

**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND  
TECHNOLOGY SCHOOL OF BUSINESS**

**EFFECT OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL  
INTENTION AMONG TERTIARY STUDENTS AT THE KWAME NKRUMAH  
UNIVERSITY OF SCIENCE AND TECHNOLOGY**

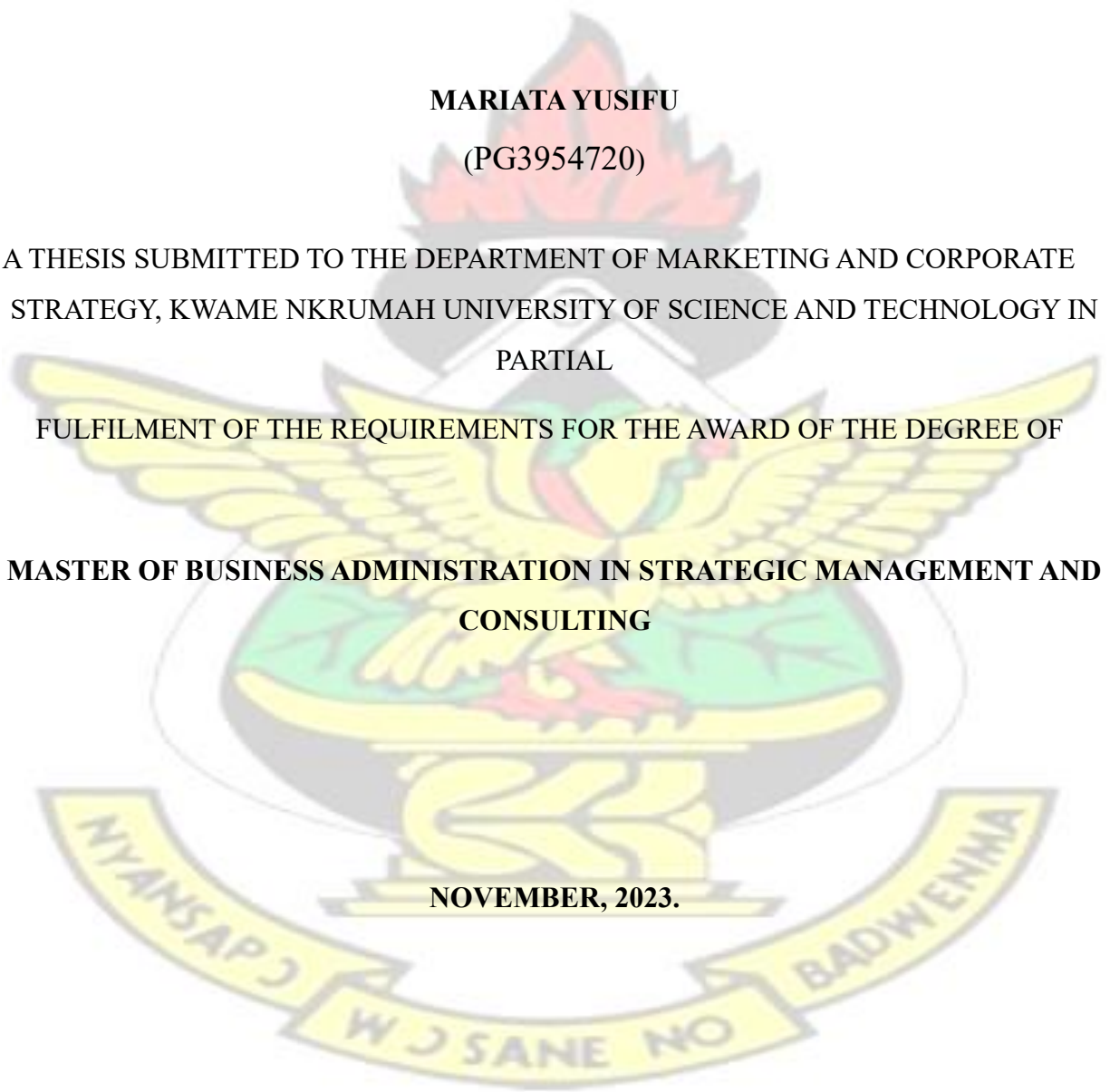
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**MASTER OF BUSINESS ADMINISTRATION IN STRATEGIC MANAGEMENT AND  
CONSULTING**

**NOVEMBER, 2023.**



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I

## DECLARATION

hereby declare that this submission is my work toward the award of the Master of Business Administration in Strategic Management and Consulting and that to the best of my knowledge, it contains no material previously published by another person, nor material that has been accepted for the award of any other degree of the University, except where due acknowledgment has been made in the text.

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## DEDICATION

dedicate my thesis to my dearest husband (Mr. Osman Amadu, Bulk Oil Storage and Transportation Company Limited (BOST) and children: Fatima Osman Ahmed (University of

I

Ghana, Legon). Adizatu Osman Ahmed (University of Professional Studies (UPSA)), Leilatu Osman Ahmed (St. Louis SHS), Ahmed Osman Kangkooha (ALSVD Academy, Accra) and Salihu Osman Ahmed (Kumasi Technical University). To the entire family of Osman and Yelkumo for assisting me to become what I am today. May God richly bless you.



I

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## ABSTRACT

Entrepreneurship has been extensively discussed in literature due to its proven benefits. Despite the high penetration of entrepreneurship studies in literature, using the theory of planned behaviour dimensions and their possible effect on entrepreneurial intentions has been neglected in the literature, especially in Ghana. This study investigates the effect of TPB dimensions such as perceived attitudes, subjective norms and perceived behavioural control on entrepreneurial intentions in Ghana. The study uses survey data from 120 students from the Kwame Nkrumah University of Science and Technology and employs the hierarchical regression method. The study finds evidence supporting that developing a positive attitude towards entrepreneurship affects students' intentions to become entrepreneurs. In addition, the results show that perceived behavioural control towards entrepreneurship has a positive and significant influence on students' entrepreneurial intentions of students. The study concludes that developing positive attitudes and behavioural control enhances students' entrepreneurial intentions. This study has implications for a sound entrepreneurship framework that addresses the entrepreneurial needs of aspiring entrepreneurs. In addition, this study recommends that entrepreneurship education must be structured to develop individuals' attitudes to have a positive outlook on becoming entrepreneurs.

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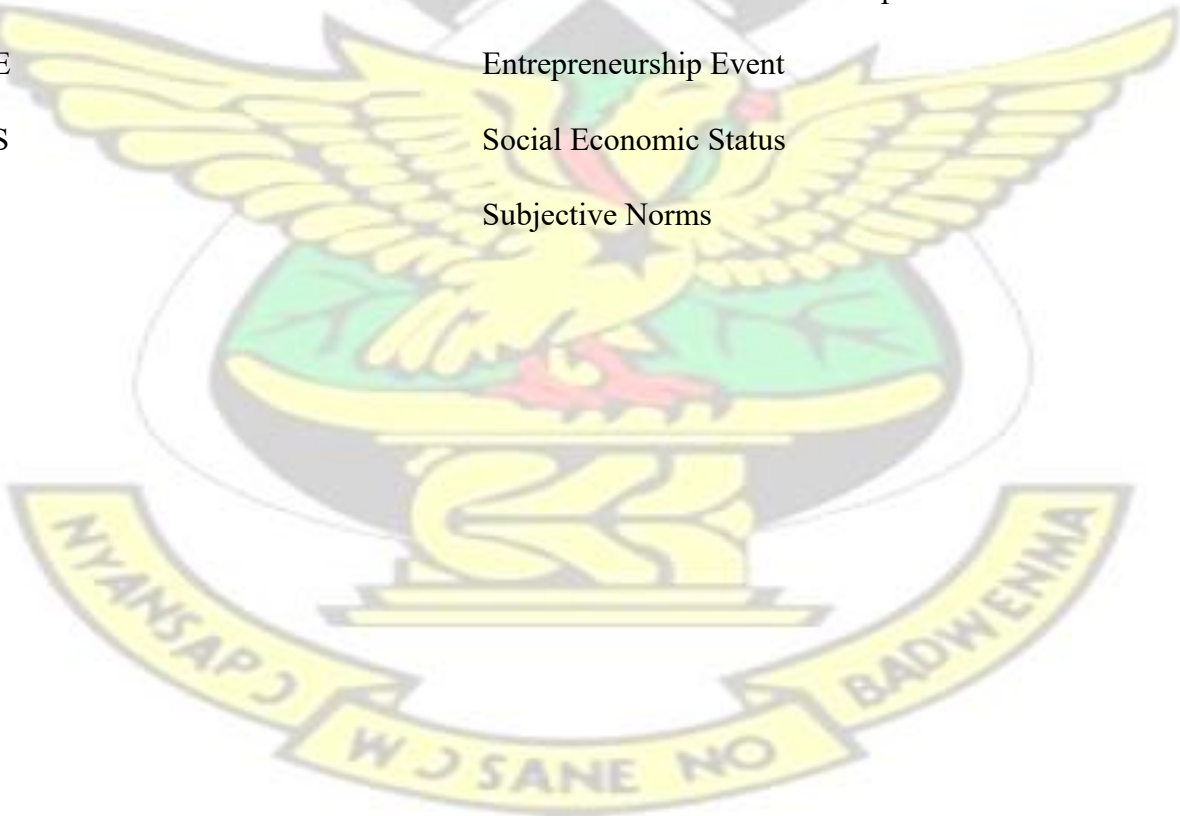
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## LIST OF ABBREVIATIONS

QEE	Quality Entrepreneurship Education
PBC	Perceived Behavioural Control
PA	Perceived Attitude
EI	Entrepreneurial Intention
ECA	Extracurricular Activities
EEE	Exposure to Entrepreneurship Education
HEI	Higher Education Institute
MSMEs	Micro, Small and Medium Enterprises
MBA	Master of Business Administration
SMEs	Small and Medium Scale Enterprises
SEE	Entrepreneurship Event
SES	Social Economic Status
SN	Subjective Norms



## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

One of the most difficult problems for governments, institutions of higher education, experts and the citizenry of many developing countries in general and Ghana, in particular, is the teeming unemployment (Nyadu-Addo and Mensah, 2017; Mersal, 2022). In Ghana, the various universities produce over fifty thousand graduates who after their compulsory national service, are added up to the already existing thousands of unemployed graduates who could not secure a white-collar job (Owusu-Mintah, 2014). Several factors are reported to account for this menace, some of which are a mismatch between graduate training labour market demands, less practical higher education training, lack of job prospects, and graduate inability to self-employ (Mersal, 2022).

Studies and policy recommendations suggest the intensification of entrepreneurship education as a panacea to the teeming unemployment (Owusu-Ansah and Poku, 2012; Frunzaru., and Cismaru, 2020; Hassan et al. 2021; Fatima et al. 2021; Podrug et al. 2020). Quality entrepreneurship education provides graduates with a skill set capable of turning entrepreneurial ideas into enterprises, thus the main reason for its current political popularity. By promoting entrepreneurship education, universities of higher learning must lead the way to provide entrepreneurial orientation to develop students' entrepreneurial intentions since they provide the immediate transition to the graduates towards economic life (Frunzaru., and Cismaru, 2020).

Entrepreneurship is defined as the creation of opportunities and pursuing them to the start of a business, regardless of resource constraints (Balan and Metcalfe, 2012). Entrepreneurship education is any pedagogical program or educational process to impart entrepreneurial attitudes and skills (Fayolle et al., 2006). Although some acquire it from parents through involvement in the family business, and some entrepreneurs are born with natural abilities (Blume-Kohout, 2016; Forbes, 2017; Erhardt and Haenni, 2018), most entrepreneurs acquire it through entrepreneurial



education (Nieuwenhuizen, 2016; Nieuwenhuizen et al., 2016; Kirkley, 2017; Neck and Corbett, 2018), justifying the frequent questions about "are entrepreneurs born or made?"

According to the knowledge spillover theory of entrepreneurship, all that things held constant, entrepreneurial activity tends to be greater in a context where greater investment in knowledge has been made since the new startup will begin from the knowledge that has spilt over from the source of the knowledge, (Acs et al. Carlsson, 2005). Examples of such knowledge investments are research and development, and university training (including entrepreneurial education (Audretsch, 2007). Providing education to students without examining the quality of education and other critical factors that affect their intentionality will not achieve the goals desired by policymakers or governments through the policies they formulate (Sahoo and Panda, 2019). The main emphasis of universities should be on providing an effective support system to their students so that they will become job creators, not job seekers (Tomy and Pardede, 2020). Against this background, this study examines the key factors of entrepreneurship education and entrepreneurial intentions.

Entrepreneurial intentions are defined as ambition influenced by a set of motivations, leading to actual behaviour (Schlepphorst et al. (2020). In ascertaining the mood of the young generation, particularly students, regarding career choice, the understanding of intention is of critical importance and entrepreneurship education plays an important role in the development of intention (Anwar et al., 2020; Anwar and Saleem, 2019a; Hassan et al., 2020). Entrepreneurship can be learned and promoted through entrepreneurship education (Fretschner and Weber, 2013), which assists in the development of entrepreneurial intention (Pittaway and Cope, 2007) and can transform intention into actual behaviour (Nabi et al., 2010). According to Owusu-Ansah and Poku (2012), not only does entrepreneurship education influence the career intentions and aspirations of tertiary students but also influences their career intentions and aspirations towards self-employment.

According to Podrug *et al.* (2020), entrepreneurship is a vital economic and social phenomenon to propel economic growth. It provides avenues for the individual to convert entrepreneurial ideas



into enterprises, stimulates individuals' innovative abilities, and contributes to job creation. But before that, a successful entrepreneurial orientation is premised on quality entrepreneurship education through quality entrepreneurial programmes provided by institutions of higher learning. Entrepreneurial programmes are developed to induce individuals to become entrepreneurs (Nieuwenhuize and Jegede, 2021; Kakouris and Georgiadis, 2016; Ramchander, 2019). Entrepreneurship education can be in the form of either formal training, i.e., students taking instructions from a teacher in an entrepreneurship module (Martin et al., 2013), or informal training due to spillover effect from a colleague, mentor with entrepreneurial experience (Lerner and Malmendier, 2013).

Education must contribute positively to the development of the student's entrepreneurial mindset, raising awareness of entrepreneurship as the trusted means to economic prosperity and job creation and an avenue to develop an important skill set. Entrepreneurship education is rigorously integrated into many universities' curriculum, yet at the height of this compulsory entrepreneurship education, fewer enterprises are produced (Frunzaru and Cismaru, 2020). Against this background, this study examines the key factors of individual entrepreneurship education and entrepreneurship intentions.

## **1.2 Statement of the Problem**

Several studies have examined entrepreneurial education as a determinant of economic development because it increases entrepreneurs (e.g., Elgar, 2007; Frunzaru et al. 2020), a panacea to unemployment (e.g., Hassan et al. 2021; Issau, 2021; Owusu-Ansah and Poku, 2012; Nyadu-Addo and Mensah, 2017; Owusu-Mintah, 2014), a critical factor to entrepreneurial motivation (eg., Hassan et al. 2021; Mersal, (2022)). However, studies on the application of the theory of planned behaviour (TPB) to investigate how the component of the TPB (attitude, subjective norms and behavioural control) influence students to become entrepreneurs is limited, particularly in developing countries such as Ghana. Thus, this study considers the limitation as a significant gap and explores these factors among students.

Additionally, several studies have examined the role of entrepreneurial education in determining entrepreneurial intention and have found that it positively enhances entrepreneurial intention (Frunzaru and Cismaru, 2018; Robinson and Stubberud, 2014; Sahoo and Panda, 2019; Sahoo and Panda, 2019; Hassan et al. 2021). However, studies on entrepreneurial intentions have not fully

examined the results of entrepreneurship education on students' entrepreneurial intentions, which considers proactiveness, innovativeness and risk-taking as entrepreneurial competencies as constructs of the TPB (Anwar et al., 2021; Koe, 2016), and there appears to have been little work on the extent of student's entrepreneurial orientation. Thus, the study addresses the gap by integrating these factors of entrepreneurial intentions on students.

Moreover, education can play a key role in promoting entrepreneurship (Martin et al., 2013; Zhang et al., 2014). Education can therefore also play an important role in developing intention toward entrepreneurship (Anwar et al., 2020a; Anwar and Saleem, 2018); Mersal, 2022, Ullah *et al.*, 2019; Nair *et al.*, 2019). Lin'an and Fayolle (2015) and Nabi et al. (2017) describe entrepreneurial intention as an immediate consequence of entrepreneurship education. Bae et al. (2014) and Botha and Bignotti (2016) argue that entrepreneurship education can shape an individual's attitude toward entrepreneurship, with attitude being an important antecedent of intention. Studies have also shown that the relationship between entrepreneurship education and entrepreneurial intention is stronger than that between general business education and entrepreneurial intention (Bae et al., 2014).

Many researchers have noted the strong relationship between entrepreneurship education and the intention to undertake a new venture due to the development of the individual's perceived ability and an increase in their entrepreneurial knowledge (Ferreira and Trusko, 2018; Saeed *et al.*, 2015; Lindberg et al., 2017; and Robinson and Stubberud, 2014). However, other studies have shown inconsistent results (e.g., Hassan *et al.*, 2021; Athayde, 2019; Karimi et al., 2016; Oosterbeek et al., 2020). Hassan *et al.*, (2021) find that the ability and desire to undertake a venture increased among students after participation in an entrepreneurship programme. Athayde (2019) also found a significant increase in students' intention to start a business after attending a training programme. However, some studies produced different findings. Karimi et al. (2016), for example, find that the differences in the intention to start a venture before and after attending an educational program were not significant. Oosterbeek et al., (2020) also found results that contradicted those of the previous studies.

In some of these studies, the authors do not specify whether the research was conducted within or outside the university, or whether the programs in question were mandatory or optional (Asimakopulos et al., 2019). This study therefore focuses on the inconsistencies between the results on the relationship between entrepreneurship education and entrepreneurial intention while giving due consideration to students at the university. The ongoing discussion is to establish whether entrepreneurship education is sufficient to influence students' entrepreneurial intention, particularly in Ghana where studies on the relationship are not fully developed.

### **1.3 Research Objectives**

The main aim of the study is to find the effect of entrepreneurship education on entrepreneurial intention among tertiary students of the Kwame Nkrumah University of Science and Technology (KNUST). Specifically, the study seeks;

1. To examine whether attitude towards entrepreneurship affects students' intentions to become entrepreneurs.
2. To investigate whether subjective norms towards entrepreneurship influence students' entrepreneurial intentions.
3. To examine whether behavioural control towards entrepreneurship affects the entrepreneurial intentions of students.

### **1.4 Research Questions**

Accordingly, the study will explore the following research questions:

1. To what extent does attitude towards entrepreneurship develop students' entrepreneurial intentions?
2. To what extent do subjective norms towards entrepreneurship influence students' entrepreneurial intentions?
3. Can behavioural control towards entrepreneurship influence students' intentions to become entrepreneurs?



## **1.5 Significance of the Study**

The study contributes to policy formulation, literature, and university entrepreneurship training. Firstly, the study provides practical suggestions for the reconstruction of new educational policies that support students' entrepreneurial interests. Policy recommendations inspired by the research outcomes recommend current appropriate strategies and practical ways of rolling out entrepreneurship education across the various universities in the country,

Secondly, it contributes to the literature by providing empirical evidence on the non-existing use of the theory of planned behaviour (TPB) constructs of entrepreneurial intentions and how they are influenced by entrepreneurship education. The novel literature opens up future research on these variables and uses them to foster the individual competencies, willingness or drive an individual to choose entrepreneurship as a career option. It adds to the scarce literature on the recently recognized entrepreneurship construct.

Thirdly, the study is relevant to institutions of higher learning that offer entrepreneurship training. Studies suggest that entrepreneurship education, orientation entrepreneurship motivation, risktaking, and competencies can be harnessed and developed through entrepreneurship education (Kyro and Tapani, 2007). This study offers that offering entrepreneurship education goes beyond the theoretical aspect but practical training that expose students to real-life problem and opportunities, this brings out the entrepreneurship education in student and provides interaction with experienced entrepreneurs.

## **1.6 Summary of Methodology**

This study uses survey-based cross-sectional data collected from KNUST students. Random sampling selection is used for the data collection. Sample students are students of Business Administration, Business and Management, Actuarial Science, Food Science and Technology, Engineering, Textile and Fashion and others, both undergraduates and postgraduates were selected for the study. Confirmatory factor analysis is used to assess the model fitness and the reliability and validity of the data while relationships were tested using regression. The hierarchical multiple regression and moderation to explore the effect of redundancy perception on employee's

performance; investigate if psychological detachment moderates the effect of redundancy perception on employee's performance. SPSS is the tool for the analysis.

## **1.7 Scope of the Study**

The study focuses on students of Kwame Nkrumah University of Science and Technology. Particularly both undergraduate and postgraduate students of business-related courses, engineering-related courses, Arts-related courses, and vocational skills-related courses.

## **1.8 Limitations of the Study**

The study, while contributing to the literature on entrepreneurship, is not free from limitations. The first of these is that the sample comprised only students of management and entrepreneurship, excluding students who have not studied entrepreneurship– future research might consider students in the latter category. Such research would enable a comparison to be made between the two sets of students and so would provide a better indication of the overall effectiveness of entrepreneurship education. The exclusion is justified based on the strict and defined objective to investigate how entrepreneurship education in the university has impacted students' entrepreneurial intention, Students who have not benefited from entrepreneurship courses can offer little support, unless on comparison which the study is not.

## **1.9 Organisation of the Study**

This study is composed of five chapters. Chapter one presents a background to the study, the research problem, the objective of the study, and the impact of the outcome of the study on stakeholders. In Chapter Two, both the theory and empirical studies are reviewed to provide a foundation upon which the present study could be understood. The methodology employed for the study is discussed in Chapter Three together with any inherent shortcomings associated with it. In Chapter Four, the findings of the research are presented and discussed. The final Chapter Five draws relevant conclusions from the findings and appropriate recommendations are proffered.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.0 Introduction**

The chapter reviews related literature on the topic. The chapter has four (4) sections. Section 4.1 presents a conceptual review and discusses entrepreneurship education and entrepreneurial intentions. Section 2.2 reviews the theory of planned behaviour as a foundational theory to explain entrepreneurship education and entrepreneurial intentions. Section 2.3 gives the contextual setting, Ghana. Section 2.4 presents an empirical review.

#### **2.1 Conceptual Review**

##### **2.1.1 Entrepreneurship Education**

Entrepreneurship is defined as the process of organizational emergence (Mei et al., 2022). The present understanding of entrepreneurship is that it transcends business creation. This is so because entrepreneurship dwells on basic concepts and precepts such as vision, change, opportunity seeking, creativity, innovation, risk-taking and the ability to manage activities to achieve specified objectives (Mensah, 2016; Winkler, et al., 2022). These principles form an integral part of human activities in the home, at the workplace and in other places of human socialization, although the extent and intensity of applicability may be higher in one setting than the other. Likewise, from the perspective of new venture creation, entrepreneurship has evolved to the extent of embracing socially-oriented activities in addition to the conventional commercial orientation (Wang et al., 2022). For example, from a commercial viewpoint, entrepreneurship may involve implementing identified business ideas through the formation of a new business or entering a new market (by an already existing firm) (Wang et al., 2022).

From a social perspective, entrepreneurship may underpin the formation of a not-for-profit organisation to serve the needs of a particular group of persons (Liu et al., 2022). In the context of the increased attention given to entrepreneurship by academics and policymakers, entrepreneurship education has also experienced rapid growth throughout the world (Manuella et al. 2019). Research has shown that entrepreneurship can be learned because education can help to achieve and increase

the awareness and acceptance of entrepreneurship as a valuable career option (Sherkat and Chenari, 2022; Baggen et al., 2022; Baluku et al., 2022). Gielnik (2017) suggest that the dispositions, skills, and competencies needed by the founders of an enterprise to generate successful entrepreneurship can be shaped by education. Entrepreneurship education has been conceptualized in a variety of ways, ranging from training for firm creation to a model of lifelong learning (Harrison et al., 2018).

Barba-Sanches and Atienza-Sahuquillo (2018) formulate an operative definition of entrepreneurship education based on the entrepreneurial intention model (which identifies personal intention as the first key element in the entrepreneurial process): "the whole set of education and training activities - within the educational system or not – that try to develop in the participants the intention to perform entrepreneurial behaviours, or some of the elements that affect that intention, such as entrepreneurial knowledge, desirability of the entrepreneurial activity, or its feasibility". In this vision, entrepreneurship education includes the development of knowledge, capacities, attitudes and personal qualities identified as entrepreneurship-specific, seeking the effective creation of enterprises and their subsequent dynamism. Education plays an important role in promoting entrepreneurship (Senali et al., 2022). The study defines 'entrepreneurship education' as any pedagogical program or educational process to impart entrepreneurial attitudes and skills (Fayolle et al., 2006; Putro et al., 2022).

Education plays a role in developing intention (immediate results of entrepreneurship education) toward entrepreneurship (Anwar et al., 2020a; Anwar and Saleem, 2018). According to Mei and Symaco (2022), entrepreneurship education shapes individuals' attitudes towards entrepreneurship, with attitude being antecedent for intention. Studies show that entrepreneurship education drives innovative ideas to undertake a new venture due to perceived knowledge of entrepreneurship (Winkler, et al., 2022; Breznitz and Zhang, 2022). Studies show that a significant number of students wanted to start their businesses after attending entrepreneurship training programs (Wang et al., 2022; Liu et al., 2022).

Researchers and governments consider entrepreneurship education highly important because they believe, and research supports that it could lead to economic growth (Harrison et al., 2018; Sherkat and Chenari, 2022; Baggen et al., 2022). Also, studies show that entrepreneurship education creates

entrepreneurial skills and behaviour (Liu et al., 2022). Empirical research shows that student's intention to start is significantly influenced by the educational support at the university (Anwar et al., 2020a; Harrison et al., 2018). Entrepreneurship education nurtures students' entrepreneurial competence which leads to entrepreneurship intention (Larsson et al., 2017). Accordingly, university education is critical to the development of entrepreneurship intention, orientation and motivation (Miller 2017). University curricula courses enhance students' perception, conviction and competency towards entrepreneurship (Baluku et al., 2022; Gielnik et al. 2015). Education functions as an antecedent in entrepreneurial capacity development (Barba-Sanches and Atienza-Sahuquillo, 2018; Breznitz et al., 2018). Liñán and Chen (2009) identify four objectives and types of entrepreneurship education initiatives in

#### 2.1.1.1 Types of Entrepreneurship Education

##### (a) Entrepreneurial Awareness Education.

This type of education is aimed at students who have no experience in starting a business and usually includes optional courses within business or engineering degrees. The goal of entrepreneurship awareness education is to enable students to develop entrepreneurial skills and to assist them in choosing a career by giving them a broader perspective (Liñán and Chen, 2009). This type of educational initiative aims at increasing the number of people with sufficient knowledge about entrepreneurship and self-employment, so that they consider a rational and viable employment and career option, i.e., the creation of more potential entrepreneurs, regardless of whether they create their firm immediately after the training. According to intention models, entrepreneurship awareness education programs act on one or more of the antecedents of entrepreneurial intent: entrepreneurial knowledge, desirability or feasibility.

##### (b) Education for Start-up.

It generally addresses those who already have a viable business idea and seek to become entrepreneurs during or shortly after the course. This type of entrepreneurship education is to prepare trainees to become the owners of a small conventional business, as most of the newly



created firms. The content of the courses focuses on specific practical aspects related to the startup phase, such as how to obtain funding, legal regulations, and taxation (Breznitz et al., 2018)

(C) Continuing Education for Entrepreneurs.

This kind of educational initiative is designed for active entrepreneurs, aiming at improving existing entrepreneurs' abilities (Liñán and Chen, 2009) to help them become dynamic Entrepreneurs.

(d) Education for Entrepreneurial Dynamism.

This type of education promotes dynamic entrepreneurial behaviours after the start-up phase, aiming both to increase the intention of becoming an entrepreneur and to develop dynamic behaviours when the enterprise is already in operation.

### 2.1.2 Survival and Growth of Start-Ups

While literature reports that entrepreneurship programmes induce entrepreneurship (Baggen et al., 2022), some studies however consider local economic development as a factor for entrepreneurship start-ups (Breznitz and Zhang, 2022; Mei and Symaco, 2022). These studies examine university programs and other entrepreneurship courses provided by both academic institutions and non-academic institutions. Different studies across different countries on entrepreneurship education and entrepreneurship find that entrepreneurship training leads to business startups (Mangasini, 2015; Maritz et al., 2022; Kwong et al., 2022). For instance, a study in 1995 by Kolvereid and Moen (1995) studied individuals who had entrepreneurship programmes and the impact on firm formation. They wanted to know if students who majored in entrepreneurship have a high propensity to start their businesses. While controlling for age, and gender, their results indicate that entrepreneurship led to firm formation. Business schools continue with the studies by conducting additional studies (Othman et al., 2022; Gupta, 2022; Schultz, 2022). While survey studies indicate a decline in intention to start their own business (Linh and Thuy, 2022; Gallage et al., 2022; Schultz, 2022), majoring in entrepreneurship remain a significant factor for business start-ups

(Othman et al., 2022; Gupta, 2022), Therefore, the study argues that entrepreneurship education impacts graduate's entrepreneurship.

### 2.1.3 Entrepreneurship Education and the Field of Study

Previous studies show that students majoring in important entrepreneurship courses are influenced to start a business. They argue that science and engineering students establish new firms (Kiyic et al., 2022; Rahman et al., 2022; Cheung, 2022), and have developed a favourable outlook for entrepreneurship (Samala et al., 2022; Djazilan and Darmawan, 2022). Tamaramieebi (2022) notes that Science and Engineering graduates who have taken entrepreneurship courses are more likely to become owners than their colleagues who have not taken entrepreneurship courses. Moreover, studies suggest that students from the STEM programmes (Science, Technology, Engineering and Mathematics) become leaders in the technological field and impact the economy (Alamineh, 2022; Zhan and Chen, 2022). Zhan and Chen (2022) highlight that STEM graduates lead innovative industries that impact positively the significant sectors of the economy such as Health, Agricultural, Transport, Food and beverages, and Defense. This study does not use only students or graduates from the business school as participants, but also students and graduates from the Science, Technology, Engineering and Mathematics departments. The study argues that students from a STEM background are important to innovative business establishments and that entrepreneurship education will positively impact the formation of high-tech firms.

### 2.1.4 Students Entrepreneurship

The absence of data forms the study's limitation, although there are studies on student entrepreneurship, it is limited. Wright et al. (2017) highlight the importance of student entrepreneurship. To capture the contributions of students to their economy, universities such as Harvard, Toronto University, Stanford, and MIT started alumni surveys. These surveys highlight the contributions of students in their various countries (Wang and 2022; Breznitz and Zhan, 2021; Breznitz and Zhang, 2019; Eesley, 2016; Hsu et al., 2007). Wright et al. (2017) suggest that universities create an ecosystem, just like the entrepreneurial ecosystem to groom students to become entrepreneurs. The university ecosystem will comprise business incubators, mentorship,



entrepreneurship courses and accelerators. This study highlights the university's entrepreneurial ecosystem including grants, incubators business plans, and competitions. Similarly, Miller and Ace (2017) highlight the campus entrepreneurship ecosystem as part of the internal university system such as students, faculty, courses, facilities and funding. Outside environments such as government funding, sponsorship, private funding, professional services and accelerators are important. This study therefore argues that student entrepreneurs are firm creators. Also, entrepreneurship education positively impacts student entrepreneurship (Breznitz and Zhan, 2021).

#### 2.1.5 Elements of an Entrepreneurship

According to Anwar and Saleem (2018), the four key elements of entrepreneurship include innovation, organization, risk and vision. In the following section, all these elements have been discussed briefly.

##### (a) Innovation

Innovation is considered the key factor in the concept of entrepreneurship (Fatima et al., 2021). An entrepreneur adds to the economy in terms of innovation and discrepancy and the degree of these assures a positive outcome (Ferreira and Trusko, 2018). The entrepreneurs carry out imaginative and unique thoughts on the available situations and strive to foster something new (Frunzaru and Cismaru, 2020). It can be in terms of a new product, production technique, technology, or marketing strategy (Anwar and Saleem, 2018)

##### (b) Organization

The organization is another key element of successful entrepreneurship (Hassan, et al., 2021). Without organization, everything will become disorganized and unmanageable which further will cause losses, decreasing business goodwill, unsatisfied customers, and mental stress to the staff due to which the workers may leave the organization (Issau et al., 2021). Hence it is important to maintain a decent organizational structure within the company, which defines who will perform a specific task and the way that task will be performed (Frunzaru and Cismaru, 2020)

##### (c) Risk

All businesses involve risks and in entrepreneurship, it is the sole responsibility of the entrepreneur only as it is a “one-man-show” (Koe, 2016). Without taking risks, a business cannot flourish but

on the other hand, indulgence in excessive risk-taking may lead to severe losses (Mersal, 2021). Risk-taking is another word for exploiting opportunities and gaining a competitive edge over others performing in the same market (Nair et al., 2019). This way, the business and the economy both are facilitated.

#### (d) Vision

An entrepreneur must have a strong vision if he wants to succeed in the business (Nieuwenhuize and Jegede, 2021). The foresight of the entrepreneur determines how the business and other business policies will run (Nyadu-Addo and Mensah, 2017). The way the entrepreneur visualizes his business in the coming years is how the business moves forward and the profitability is earned (Podrug et al., 2019). Keeping the vision in the head, the tasks are identified, and performed, risks are taken and organizational culture is brought forth (Sahoo and Panda, 2019). It is important to set long-term and short-term goals for a business so that the organizational objectives are learned. Entrepreneurship and its basic elements of it. An entrepreneur needs to control the whole business performance, tackle the workforce, monitor the market trend, and modify business policies to meet customer demand (Tomy and Pardede, 2020; Wales et al., 2019).

#### 2.1.6 Entrepreneurial Intentions

Intentions are classically defined as the cognitive state temporally and causally before action (e.g., Krueger 2000; Maheshwari and Arokiasamy, 2022). Entrepreneurial intentions encapsulate a series of cognitive processes evidenced in actions that produce businesses (Solórzano-García et al. 2022). The study defines and discusses entrepreneurial intentions guided by two models: The theory of planned behaviour (TPB) (Ajzen, 1991), and the entrepreneurial event (SEE) (Shapero, 1982). The TPB explains that individual subjective norms, perceived behaviour and attitudes towards an act, are antecedents of intention (Ajzen, 1991). The SEE, on the other hand, was developed to understand entrepreneurial behaviour (Shapero, 1982). Entrepreneurial intentions are rooted in perceived desirability, feasibility and propensity to act upon opportunity (Kumar and Shukla, 2022). In this sense, the study defines perceived desirability as the attractiveness to starting a business, and perceived feasibility as the perceived capability to start the business, and the

conviction to act on personal feelings to achieve that. Both the TPB and the SEE provide insightful comparable interpretations for entrepreneurial intentions (Krueger, 1993; Tiwari et al., 2022). According to Krueger (1993), the attitude and subjective norm in the TPB models correspond to the perceived feasibility in the SEES. In the same way, the perceived behavioural control corresponds to the perceived feasibility in the SEES model. Fundamentally, the foundational elements of behavioural intents are the perceived desirability and feasibility.

Hatos et al., (2022) describe entrepreneurial intention as an immediate outcome of entrepreneurship education. According to Kumar and Shukla (2022), entrepreneurship education can shape students' attitudes towards entrepreneurship, with attitude being antecedent of entrepreneurial intention. Studies show that the relationship between entrepreneurship education as a specific course and entrepreneurial intention is higher than between general business course and entrepreneurial intention (Rahman et al., 2022; Joensuu-Salo et al., 2022). Studies on “the intent to act”, and firm creation find that intention to act is the most significant factor towards business establishment (Orlando et al., 2022; Luo et al., 2022). Discussing and analyzing entrepreneurial intentions provides deeper knowledge and understanding of the entrepreneurial process.

## **2.2 Theoretical Review**

### **2.2.1 Theory of Planned Behavior**

The theory of planned behaviour was proposed by Ajzen (1991). The theory suggests that attitudes towards an act are both the favourable and unfavourable evaluation of the said behaviour (Ajzen, 1991). Thus, behaviour is a function of beliefs relevant to the said behaviour. Thus, the psychological approach to understanding entrepreneurship is premised on the understanding of business success (Funaro and Cismaru, 2020). Several studies have used the theory of planned behaviour to understand the reasons to start a business (e.g., Zheng et al., 2022; Bardus and Massoud, 2022; Shapero and Sokol, 1982). For instance, Shapero and Sokol (1982) explain that the reasons to start a business stem from the desirability and feasibility perceptions.



The theory of planned behaviour is relevant in the context of entrepreneurial action. TPB argues that entrepreneurial intentions are influenced by attitudes towards entrepreneurship, perceived behavioural control, and subjective norms (Ajzen, 1991). Empirical studies which surveyed university students on entrepreneurship support the theory of planned behaviour (Soomro, et al., 2022; Zaremohzzabieh et al., 2022; Sarma, 2022). Contemporary studies have extended the TPB dimensions to intention to include entrepreneurship education, gender, entrepreneurial identity, and psychological traits (Entrialgo and Iglesias, 2016; Soria-Barreto et al., 2017; Jang, Hadley, Son, and Song, 2019; Omid et al., 2016). Individual intentions are the only immediate precursor of behaviour (Ajzen, 1991, p. 203) and the basic element that determines it. This study uses TPB to argue that entrepreneurship education stimulates entrepreneurial intention to start a business (Krueger and Carsrud 1993; Mukesh et al., 2019), where entrepreneurial intention, in this case, refers to "a self-acknowledged conviction by a person that they intend to set up a new business venture and consciously plan to do so at some point in the future" (Thompson, 2009).

#### 2.2.1.1 Behavioral Intention

The focal point of TPB is the individuals' intention to engage in certain behaviours. TPB is regarded as quite useful in envisaging a large variety of behaviour (Sheppard et al., 1988). TPB has frequently been applied in the domain of food choice. Several past studies have applied TPB to study the behavioural intentions of consumers related to organic products (Fatima et al., 2021; Frunzaru and Cismaru, 2020; Hassan et al., 2021)

#### 2.2.1.2 Attitude

Attitude is a psychological construct (Jung, 1971), which is shaped by cognition (thought), values (beliefs) and affection (emotions) toward a particular object (Hatos et al., 2022; Zaremohzzabieh et al., 2022; Sarma, 2022). Thøgersen (2009a) and Michaelidou and Hassan (2008) revealed that "belief" about the consequences is instrumental in leading students to harness entrepreneurial intentions. Roitner-Schobesberger et al. (2008) further stressed that the wealth consciousness factor was one of the main driving forces in becoming an entrepreneur.

Moreover, forming a cognition process in becoming an entrepreneur is also important.

### 2.2.1.3 Subjective Norms

Subjective norms relate to the perceived social influences/pressures to indulge or not to indulge in a given behaviour (Ajzen, 1991; O'Neal, 2007). Subjective norms reveal the beliefs of individuals about how they would be viewed by their reference groups if they perform a certain behaviour. Past studies have indicated that attitude is significantly related to subjective norms. Chang (1998), Shimp and Kavas (1984), Vallerand et al. (1992) and Tarkiainen and Sundqvist (2005) have found in their studies that there exists a significant causal path between subjective norms and attitudes leading toward behaviour (entrepreneurial intention). Chang (1998) proposed that the impact of the social environment on shaping the attitude of individuals should be thoroughly studied. Tarkiainen and Sundqvist (2005) took note of Chang's suggestion. In their study in Finland, they found a significant path from subjective norms to attitude toward entrepreneurship.

## 2.3 Context Setting

The positive impact of entrepreneurship courses and programmes in higher education, on the employability of graduates, and society and the economy (specifically employment, innovation and welfare effects) has been established and acknowledged across the globe (e.g., Hartshorn & Hannon, 2005; Postigo, Iacobucci and Tamborini, 2006; Boissin, Castagnos and Deschamps, 2006; Owusu-Ansah and Poku, 2012). Through such education, people are better prepared to unleash their entrepreneurial potential. For example, the Kauffman research series, on the impact of entrepreneurship education, reports that entrepreneurship education produces self-sufficient enterprising individuals, and successful business and industry leaders, enhances a graduate's ability to create wealth and produces champions of innovation (Charney and Libecap, 2000). Consequently, in several advanced countries, entrepreneurship education is offered right from the primary school level through secondary school to the tertiary level of education (see Gasse and Tremblay, 2006; Blenker, Korsgaard, Neergaard and Thrane, 2011). In Nigeria for instance, entrepreneurship is a mandatory course for students of HEIs (Omoniyi and Osakinle, 2011).

In Ghana, however, these facts cannot be strongly posited. Entrepreneurship education seems to be pursued, largely, in higher education institutions (HEIs) with several polytechnics, professional institutes and universities offering one or few entrepreneurship courses and/or programmes.



Consequently, much of the ongoing debate on entrepreneurship education, in the country, centres on its place in the organisational set-up (that is, which department or faculty should house entrepreneurship education) and its recipients. The latter is the subject of interest in this study. The prime focus of debate has been whether entrepreneurship education should be delivered to all students of a particular HEI or to a select group(s) of students whom curriculum designers believe should receive such education. For instance, the European Commission (2012) strongly proposes that entrepreneurship education should become obligatory and should be extended to all disciplines since through that, the entrepreneurial competencies, intentions, and employability of students are enhanced for a better impact on society and the economy. In such an instance, the practice has been the introduction of a mandatory one or more credit hours entrepreneurship course which students must take at a particular level of their study before graduation.

The primary objective of such a course is, usually, to enhance the entrepreneurial behaviour of the students and/or develop students' mindsets into considering entrepreneurial careers – mostly self-employment (Nyadu-Addo and Mensah, 2017). Examples are the three credit hours mandatory entrepreneurship course for fourth-year business students of the Kwame Nkrumah University of Science and Technology and the mandatory entrepreneurship course for all first-year undergraduate students of the University of Ghana. On the other hand, offering entrepreneurship education to a select group of students may have two separate or interrelated outcomes. First, entrepreneurship education may aim at enhancing the entrepreneurial behaviour of students as in the former and equipping students with competencies for the successful implementation of projects/businesses. Second, entrepreneurship education may be designed to enhance the competencies of students for MSMEs and entrepreneurship promotion-driven careers. These two outcomes are often merged with a programme designed for graduate studies. An example is the MBA in Entrepreneurship and Small Enterprise Development offered at the Kwame Nkrumah University of Science and Technology.

The key source of disagreement that often generates debate is the concept of “entrepreneurship education for all”, as the pressure that by all means, and by any means possible, students from

entrepreneurship courses must start theory ow enterprises, as in the case of the University of Ghana. Strong proponents of “entrepreneurship education as the preserve of select few and a way to the formation of enterprises” argue that entrepreneurship education cannot be a wholesale commodity given its legitimacy as a discipline with programmes of study, its relevance to economic development and the need to commit adequate resources to its design and delivery. As a means to contribute towards an end to the debate, this study strongly proposes that the question of who should receive entrepreneurship education, and how to turn students into enterprises should be answered from the perspective of the fundamental development challenge that entrepreneurship education is expected to address. One of such challenges facing Ghana is graduate unemployment.

## **2.4 Empirical Review**

### **2.4.1 Entrepreneurship Education and Entrepreneurial Intentions**

Takyi-Nyarko et al., (2022) investigate individual-level determinants of the intention to become an entrepreneur, grounding in the social-cognitive, planned behaviour, and human capital theories. Their research used content analysis of semi-structured interviews. Their results document the capacity of entrepreneurial programmes to encourage business initiation via stimulating entrepreneurial self-efficacy, and the importance of perceived behavioural control in explaining entrepreneurial intention.

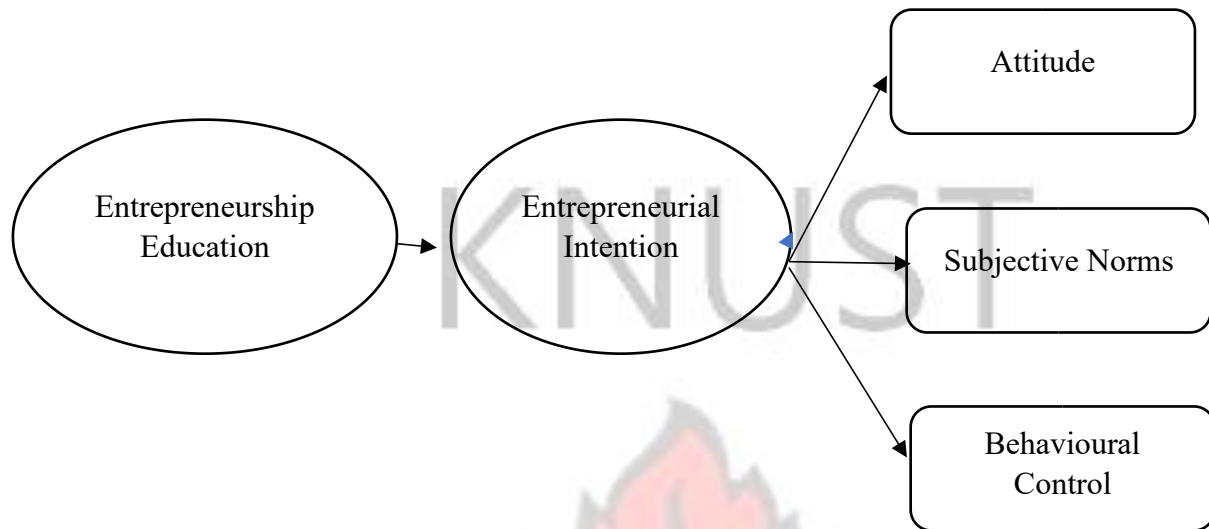
Westhead and Solesvik (2016) explore links between entrepreneurship education participation, alertness and risk-taking skills and the intensity of entrepreneurial intention relating to becoming an entrepreneur. Guided by insights from human capital and socially learned stereotypes theories, they conceptualize and test hypotheses that consider the potential moderating effect of gender and participation in entrepreneurship education. They used Hierarchical regression analysis and found that women who have benefited from entrepreneurship education had higher intensity of intention than women who had not benefited from entrepreneurship education. Maharana and Chaudhury (2022) studied the entrepreneurial intent (EI) of the students of private and government universities located in the state of Odisha, India. They gathered responses from 485 students from selected private and government universities in Odisha, India. Their findings suggest that private

universities are superior to government universities in their Quality of Entrepreneurship Education (QEE), students' Exposure to Entrepreneurship Education (EEE) and their EI. Business Management and Commerce students have more inclination toward entrepreneurship compared to the students of professional streams like Law, Pharmacy, and Engineering etc. Self-employed parents, EEE and extracurricular activities (ECA) are the significant determinants of EI among university students; whereas, Academic Achievement (AA) and Socio-economic Status (SES) do not significantly explain their EI. Finally, gender also plays a vital role where male students show higher EI compared to their female counterparts.

Hassan et al., (2021) examine the direct and indirect roles of individual entrepreneurial orientation and entrepreneurship education in determining students' entrepreneurial intention through the mediation of entrepreneurial motivations. They use cross-sectional data from 323 university students using the convenience sampling method. Their findings affirm that entrepreneurship education facilitates both individual entrepreneurial orientation and entrepreneurial motivations and also has a positive association with entrepreneurial intention.

## **2.5 Conceptual Framework**

Fig 2.1 depicts the relationship among the study constructs. The arrow points to the direction of such a relationship. This study uses the Theory of Planned Behaviors measures of entrepreneurial intentions using the three components of TPB i.e., attitude, subjective norms and behavioural control. This study also seeks to empirically demonstrate the impact of entrepreneurial education on intention along with the impact of the particular component of entrepreneurship education programs on entrepreneurial education.



**Fig 2.1: Conceptual Framework**

## 2.6 Conclusions

At last, it is concluded that entrepreneurship can be observed as an identifying change, pursuing opportunities, taking risks and responsibilities, innovating existing or new products, employing the better use of resources, creating new values that are significant for customers, and repeating the process all over again and again.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This chapter presents the methodology used for the study. Key methodological issues discussed in the chapter include research approach and designs, population, sample and sampling; technique, data type and instrument, measures, data collection, data analysis, reliability, validity, and ethical consideration.



### **3.2 Research Approach and Design**

This study is descripto-explanatory in nature; and therefore, employs descriptive and explanatory research design at a different stage. Descripto-explanatory study uses both descriptive and explorative approaches where the description acts as a precursor to an explanation (Saunders et al. 2009). Descriptive statistics such as frequency and mean scores are used to describe the events, while explanatory research is used to identify how the independent variables influence the dependent variable. The study uses a cross-sectional survey design. Cross-sectional survey involves collecting data on multiple variables from many cases at a single time. The cross-sectional design is appropriate for testing the cause-and-effect relationships. It further improves external validity/generalization (Rindfleisch *et al.*, 2008).

### **3.3 Target Population**

This study targets both undergraduate and postgraduate students of Kwame Nkrumah University of Science and Technology, Kumasi Ghana (KNUST). KNUST has about 40,000 student population.

### **3.4 Sampling Strategy and Sample Size**

This study uses a simple random sampling technique to select 120 students. Studies which adopted this sampling technique produced reliable and valid results (e.g., Anwar et al., 2020a; Anwar and Saleem, 2019b; Bazan et al., 2019; Hassan et al., 2020). The choice of a simple random sampling technique is due to its unbiased sampling selection procedure which makes it more an unbiased surveying technique, thus robust results are assured. Students studying business administration courses as well as students from other colleges such as Science, Engineering, Health and Arts and Agricultural are selected for the study. These include both undergraduate and postgraduate students who have received entrepreneurship education either delivered by classroom teaching, case studies, presentations, dissertations at the postgraduate level, and/or internships in industry, university's business incubator, and student entrepreneurship seminars). Students who have received or are receiving entrepreneurship education are selected to assess whether attitudes

towards business startups, career intentions and aspirations and entrepreneurial intentions can be explained by student's entrepreneurship education.

### **3.5 Questionnaire Development**

This study uses the entrepreneurial intention questionnaire (EIQ) developed by Lin~an & and Chen. This study hypothesized a conceptual model involving students' entrepreneurship education to predict students' career intentions and aspirations, attitudes toward starting a business and entrepreneurship intentions. As indicated, the main explanatory variable is this study measures a student's experience in taking entrepreneurship education, which could be offered by various types of organizations, such as universities, incubators/accelerators and other organizations. This study develops a questionnaire, with validated scales borrowed and contextualized from earlier published studies. Latent items for entrepreneurship education and entrepreneurship intentions are taken from Lin~ and Chen (2009

### **3.6 Data Collection Instrument**

Consistent with prior survey studies in Ghana (e.g., Agyapong et al., 2019; Boso et al., 2020), this study adopted a face-to-face data collection approach, delivery-and-collection, and structured questionnaires. This data collection approach ensures a high response rate.

### **3.7 Data Collection Procedures and Techniques**

This study uses structured questionnaires to obtain relevant information about the study's constructs from the respondents. Students who have received any form of entrepreneurship education are approached. The rationale and objective of the exercise is explained to them. Students who accept to participate are given the questionnaire to fill out. Participants who are unable to provide instant responses are allowed to answer the questionnaire at their own convenience time. The researcher after 30 days ensures that all questionnaires are returned for cleaning, coding and analysis.

### **3.8 Measurement of Instrument**

This study uses TPB questionnaires by Liñán and Chen (2009). The TPB has four sub-scales; (i) attitudes towards entrepreneurship, (ii) subjective norms, (iii) PBC, and entrepreneurial intentions. TPB questionnaire follows Ajzen's (2002) methodology in constructing variables for TPB. The items are measured using a 7-Likert scale from strongly disagree to strongly agree.

#### **Attitudes towards entrepreneurship**

Attitudes towards entrepreneurship are measured using 6 items which evaluate the expectations and outcomes from entrepreneurship and entrepreneurial careers and the desirability of those outcomes. The outcome items are multiplied by the desirability items and divided by 6 to construct a score for attitudes towards entrepreneurship, following Ajzen (2002).

#### **Subjective norms**

Subjective norm is measured using three items in two sets each representing how significant others such as parents view entrepreneurial careers and their extended motivation to comply with those people. Following Ajzen (2002), this study multiplies the items in the two set and divide them by three to obtain a variable for subjective norms.

#### **Perceived Behavioral control**

This study measures PBC through self-efficacy items. Six high-efficacy items are used where a high score indicates strong entrepreneurial self-efficacy and vice versa (Liñán and Chen, 2009.)

#### **Entrepreneurial intention**

This study measures EI using four items that assess the perceived likelihood that an individual will choose an entrepreneurial career. A high score indicates a strong entrepreneurial intention and vice versa (Liñán and Chen, 2009.)

### **3.9 Data Analysis**

This study uses the hierarchical multiple regression method to explore the effect of perceived attitude, subjective norm and perceived behavioural control on entrepreneurial intention. This

method allows several stages of analysis where a model can have moderated variables at each stage of the process to achieve robust results (Osei et al., 2022)

### **3.10 Data Quality (Validity and Reliability) Consideration**

To improve the quality of the study and obtain a reliable outcome, this study adopts existing measures to capture the constructs. The reliability of each measure is assessed using Cronbach's alpha test, while their validity was assessed using confirmatory factor analysis and second, by comparing the strength of correlation between the scales.

### **3.11 Ethical Issues**

Several ethical concerns arise when questionnaires are used to gather data from primary sources where confidentiality is a critical issue (Saunders et al, 2007). As asserted by Saunders et al. (2007), the three major areas of concern through data gathering via primary sources are time, topic sensitivity, participant confidentiality and anonymity. The research questions were explained to all the participants to enhance their understanding of the variables and the exercise to disabuse any negative thoughts and to encourage participation level. Only those who showed concerns about participating were selected for the research. The anonymity of the participants is strictly ensured by using passwords on the received data and ensuring that the information collected was used for its intended purpose.



## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.0 Introduction

This chapter presents the results and discussion. The data was collected using a self-administered questionnaire. It has six (6) sections as follows; Section 4.1 presents descriptive summary and sample attributes. Section 4.2 presents results for validity and reliability. Section 4.3 shows correlation results. Section 4.4 shows empirical results. Section 4.5 discusses the results, and section 4.6 summarises the chapter.

#### 4.1 Descriptive Summary and Sample Attributes

Table 4.1 presents the demographic distribution of the respondents. The majority (53.3%) of the respondents are males and 46.7 % are females. Most of the respondents (40%) are between the ages of 18-25, suggesting that students are on average between the ages of 18 to 29.

**Table 4.1: Sample Attributes**

Profile	Description	Frequency	Percentage
Gender	Males	64	53.3%
	Females	56	46.7%
Age	18-25	48	40%
	26-35	41	34.2%
	36-45	22	18.3%
	46-60	8	6.7%
	>60	1	0.8%
Total		120	100%

Source: Survey data, 2023

Table 4.2 presents summary statistics of the study variables, perceived attitudes, subjective norms, perceived behavioural control and entrepreneurial intentions, and were evaluated with 7 Likert scale questions. The respondents either strongly disagreed or strongly agreed with the questions asked. In the analysis, a mean score of  $\geq 4.543$  suggests the respondents agreed with the statements to a very large extent;  $3.5 \leq$  to  $4.5$  meant the respondents agreed to a large extent;  $2.5$  to  $\leq 0.35$  suggests a moderate agreement;  $1.5$  to  $\leq 2.5$  indicates little agreement, and a score  $\leq 1.5$  indicates no agreement. A standard deviation  $\leq 1$  indicates that respondents hold similar views of the statements, while a standard deviation greater than 1 suggests disagreements with the statements. The results show a much higher mean for perceived attitudes, subjective norms, perceived behavioural control and entrepreneurial intentions, indicating strong perception from the students about those variables.

**Table 4.2 Summary Statistics**

Variable	Mean	Median	Std. Dev.	Kurtosis	Skewness	Min	Max
<b>PA</b>	4.075	4.076	1.242	0.000	-0.543	1	7
<b>SN</b>	4.987	4.543	1.109	0.276	-0.134	1	7
<b>PBC</b>	3.654	3.436	1.176	-0.254	0.246	1	7
<b>EI</b>	3.565	3.564	1.453	-0.342	0.235	1	7

Note: PA is perceived attitude, SN is subjective norms, PBC is perceived behavioural control, EI is entrepreneurial intentions

**Source:** Author's analysis with 2023 Survey data

## 4.2 Reliability and Validity

The study loads 19 items onto 4 latent constructs. The confirmatory factor analysis (CFA) was used to assess the validity and reliability of the measurement of the constructs. First, the study assesses whether there is a strong correlation between the indicator and constructs ( $\rho$ ) to ascertain how much the latent variable explains the variance of the constructs (at least 50%).

According to Hair et al., (2006), the standardized loadings must be greater than 60 per cent. Apart from the A4, all the latent variables significantly explain the variance of the constructs.

Second, this study uses composite reliability ( $\rho_c$ ) to measure the internal consistency of the items in constructing the variables. The composite reliability ( $\rho_c$ ) is preferred to Cronbach's ( $\alpha$ ) (Henseler et al., 2009). Cronbach's alpha assumes that all items are reliable to the constructs, but composite reliability prioritizes the items according to their reliability leading to a more reliable composite (Henseler et al., 2009). A composite value above (0.70) is more reliable and measures strong internal consistency (Henseler et al., 2009). As indicated in Table 4.3 the composite index of all the variables (PA, SN, PBC, and EI) all exceeded the threshold, suggesting strong internal consistency.

Third, this study uses the Average Variance Extracted (AVE) to measure convergent and discriminant validity or to ensure all the items measure the underlying constructs (Henseler, et al., 2009). A higher AVE value indicates that the items strongly represent the underlying construct, and must be above (50%). As shown in Table 4.3 the AVE for all the variables are satisfactory.

**Table 4.3: Individual Loadings ( $\lambda$ ), Composite Reliabilities ( $\rho_c$ ), and AVE**

Constructs	Items	$\lambda$	AVE	$\rho_c$
<b>Attitude</b>	A1	0.784	0.643	0.800
	A2	0.675		
	A3	0.654		
	A4*	0.501		
	A5	0.687		
<b>Subjective Norms</b>	SN1	0.754	0.743	0.843
	SN2	0.86		
	SN3	0.834		
<b>Perceived Behavioral control</b>	PBC1	0.765	0.764	0.910
	PBC2	0.654		
	PBC3	0.743		

	PBC4	0.346		
	PBC5	0.654		
<b>Entrepreneurial Intentions</b>	EI1	0.954	0.704	0.865
	EI2	0.954		
	EI3	0.876		
	EI4	0.765		

**Source:** Author's analysis with 2023 Survey data

### 4.3 Correlation

Table 4.4 presents correlation results. The results show whether the explanatory variables suffer from multicollinearity problems. Subjective norm has a positive and significant correlation with attitude, ( $\beta = 0.342$ ,  $p < 5\%$ ). Moreover, entrepreneurial intention has a positive and significant correlation with the subjective norm, ( $\beta = 0.442$ ,  $p < 5\%$ ). None of the correlation coefficients exceeds (0.7), therefore, this study concludes that the variables do not suffer from the multicollinearity problem (Kennedy, 2008)

**Table 4.4: Correlation**

Var	PA	SN	PBC	EI
PA	1			
SN	0.342*	1		
PBC	0.432*	0.061	1	
EI	0.043	0.442*	0.054	1

**Note 1:** PA is perceived attitude, SN is the subjective norm, PBC is perceived behavioural control

**Note 2:** \* is  $p < 5\%$



#### 4.4 Empirical Results

This study follows Zhang et al. (2020), and Osei et al. (2021), and employs the hierarchical multiple regression method to explore the effect of perceived attitude, subjective norms and PBC on entrepreneurship. The statistical estimation was done using two multiple models while controlling for gender and age. Model 1 regresses PA, SN and PBC on EI without the control variables. Model 2, on the other hand, regresses PA, SN PBC and all the control variables on EI. The baseline model to estimate the hypothesized relationships, following Osei et al. (2021).

The adjusted R-squared in Table 4.5 is 0.601, suggesting that about 60.1% of variations in entrepreneurial intention are explained by the explanatory variables. Perceived attitude has a strong negative and significant effect on entrepreneurial intention ( $\beta = 0.364$ ,  $p < 1\%$ , model 2), supporting the argument that attitude towards entrepreneurship improves students' intentions to become entrepreneurs. A percentage increase in attitude leads to a 36.4% increase in entrepreneurial intentions. Moreover, perceived behavioural control has a positive and significant effect on entrepreneurial intentions, ( $\beta = 0.184$ ,  $p < 1\%$ , model 2), supporting the argument that behavioural control towards entrepreneurship affects the entrepreneurial intentions of students.

**Table 4.5: Effect of PA, SN and PBC on IE**

Var	(1)		(2)		Test Results
	Coeff.	Std. Error	Coeff.	Std. Error	
Perceived attitude	0.397***	(0.097)	0.364***	(0.096)	Accepted
Subjective norm	-0.174	(0.148)	0.254	(0.351)	Not Accepted
PBC	0.779***	(0.272)	0.184***	(0.052)	Accepted

<b>Gender</b>			0.0381*	(0.194)
<b>Age</b>			-0.262*	(0.108)
<b>Constant</b>	3.273***	(0.490)	5.211***	(0.893)
	0.5458		0.448	
<b>AdjA</b>	0.488		0.601	
<b>F-statistics</b>	16.714		5.535	
<b>Prob.</b>	0.000		0.000	

**Note 1:** The dependent variable is entrepreneurial intention

**Note 2:** \*, \*\*, \*\*\* denote 10%, 5% and 1% significance levels respectively; **Source:** Survey data, 2023

#### 4.5 Discussion of Results

The empirical results are centred on the theory of planned behaviour captured on how the three dimensions of entrepreneurial intention (perceived attitude, subjective norm and perceived behavioural control) influence students' intentions to become entrepreneurs. Entrepreneurial intentions are influenced by entrepreneurship education (a system that allows individuals to learn concepts and skills needed to enable them to realize entrepreneurial opportunities and act upon them. The results show that a positive attitude towards entrepreneurship education develops students' entrepreneurial intentions. The results are consistent with other studies (e.g., Mykolenko et al., 2022; Cassol et al., 2022; Anwar et al., 2020a; Anwar and Saleem, 2018; Mersal, 2022, Ullah et al., 2019; Nair et al., 2019). Perceived attitudes describe the extent of attractiveness an individual perceives of being an entrepreneur (Ajzen, 2001).

For instance, Mykolenko et al., (2022) posit that when people feel that they possess control to manage a company and develop a positive attitude towards this mindset, it reinforces their entrepreneurial intentions. According to Cassol et al., (2022) developing a positive attitude towards entrepreneurship education and perceiving landing an entrepreneurship career as more advantageous stimulate a strong desire within the student to become an entrepreneur (Anwar and

Saleem, 2018). Moreover, when a student of entrepreneurship education develops a strong desire to start a business, it has a long-term positive effect on the student's entrepreneurship career (Barba-Sánchez, et al., 2022). Barba-Sánchez, et al., (2022) find that perceived attitudes and perceived behavioural control positively influence students in Brazil's entrepreneurial intentions. The results imply that entrepreneurship education must stimulate students' perceived attitudes towards entrepreneurship.

Moreover, the results show that perceived behavioural control towards entrepreneurship affects the entrepreneurial intentions of a student, consistent with (see, e.g., Barba-Sánchez, et al., 2022; Cassol et al., 2022; Nieuwenhuize and Jegede, 2021; Kakouris and Georgiadis, 2016; Ramchander, 2019). Perceived behavioural control represents a degree of difficulty or ease of being an entrepreneur (Barba-Sánchez, et al., 2022), and captures the extent to which the individual feels capable of executing a given behaviour. For instance, studies show that when an individual perceives that creating a business and keeping it will be easy, that individual has his entrepreneurial intentions reinforced (Barba-Sánchez, et al., 2022; Cassol et al., 2022). According to Nieuwenhuize and Jegede, (2021), entrepreneurship education motivates the individual to believe in themselves and that they can succeed in entrepreneurship. Thus, developing positive behavioural characteristics that make students perceive that starting a business will not be as difficult as perceived is a significant step towards entrepreneurial intentions.

The results, however, find no significant relationship between subjective norms and entrepreneurial intentions. Subjective norms represent how reference people such as family and friends approve or disapprove of an individual intention of becoming an entrepreneur. Several studies indicate that the subjective norm is the weakest predictor of individual entrepreneurial intentions (Barba-Sánchez, et al., 2022; Cassol et al., 2022), and therefore the results are not surprising

#### **4.6 Chapter Summary**

The chapter presented results and discussion. In this chapter, various instruments were used to measure internal consistency, validity and reliability of the items used to construct the study variables. The reliability and validity results proved satisfactory. In addition, the empirical results show that perceived attitudes and perceived behavioural controls influence a student's attitudes

toward becoming an entrepreneur. The study concludes that policy must be implemented to support entrepreneurship education in Ghana.

# KNUST





## CHAPTER FIVE

### CHAPTER FIVE SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.0 Introduction

This chapter summarizes the study, concludes and provides some recommendations. It has four (4) sections as follows; Section 5.1 summarizes the study. 5.2 presents conclusion. 5.3 provides policy implications and recommendations, and 5.4 suggests recommendations for further studies.

#### 5.1 Summary of Findings

In recent years, entrepreneurship has received global attention due to its economic, social and financial benefits of employment creation, poverty reduction, economic growth and revenue mobilization. This has promoted the study of entrepreneurship education across tertiary institutions, the creation of business incubation centres, business forums and entrepreneurial awareness programmes. Relying on the theory of planned behaviour entrepreneurial intentions dimensions, this study sought to examine whether perceived attitude subjective norms and perceived behavioural control influence a student's intention of being an entrepreneur. The results are summarised as follows;

Perceived attitude has a positive and significant influence on students' entrepreneurial intentions. That is, developing a positive attitude towards entrepreneurship education enhances the students' entrepreneurial intentions. Education which offers concepts and skills about the need for students to believe in their strengths to handle, manage and sustain businesses reinforces the student's entrepreneurial intentions.

In addition, the results show that perceived behavioural control has a significantly positive effect on students' entrepreneurial intention. The results imply that entrepreneurship education delivered in a way that drives out the fear of starting a business and its associated challenges will enhance students' entrepreneurial intentions. Entrepreneurship and concepts must equip the student to see opportunities in challenges and develop their entrepreneurial potential.

## 5.2 Conclusion

Entrepreneurship has been extensively discussed in literature due to its proven benefits. Despite the high penetration of entrepreneurship studies in literature, using the theory of planned behaviour dimensions and their possible effect on entrepreneurial intentions has been neglected in the literature, especially in Ghana. This study investigates the effect of TPB dimensions such as perceived attitudes, subjective norms and perceived behavioural control on entrepreneurial intentions in Ghana. The study uses survey data from 120 students from the Kwame Nkrumah University of Science and Technology and employs the hierarchical regression method. The study finds evidence supporting that developing a positive attitude towards entrepreneurship affects students' intentions to become entrepreneurs. In addition, the results show that perceived behavioural control towards entrepreneurship has a positive and significant influence on students' entrepreneurial intentions of students. The study concludes that developing positive attitudes and behavioural control enhances students' entrepreneurial intentions.

## 5.3 Implications and Recommendations

This study has implications for theory. Several studies on entrepreneurship have been based on the theory of planned behaviour. The results support the appropriateness of using the theory of planned behaviour in determining factors that influence entrepreneurial intentions. Second, this study has implications for practice. There is a surge in unemployment in Ghana. This in part is attributed to the insufficient transship awareness across various tertiary schools and highly politicized and discriminatory government support of entrepreneurs. Thus, this study has implications for a sound entrepreneurship framework that addresses the entrepreneurial needs of aspiring entrepreneurs.

The results demonstrate that developing positive attitudes and positive behavioural control enhances students' entrepreneurial intentions. Based on these findings, this study recommends that entrepreneurship education must be structured to develop individuals' attitudes to have a positive outlook on becoming entrepreneurs.

#### 5.4 Recommendations for Further Studies

This study only investigates the direct effect of the TPB dimensions on entrepreneurial intentions. However, the flow from EE using TPB in EI cannot always be direct. Therefore, future studies must investigate how other factors such as entrepreneurial motivation, influence this nexus



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## Appendices

### KNUST School of Business

COLLEGE OF HUMANITIES AND SOCIAL SCIENCES

..KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY, KUMASI

University Post Office, Kumasi-Ghana West Africa

SCHOOL OF BUSINESS (Department of Marketing and Corporate Strategy)

### **EFFECT OF ENTREPRENEURSHIP EDUCATION ON ENTREPRENEURIAL INTENTION AMONG TERTIARY STUDENTS AT THE KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY**

Introduction,

Thank you for considering participating in this research that seeks to investigate the effect of entrepreneurship education on students' aspirations and career intentions; attitude to start a business and entrepreneurial intention. While this research is for academic purposes, it also seeks

to generate practical insights to help governments leverage entrepreneurship education for social and economic good.

For confidentiality reasons, kindly do not indicate your name to us. Only reflect on your personal experience on entrepreneurship education to respond to the statements/questions in the questionnaire. We can assure you that your responses will be anonymized and used only for statistical and academic purposes.

The questionnaire has specific instructions to follow and scales to use to indicate your responses. Every statement/question included in the questionnaire is relevant, and although some appear quite similar, they are also unique in many ways, so **kindly do well to respond to each**. The questionnaire will take about **20 minutes** to complete. All questions and concerns about the research can be directed to **Mrs Mariata** (Tel: 0247246499), a postgraduate researcher who is leading the fieldwork.

As a token of appreciation for participating in the study, you will receive a summary report of the study's key findings and recommendations. Please provide your email address here (in case you are interested in this package):

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Thank you in advance for participating; your co-operation is much appreciated. By continuing, you are consenting to participate.

Yours sincerely

**Mariata Yusifu**



**SECTION A**

*This section presents different scales for evaluating different sets of statements. Using the respective scales, kindly tick/circle a number that represents your opinion on each statement.*

**Kindly use the following scale to evaluate the statements in the subsequent table:**

Not possible at all	Not possible	Somehow not possible	Neither possible nor impossible	Somehow possible	Possible	Totally Possible
1	2	3	4	5	6	7
Indicate your level of agreement with the following statements from 1 (total disagreement) to 7 (total agreement):					<i>Not possible at all</i>	<i>Totally Possible</i>
<b>Attitudes (Source: Lin'an and Chen, 2009)</b>						
In my opinion, being an entrepreneur entails more advantages than disadvantages					1	2 3 4 5 6 7
To create employment for other people					1	2 3 4 5 6 7
The idea of becoming an entrepreneur appeals to me					1	2 3 4 5 6 7
To have a high income					1	2 3 4 5 6 7
I would start a company if I had the opportunity and the necessary resources					1	2 3 4 5 6 7

**Kindly use the following scale to evaluate the statements in the subsequent tables:**

Total disagreement	Disagree	Somehow disagree	Neither agree nor disagree	Somehow agree	Agree	Total Agreement
1	2	3	4	5	6	7

Indicate your level of agreement with the following statements from 1 (total disagreement) to 7 (total agreement):	<i>Total disagreement</i>							<i>Total agreement</i>						
<b>Perceived Behavioural Control (Source: Lin~an and Chen, 2009)</b>														
It would be easy for me to create a company and keep it in the business	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I can control the creation process of a new company	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I know enough practical details to start a company	1	2	3	4	5	6	7	1	2	3	4	5	6	7
I know how to develop an entrepreneurial project	1	2	3	4	5	6	7	1	2	3	4	5	6	7
If I tried to start a business, I would have a high chance of success	1	2	3	4	5	6	7	1	2	3	4	5	6	7

**Kindly use the following scale to evaluate the statements in the subsequent tables:**

Total disagreement	Disagree	Neither agree nor disagree	Somehow agree	Agree	Total Agreement
1	2	3	4	5	6

Indicate your level of agreement with the following statements from 1 (total disagreement) to 7 (total agreement):	<i>Total disagreement</i>						<i>Total agreement</i>					
<b>Active Norms (Source: Lin~an and Chen, 2009)</b>												
Entrepreneurs are a dynamic individual	1	2	3	4	5	6	1	2	3	4	5	6
Entrepreneurs have good organisational skills	1	2	3	4	5	6	1	2	3	4	5	6
Entrepreneurs have good financial and managerial skill	1	2	3	4	5	6	1	2	3	4	5	6
Entrepreneurs are very innovative	1	2	3	4	5	6	1	2	3	4	5	6
Entrepreneurs are very innovative. Entrepreneurs are personally very wellprepared	1	2	3	4	5	6	1	2	3	4	5	6

**Kindly use the following scale to evaluate the statements in the subsequent tables:**

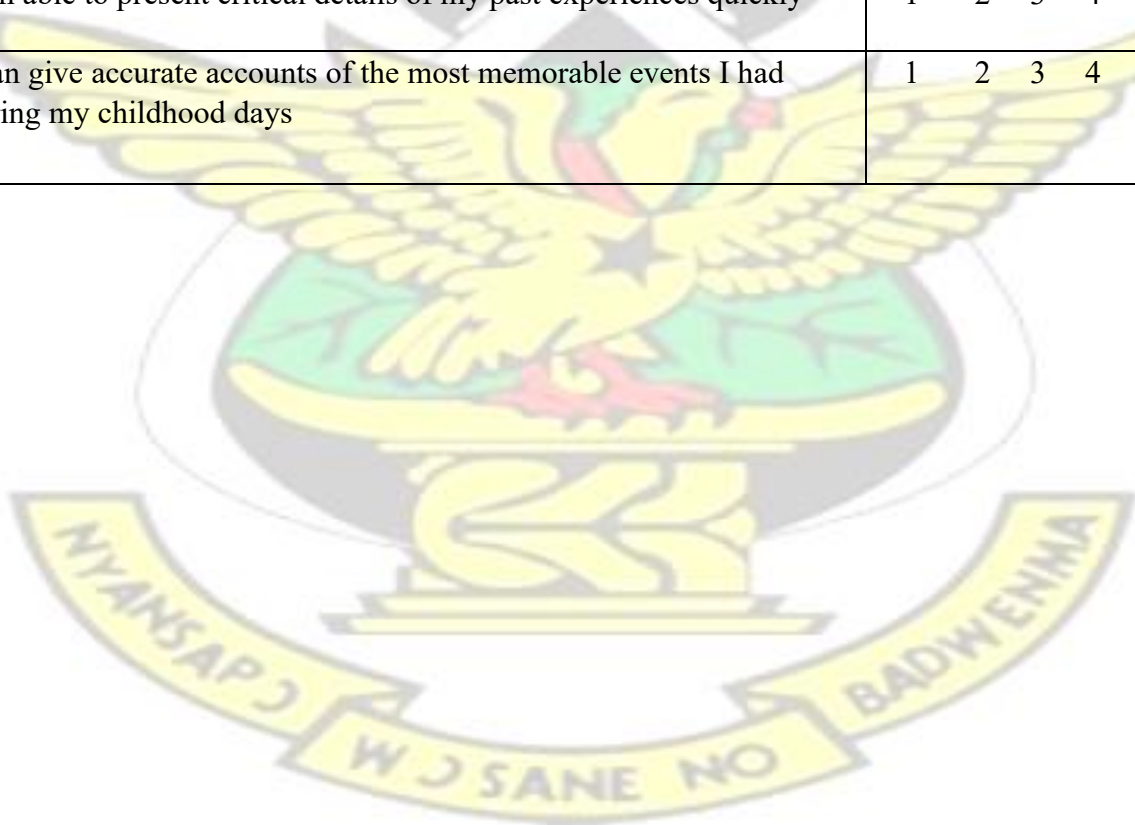
Total disagreement	Disagree	Somehow disagree	Neither agree nor disagree	Somehow agree	Agree	Total Agreement
1	2	3	4	5	6	7
Indicate your level of agreement with the following statements from 1 (total disagreement) to 7 (total agreement):					<b>Strongly disagree</b>	<b>Strongly agree</b>
<b>Entrepreneurial intention (Source: Lin'an and Chen, 2009)</b>						
I am ready to do anything to be an entrepreneur.					1	2 3 4 5 6 7
I will make every effort to start and run my own firm					1	2 3 4 5 6 7
I am determined to create a firm in the future					1	2 3 4 5 6 7
I have the firm intention to start a firm someday					1	2 3 4 5 6 7
I have been seriously considering creating a company in the future					1	2 3 4 5 6 7

### SECTION B

*This section collects profile information about you and your company.*

>> Your Gender? <input type="checkbox"/> Male <input type="checkbox"/> Female  >>Kindly provide your age group. <input type="checkbox"/> 18-25 <input type="checkbox"/> 26-35 <input type="checkbox"/> 36-45 <input type="checkbox"/> 46-60  >>Your father profession <input type="checkbox"/> Entrepreneur <input type="checkbox"/> Not working <input type="checkbox"/> Employee <input type="checkbox"/> >60	
<b>To what extent do you disagree or agree with the following statements?</b>	<b>Strongly disagree</b> <b>Strongly agree</b>
The questionnaire deals with issues I am very knowledgeable about	1 2 3 4 5 6 7

The questionnaire deals with issues that I am very interested in	1	2	3	4	5	6	7
I am completely confident about my answers to the questions	1	2	3	4	5	6	7
I am confident that my answers reflect the organization's situation	1	2	3	4	5	6	7
Minor setbacks tend to irritate me too much	1	2	3	4	5	6	7
Often, I get irritated at little annoyances	1	2	3	4	5	6	7
There are days when I am "on-edge" all of the time	1	2	3	4	5	6	7
I am capable of recalling past events accurately	1	2	3	4	5	6	7
I am able to present critical details of my past experiences quickly	1	2	3	4	5	6	7
I can give accurate accounts of the most memorable events I had during my childhood days	1	2	3	4	5	6	7





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