substantive significant effect at an effect size of $d = .32$ that also showed educational significance. This is proof that the entrepreneurship students’ attitude is positively impacted by EE and that the presence of EE is a substantive significant indicator of EA.

5.3 Discussion

5.3.1 Entrepreneurial Mindset

The first objective was to determine effect of EE on the development of EM of students. The results showed that there was no statistical significance between the means of the study group and control group $p = .08$. There was however a small positive substantive significant effect $d = .28$ that showed proof that the entrepreneurship students mindset was associated with EE.

Entrepreneurship, we have found from research, has generated interest world over as a wealth creation process(Klapper, Amit, and Guillen,(2010) where ideas are created into (Hattab, 2014; Mishra & Zachary, 2014) in environments laden with uncertainty. Entrepreneur, being at the core of this process are unique in how they think (Mitchell, Busenitz, Bird, Marie, & Smith ,2007) in contrast to the general population, managing to see opportunity where others cannot. It is then proper to speculate that to teach budding entrepreneurs on how to think like more experienced entrepreneurs requires in itself a unique approach. Most graduate EE programs have been using traditional teaching approaches that advocated for a causal approach to the subject, where causation begins with the end in mind by setting goals and thereafter assembling an array of means to achieve those goals. Sarasvathy (2001), from her research found evidence that
experienced entrepreneurs had a different thought process, a thinking she named effectuation.

Whereas causation sets goals, arranged means toward efficiently achieving that goal, effectuation begins with means. It is from these means available that that entrepreneurs learn to make decisions and figure out a goals that are achievable with these means (Sarasvathy, 2001). This thinking we can speculate, is more suitable to environments of uncertainty which are just the environments you would find entrepreneurs seeking out opportunity. Effectuation is thus proposed as an alternative (not a replacement) to causation, which base decision making on the ability to select and predict actions towards a specific goal (Sarasvathy, Dew, Read, & Wiltbank, 2008). This we can say is especially applicable at the start up phase of businesses when the business has not as yet established a market for its goods and services nor has a known market position. This is not to say that causation is left by the wayside, rather than effectual thinking is needed in most instances. Causation is still relevant when tasks have been defined such as setting goals for the number of potential clients to visit within a particular time period.

The study findings show that the GSSE program at USIU-A has a positive association to students’ entrepreneurial mindset. We can speculate that the teaching approaches that have been put in place at USIU-A have had an impact on the students. These findings are in line with the general view that entrepreneurship can be taught (Wang and Verzat, 2011) and including those aspect that fall into the “art” of entrepreneurship (Akola and Heinonen 2006; World Bank, 2010). On the particular area of entrepreneurial mindset, the findings are in line with Solesvik, Westhead, Matlay and Parsyak (2013) in finding positive associations of EE. The teaching methodologies in the USIU-An entrepreneurship incorporate traditional lectures (Causal approaches), group work, class discussions, role-plays, creating business plans, creating business model canvases and introduction to mainstream experiential learning concepts of lean methodology and design thinking. In the process of the course work, students identify business opportunities they can exploit as groups and later on as individuals where business coaching is availed. The study validates that these teaching methods are increasing students EM and thus helping them to become more entrepreneurial.
5.3.2 Core Self-Evaluation

The second research objective was to determine effect of EE on the development of entrepreneurial mindset of students. The results indicated no statistical significance between the means of both groups $p = .94$ but did show a substantive significant effect $d = .01$.

The results mean that on average entrepreneurship students core sense of worthiness, competence, and capabilities is no different from any other MBA student, contrary to expectation. Research in the field of CSE has been scanty in the aspects of entrepreneurship (Sehgal & Khandelwal, 2015). Most of the research has been directed toward non-entrepreneurship with the major focus being in its use in relating high levels of CSE to high job satisfaction and superior performance (Judge & Bono, 2001). CSE, we saw, is a higher order constructs that is indicated by four traits—self-esteem, generalized self-efficacy, locus of control, and emotional stability (low neuroticism). Self-esteem is the most fundamental manifestation of CSE as it represents the overall value that one places on oneself as a person. Followed by it is generalized self-efficacy—one's estimate of one’s fundamental ability to cope, performs, and be successful. Entrepreneurial research has been more forthcoming in terms of findings on the traits rather than the CSE itself as a construct.

Research has shown that high levels of self-esteem are associated with success and well-being in life domains such as work, relationships and health (Orth & Robins, 2014) and also that self-esteem increases with age from adolescence to middle adulthood, peaking at about the age of fifty to sixty before decreasing in old age. We could speculate that the lack of notable difference in CSE may have resulted from the fact that most respondents are within the same age range 25-34 years and have similar economic backgrounds. There is however evidence that entrepreneurship students achieve higher comparative scores than their non-entrepreneurship counterparts on self-esteem. Basardien, Friedrich, and Twum-Darko (2016) found evidence of that EE improved self-esteem in students undertaking an entrepreneurship course at the University of the Western Cape (UWC) in South Africa. Rasheed and Rasheed (2003) site similar positive effects on EE on self-esteem and personal control in their study of intermediate level students using a control group. It is notable that the EE programs used action based methods to administer the study, further validating the need for experiential learning approaches in EE.
Self-efficacy, the other major trait in the CSE construct was found to be a person's belief that they can successfully perform certain tasks (Bandura, 1997). This means they embodies self-assurance, self-awareness and a feeling of empowerment. Because entrepreneurial initiative entails substantial risks and difficulties, we can infer that entrepreneurs need high levels of self-efficacy (Sanchez, 2011). Research shows that entrepreneur’s score significantly higher on self-efficacy than non-entrepreneurs (EC, 2012). In a study of final-year, commerce students from two South African universities, Malebana and Swanepoel, (2014) found positive effects of EE on perceived entrepreneurial self-efficacy differently from those lacking such exposure. As too did Wilson et al (2007) survey of 933 MBA students across a range of business schools in the United State of America. An earlier study by Noel (2001) on the impact of entrepreneurship training on the development of entrepreneurial intentions and the perception of self-efficacy found similar results. His study sample consisted entirely of graduates of entrepreneurship, management, and other disciplines who had enrolled in an entrepreneurship education program. His findings confirmed to some extent that entrepreneurship graduates had a higher level of intention and a better perception of their self-efficacy than other students did. There was however a differing view on self efficacy. In their 2012 study of the impact of EE on university alumni of various universities in Europe, the European Commission did not find significant differences in self-efficacy between the alumni from entrepreneurship courses and those who did not attend these courses. They, however, found that male alumni had a higher level of self-efficacy than women did and that older alumnus had higher levels of self-efficacy. It suggests that gender and age are mitigating factors in the case of self-efficacy.

5.3.3 Entrepreneurial Attitude
The third research objective was to determine effect of EE on the development of EA of students. The results indicated no statistical significance between the means of both groups p = .06 but did show a substantive significant effect $d = .32$ that also showed proof that the entrepreneurship students attitude was impacted by EE.

Entrepreneurial attitude we saw, can be termed as one's attitude toward the entrepreneurship process and its outcomes, which would, in this case, are either positive or negative. Teaching of entrepreneurial attitude is termed more an 'art' (Akola and
Heinonen 2006) only learned from practical experiences making teaching it a challenge not approached using conventional teaching methods. Matthews and Moser (1996) study on 89 ex-business administration students, found that gender and families that own businesses influenced entrepreneurial attitudes among the respondents. This finding supported the finding by Scherer and Brodzinski (1990), which found gender, influenced the choice of entrepreneurship career among the respondents. The responsibility factor also influenced individuals when indulging in the field of entrepreneurship. The evidence of this is in research conducted by Buttner and Moore (1997) on 129 professional women and executives who have left their careers in major firms to become entrepreneurs by establishing their own companies. Contrasting this with our findings, 57 percent of all the respondents were women, and of interestingly enough most entrepreneurship 43 percent said they had a mother who was an entrepreneur. We can speculate that besides the EE, these – gender, having a mother who is an entrepreneurs - are mitigating factors students entrepreneurial attitude.

Going through a relevant EE program we can speculate from our findings in this research, has a positive effect on the entrepreneurial attitude of students. This is in line with research conducted by Hatten and Ruhlan (1995) on 220 college students who were following a program sponsored by the Small Business Institute in the USA. The research found that students inclination to become entrepreneurs was higher after completing the program and it could be linked to high internal self-control as well as age. Research conducted by Barcelona and Valida (1992) on 800 final year students at Universiti Utara Malaysia also found significant correlative existence between the respondents' personality and the characteristics of entrepreneurial attitudes.

Beliefs related to perceived high entrepreneurial motivation on a countrywide level might promote individuals' entrepreneurial attitude (Lent, Brown & Hackett, 2000). There has been evidence of an improved positive cultural attitude towards the concept of entrepreneurship within France (Le`ger-Jarniou, 2002). This is in part due to government efforts of introducing a range of initiatives such as new legislation, the creation of business support agencies and increased entrepreneurship education provision to encourage and simplify the enterprise start up process (Klapper and Le`ger-Jarniou, 2006). This can be linked to a positive attitude towards entrepreneurship by French students as found by Packham, Jones, Miller, Pickernell and Thomas (2010) in their
comparative study of attitudes toward entrepreneurship in France, Germany and Poland. Yaqub, Ali, & Khaleeq (2015) ventured to study the relationship between attitude towards entrepreneurship and entrepreneurship education in Pakistan. Their study focused on universities and collected data from 10 different universities in which EE was available as a course or discipline with a sample of 329 students tested. They reported as finding a strong relationship and positive correlation existing between attitude towards entrepreneurship and entrepreneurship education. From this, we can also speculate that the environment for entrepreneurship in Kenya is improving. There has been a concerted drive by both the government and the private sector to encourage youth to venture into entrepreneurship with entrepreneurship competitions becoming common place with corporate, keen to tap into the innovation of the younger tech savvy populace and the governments view as seeing entrepreneurship as its solution to perennial youth unemployment challenges.

5.4 Conclusion

5.4.1 Entrepreneurship Mindset
EE has a positive effect on EM. This shows that the EE programs at USIU-A have an adequate mix of teaching methodologies to not only pass on knowledge about entrepreneurship but to change the way in which students actually think and approach problems in uncertain environments such as those typically experienced by entrepreneurs.

5.4.2 Core Self-Evaluation
EE has no effect on CSE. One conclusion we can make of this is that EE does not, through the teaching methods employed, have any significant or substantive impact on the students. It can be speculated that there is no effect on CSE due to most respondents having similar economic backgrounds, that is middle income, being the majorly from the same age set 25 -34, have studied the same MBA course thus their assessments of their worthiness, competence, and capabilities is similar. Perhaps also, it could be the tool used may not have captured this competencies in all its dimensions enough to show a substantive and significant difference. The competency was measured directly using an abridged version of the CSE tool .It may have been a better approach to measure the competency indirectly though its traits which, though using longer data collection instruments, may have brought it wider dimensions of comparison. Further studies in
focusing on the individual traits may be of more use in evaluating these competencies strengths between the groups in the study.

5.4.3 Entrepreneurial Attitude

EE has a positive effect on EA. This shows that the EE programs at USIU-A have an adequate mix of teaching methodologies to not only pass on knowledge about entrepreneurship but to change the way in which students actually think and approach problems.

5.5 Recommendations

5.5.1 Recommendations for Improvement

5.5.1.1 Entrepreneurship Mindset

EE has a substantive positive effect on EM. Though the effect was small, it is of note and a validation of the teaching methods employed in the GSSE program. It is thus recommended that conscious focus be placed on improving the experiential teaching methods currently in use. Impact studies should then be employed with each cohort and data collected to give feedback on the effects over a longer duration.

5.5.1.2 Core Self-Evaluation

EE has no effect on CSE. Though this study’s conclusion has alluded to changing the measurement approach of CSE from direct to indirect, there may be other means of impacting on this competency. The sequencing of student modules through a progression of team and individual tasks may build upon students’ self-esteem and self-efficacy as task assignments become progressively more difficult. Coaching may also assist build up traits with emphasis being more on students’ efforts to build resilience and tenacity in their attempts and accept failure as part of the learning process.

5.5.1.3 Entrepreneurial Attitude

EE has a positive effect on EA. Though it has been implied in the findings that this is due to the teaching methods employed, it cannot be disputed that some of these positive attitudes may have been developed before engaging in EE at USIU-A. Kenya and Nairobi in particular has seen a growing eco-system of entrepreneurship hubs dubbed the silicon
A faculty can enhance the effect of the graduate program by visible interactions in this eco-system.

**5.5.2 Recommendations for Further Studies**

A key element of the study was that it was based on the study of MBA students in both the study and control groups. This was logical in that the students share other common courses in their MBA program and would, by the time of choosing electives, have had commonalities in their academic engagements. This study touched on a few competencies; other competencies such as skill and knowledge remain relatively under researched in Kenya. Further, for the comparison of results across programs and locations, researchers should strive for methodological consistency by utilize similar measurement tools of EE in their research thus improving the basis by which results can be compared. Such a tool is the ASTEE project tool(2014). It will also be of benefit to conduct longitudinal studies on the impact of EE in Kenya so that the impact of EE studies we better understood.
REFERENCES


European Commission (2006, February). Communication from the Commission to the Council, the European Parliament, the European Economic and Social Committee and the Committee of the Regions – Implementing the Community Lisbon
Program: Fostering Entrepreneurial Mindsets through Education and Learning, European Commission.


53


APPENDIX

5.6 Data Collection Instrument

QUESTIONNAIRE
The purpose of the survey is academic only. Your participation is voluntary; you retain the right not to participate in it. All responses are confidential. Thank you for agreeing to participate in this survey.

Instructions: Kindly answer each question to the best of your ability, tick as appropriate

SECTION A: PERSONAL DATA

1. What is your gender? □ Male □ Female

2. What is your age? □ 18 to 24 □ 25 to 34 □ 35 to 44 □ 45 to 54 □ above 55

3. In your current program, what is your area of concentration?
□ Entrepreneurship □ Other

4. How many years of full-time work experience do you have?
□ 0 □ Less than 2 □ 3-5 □ 6-8 □ more than 8

5. Is anyone close to you self-employed? (Check all boxes that apply)
□ Mother □ Father □ Friends □ Other relatives □ No

6. Which of the following best describes your family’s economic status?
□ Lower Income □ Mid-income □ Upper-income

SECTION B: MINDSET
On a scale from 1 to 7 (how much do you agree):
1 - Strongly disagree, 2 – Disagree, 3 - Disagree somewhat, 4 – Undecided, 5 - Agree somewhat, 6 - Agree, 7 - Strongly disagree
**ENTREPRENEURIAL MINDSET**

EM1. I am often the first one to suggest a solution to a problem | 1 2 3 4 5 6 7
EM2. I keep trying until I find the solution to a problem | 1 2 3 4 5 6 7
EM3. I see possibilities where others see problems | 1 2 3 4 5 6 7

**CORE SELF-EVALUATION**

CS1. I am confident I will succeed in life | 1 2 3 4 5 6 7
CS2. When I try, I generally succeed | 1 2 3 4 5 6 7
CS3. I complete tasks successfully | 1 2 3 4 5 6 7
CS4. Overall, I am satisfied with myself | 1 2 3 4 5 6 7
CS5. I feel I can determine what happens in my life | 1 2 3 4 5 6 7

**ENTREPRENEURIAL ATTITUDES**

In general, starting a business is...

EA1. Worthless / Worthwhile | 1 2 3 4 5 6 7
EA2. Disappointing / Rewarding | 1 2 3 4 5 6 7
EA3. Negative / Positive | 1 2 3 4 5 6 7