



**The Effect of Entrepreneurship Education Programme on Nigerian Graduates' Entrepreneurial Intentions**

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*'Kemi Chukwuma-Nwuba (2019)*

## **Dedication**

This thesis is dedicated to my Lord and saviour **Jesus Christ**, by whom “the stone which the builders rejected, the same is become the head of the corner” (Luke 20:17b).

### Publications and Conference Papers

I hereby declare that the following journal article and conferences papers have emerged from this thesis. Attached as appendices are the abstracts of the peer-reviewed article and the conference papers.

S/N	Article Type	Publication Description
1	Journal	The influence of culture on entrepreneurial intentions: a Nigerian university graduates' perspective. <i>Business and Economic Development in Africa</i> , 2018, 10(3), 213-232. doi/abs/10.1080/19186444.2018.1507877. Abstract attached as appendix K
2	Conference	The influence of culture on entrepreneurial intentions: a study of Nigerian university graduates. Paper presented at the 8th African Business and Entrepreneurship Conference, Virginia Commonwealth University, Richmond, USA, October 4-7, 2017
3	Conference	Entrepreneurial Education and Graduates' Entrepreneurial Intentions: Pedagogies in Nigerian Universities. Paper presented at the City University of London Conference. June 22, 2017
4	Conference	Entrepreneurial intentions of University graduates: An application of the theory of planned behaviour. Paper presented at the Faculty of Business and Law conference, University of Northampton, June 23, 2017
5	Conference	Development of entrepreneurial intentions: Influence of teaching methodologies. Paper presented at the 2017 Institute for Small Business and Entrepreneurship conference, Belfast, United Kingdom, November 8-9, 2017

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## Abstract

Nigeria introduced entrepreneurship education programme in the undergraduate curriculum as a compulsory module in all its universities, with the objective of nurturing entrepreneurial intentions in the university graduates. This study evaluated the programme by investigating its effectiveness in nurturing entrepreneurial intentions in university graduates. The primary objective was to determine the effect of the entrepreneurship education programme on the entrepreneurial intentions of the graduates. The research was a sequential explanatory design, a mixed method of quantitative study followed by a qualitative study. The quantitative study was implemented through cross-sectional survey and quasi-experimental designs with two samples of 409 graduates who constituted the experimental group and 402 undergraduates who formed the control group while the qualitative study was implemented through in-depth interviews with six entrepreneurship education programme lecturers. All the samples were drawn from six universities in Nigeria. Furthermore, the theoretical framework was the theory of planned behaviour. Using the structural equation modelling (SEM) - AMOS, the quantitative study modelled the effects of entrepreneurship education programme proxied by traditional teaching methods and innovative teaching methods, and cultural values on the entrepreneurial intentions of university graduates with personal attitude and subjective norm as mediating variables. Findings revealed that teaching methods have only partial effect on entrepreneurial intentions. Cultural values affect entrepreneurial intentions indirectly through personal attitude and subjective norm. In addition, personal attitude and subjective norm were found to be significant in predicting entrepreneurial intentions. Fundamentally, the entrepreneurship education programme resulted in the decline of the entrepreneurial intentions of the graduates and as such has an adverse effect. The programme had no effect on the personal attitudes of the graduates. The qualitative study confirmed the quantitative finding that the lecturers employ mostly traditional teaching methods with lecture method as the most common. It also found that the lecturers have no qualifications in entrepreneurship education and are not given the relevant training. It can be concluded that the entrepreneurship education programme is ineffective in nurturing entrepreneurial intentions and is disadvantageous as a measure to curb graduate unemployment in Nigeria. The research has several implications for policy including: the possibility to provide a framework for policy reforms in entrepreneurship education programme undergraduate curriculum and policy reforms regarding evaluation and monitoring of the programme.

Keywords: Entrepreneurship Education, Entrepreneurial Intentions, Cultural Values, Theory of Planned Behaviour, Attitude, Subjective Norm

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## List of Acronyms and Abbreviations

<b>Acronyms/Abbreviations</b>	<b>Full Meaning</b>
AGFI	Adjusted Goodness Fit Index
AMOS	Analysis of Moment Structures
BMAS	Benchmark Academic Standard
CFI	Comparative Fit Index
CMIN	Chi-square
CMIN/DF	Chi-square/Degrees of Freedom
CPD	Continuing Professional Development
DF	Degrees of Freedom
EE	Entrepreneurship Education
EEPs	Entrepreneurship Education Programmes
EI	Entrepreneurial Intention
FCT	Federal Capital Territory
GFI	Goodness Fit Index
GST	General Studies
MI	Measurement Invariance
MLI	Maximum Likelihood Index
NAEC	National Agency for Enterprise and Construction
NUC	National Universities Commission
NYSC	National Youth Service Corps
PA	Personal Attitude towards Entrepreneurial Behaviour
PBC	Perceived Behavioural Control
RMSEA	Root Mean Square Error of Approximation
RO	Research Objective
RQ	Research Question
SEM	Structural Equation Modelling
SEM (AMOS)	Structural Equation Modelling (Analysis of Moment Structures)
SN	Subjective Norm
SPSS	Statistical Package for Social Sciences
TETFund	Tertiary Education Trust Fund
TLI	Tucker-Lewis Index
TNA	Thematic Network Analysis
TPB	Theory of Planned Behaviour



## Chapter 1 - Introduction

Entrepreneurship education occupies a central role in contemporary education globally (Charney and Libecap, 2000). It is an important subject in both academic research and educational policy designs. Indeed, policy makers in education in several countries have taken steps through curriculum designs to ensure that education contributes to entrepreneurship, the development of entrepreneurs and that the influence is widespread and sustained (Nabi and Holden, 2008; Draycott and Rae, 2010). This is largely due to the part that entrepreneurship plays in the development and growth of economies (Fellnhofer and Kraus, 2015; Bosma *et al.*, 2018). The question of developing entrepreneurs who will propel the economy of nations through entrepreneurship education programmes (EEPs) has attracted global attention for decades (Liu *et al.*, 2019). Of particular relevance is the nurturing of entrepreneurial intentions in university graduates through entrepreneurship education programmes with a view to facilitating their choice of entrepreneurship as career options among learners. This thesis presents the outcomes of research on Nigeria's compulsory EEP. The research investigated the link between the programme and the entrepreneurial intentions EI of graduates who participated in the programme. This chapter presents the introductory aspects of the work.

### 1.1 Background to the Study

Entrepreneurship is generally accepted as the force through which countries develop and grow (Fellnhofer and Kraus, 2015). The importance of entrepreneurship to economies has been recognised since the fifteenth century (Kurczewska, 2016; Schumpeter, 1912 in Maresch *et al.*, 2016). It is seen as indispensable to economies (Bruyat and Julien, 2000). Researchers, therefore, continually attempt to learn more about the entrepreneurial process with the aim of having an improved understanding of the driving forces in entrepreneurs (Gartner, 2001; Bull and Willard, 1993). Consequently, entrepreneurship has witnessed

growing research in its various aspects (Erkkilä, 2000; Isaacs *et al.*, 2007; Barba-Sanchez and Atienza-Sahuquillo, 2018; Goldstein and Gafni, 2019; Sang and Lin, 2019).

The recognition of the important role of entrepreneurship in economic development and growth precipitated the teaching of entrepreneurship in schools to raise potential entrepreneurs (Shane and Venkataraman, 2000; Kuratko 2005; Chiu, 2012). Consequently, EEP developed as a course of study in universities and colleges and has been growing rapidly (Katz, 2003; Kuratko, 2005). It has indeed become an area of study that is important (Crant, 1996; Gorman *et al.*, 1997; Zhao *et al.*, 2005) and a part of the process of building a more solid culture of entrepreneurship and entrepreneurial intentions (Chiu, 2012). The growth of EEP is driven by the recognition of the role that entrepreneurship plays in employment generation, innovation, productivity and economic growth (Shane and Venkataraman, 2000; Kuratko 2005; Chiu, 2012). Of interest to this study is the link between EEP and the development of entrepreneurial intentions in EEP participants.

Entrepreneurial intentions are thought of as fundamental contributing factors to the formation and growth of entrepreneurship (Usman and Yennita, 2019). Consequently, entrepreneurial intention has become a key topic (see Krueger *et al.*, 2000; Liñán *et al.*, 2013). Researchers and policy makers believe that EEP affects its participants such that entrepreneurial intentions are developed in them with the potential for them eventually becoming entrepreneurs (Autio *et al.*, 1997; Rengiah and Sentosa 2015).

There is a substantial body of literature on the impact of EEP (Byabashaija *et al.*, 2010; European Union, 2012). However, these studies mostly focus on the Western countries (Farrukh *et al.*, 2018). Empirical evidence suggests that findings from such studies might not be applicable to other countries due to environmental and cultural differences (Gorman *et al.*, 1997; Fayolle *et al.*, 2006; Iakovleva *et al.*, 2011; Solesvik *et al.*, 2012). EE impact studies on

developing countries are few, especially in relation to its effect at university level (Byabashaija and Katono, 2011; Zhang *et al.*, 2014).

Indeed, for an EEP study to be of practical and policy significance to any society, it should reflect the educational and cultural practices in the context within which it is undertaken. This is more so as cultural and environmental factors have been found to influence entrepreneurial intentions of EEP participants (Thurik and Dejardin, 2011). Thus, findings from developed countries' studies may not facilitate appropriate policy response in a developing country context. The paucity of studies in developing countries' context, especially regarding the nurturing of EI in EE programme participants, creates important knowledge gaps in the EE literature which need to be filled. More research is therefore necessary to evaluate the effectiveness of EEPs in a developing countries' context especially in relation to the development of EI in EEP participants, to have an in depth understanding of the relationship between EEP and EI. This study addresses this issue in the context of Nigeria.

Nigeria is plagued by unemployment especially among graduates (Longe, 2017). Graduate unemployment has been on the increase since the mid-1980s and has been accompanied by socio-economic complications (Adeyeye and Tugbobo, 2011). To accentuate the unemployment level among graduates in Nigeria, a former minister of finance who doubled as the coordinating minister of the economy, Dr Okonjo-Iweala, noted in 2014 that Nigeria had a pool of 5.3 million unemployed graduates. Similarly, Adejimola and Tayo-Olajubutu (2009) found that 80% of university graduates are unable to secure jobs annually. This alarming figure of unemployed graduates has consistently been a subject of concern to successive governments in the country. Given the position of Nigeria in sub-Saharan Africa, the impact of graduate unemployment has repercussions on neighbouring countries, and it is apparent by the Boko Haram terrorist activities which rapidly spread to the Cameroons, Chad and Niger (Chukwuma-Nwuba 2018).

To address graduate unemployment, Nigeria introduced a compulsory EEP in the university undergraduate curricula in 2002. The programme is aimed at developing entrepreneurial intentions in university graduates and consequently producing enterprising individuals who will produce jobs rather than seek jobs (National Universities Commission, 2011). The essence of this is to tackle graduate unemployment through the graduates themselves.

For such a programme to provide the expected benefits it needs to be evaluated from time to time to determine its effectiveness and enable reforms where necessary. Thus, evaluating the EEP in Nigeria to ascertain the role it plays in developing EI in programme participants is essential for policy reforms. Existing literature has not addressed this issue. The few available studies focus on evaluating EE for sustainable development (Arogundade, 2011; Nwambam *et al.*, 2018), or EE and career intentions (Ekpo, 2011). None of these studies investigated the effectiveness of the EE programme as measured by the effect of the programme on the EI of graduates who participate in the programme. This situation also leaves knowledge gaps in the EE literature. The intention of this study is to fill these gaps.

Thus, fulfilling the need to provide a robust EEP evaluation study in a developing country's context and particularly to evaluate the effectiveness of Nigeria's EEP by determining the extent of the effect of the programme on the EI of university graduates is the primary motivation for this research. This is essential given the goal of the programme to enable the development of EI in university graduates and possibly leading to them becoming entrepreneurs.

The motivation for this research derives from personal experience, professional practice and the need to fill gap in literature. First, as an entrepreneurship educator who has passion for youth, and the first-hand witnessing of their inability to secure jobs resulting in apparent frustration, crystallised my resolve after returning from completing a Master's degree

programme at the University of Manchester. Secondly, is a desire to contribute to the improvement of EEP in Nigeria given its acknowledgement as one of the routes through which employment generation can be achieved by university graduates. Furthermore, the interest to determine whether the EEP in Nigerian universities is achieving its objective of nurturing an entrepreneurial mindset in the graduates, the end point being to curb graduate unemployment which has become endemic in Nigeria emanated from the author's professional practice. Thirdly, the necessity to extend research on the connection between EE and EI beyond its traditional concentration in the West to Africa, a region of different cultural setting and economic development where such research is sparse to fill gap in literature.

It is consequently hoped that the dissemination of the outcome of this study will potentially inform policy realignment of the EE implementation, thus contributing to the achievement of the goal of the programme.

## 1.2 Problem Statement

Nigeria has been experiencing rapid growth in university education in the past five decades (Iruonagbe *et al.*, 2015). This is reflected in the growth of universities in the country from five in the early 1960s to 170 by 2018, comprising 43 federal, 48 state and 79 private universities (National Universities Commission, 2019). The growth in the number of universities inevitably precipitated an increase in graduate turnout. Some authors believe that the large turnout of university graduates has worsened the country's unemployment problems (Kayode-Ajayi *et al.*, 2008; Magaji *et al.*, 2013). Meanwhile, the economy is not growing at such a pace that it can absorb these graduates in the job market, resulting in many graduates remaining unemployed for several years after graduation. Some of these unemployed graduates end up engaging in social vices such as armed robbery and cultism (Adejimola and Tayo-Olajubutu, 2009; Salami, 2011; Akhuemonkhan *et al.*, 2013). The unemployment problem in Nigeria is thought to manifest in three dimensions, namely unemployment,

underemployment and poverty (Federal Ministry of Education: Technology and Science Education Department, 2002).

Occasioned by the failure of the public sector and development programmes that are targeted at promoting small businesses (Raimi *et al.*, 2014) various government administrations have designed different programmes directed at employment generation, poverty reduction and wealth creation. Unfortunately, despite these programmes, unemployment, poverty and crime rates have been on the increase (Akhueomonkhan *et al.*, 2013).

Graduate unemployment has been of such concern to the government that it decided to tackle it through intervention in the undergraduate curriculum. It introduced a compulsory EE programme for all undergraduate studies in 2002 with the goal of nurturing EI in the graduates who participate in the programmes which it is hoped will facilitate their choosing entrepreneurship as a career option (National Universities Commission, 2011).

Dealing with graduate unemployment requires not only that measures are put in place to tackle the problem but also that these measures are effective. As the EEP was introduced to nurture entrepreneurial intentions in graduates who participate in the programme, it is important to know how effective the programme is. This is essential as the programme is purposely designed to tackle graduate unemployment, a socio-economic problem that has become endemic in the country. One way of ascertaining the effectiveness of this programme is to determine the effect of the programme on the EI of graduates who have participated in it. Existing literature has not investigated this problem. In fact, little is known on the subject in developing countries' context. Moreover, findings from developed countries where a substantial amount of literature exists may not be applicable to Nigeria because of differences in the environments, cultures and educational systems.

Thus, the important question of the link between EEP and EI of graduates who participate in Nigeria's compulsory EEP is a problem the EE literature is yet to address. Such an investigation is necessary for the efficient implementation of the programme and to enable the introduction of policy reforms that will respond more effectively to the local educational and economic requirements. Completing this investigation informed the undertaking of this research. Through a cross-sectional survey of samples of graduates and undergraduates and interviews of EE teachers in six federal universities in North-central Nigeria, this research investigated the problem.

### 1.3 Research Aims and Objectives

The aim of this research is to investigate the effect of the compulsory entrepreneurship education programme in Nigeria's universities on the entrepreneurial intentions of graduates with a view to determining the effectiveness of the programme.

To accomplish this aim, the study addressed the following objectives. The brackets after each objective indicates the method used for each research question.

1. To examine the effect of entrepreneurship education on graduates' entrepreneurial intentions (QUAN).
2. To ascertain how cultural values, affect graduates' entrepreneurial intentions (QUAN).
3. To assess the effect that personal attitude has in determining entrepreneurial intentions (QUAN).
4. To assess the effect that subjective norm has determining entrepreneurial intentions (QUAN).

5. To determine the levels of the entrepreneurial intentions and personal attitude of the respondents and how entrepreneurship education programme affects the entrepreneurial intentions and the personal attitude of the graduates (QUAN)
6. To explore the implementation strategies of the entrepreneurship education programme (EEP) in Nigerian universities (QUAL).

To attain these objectives, research questions (RQ) were articulated. The broad RQ is: *How effective is the entrepreneurship education programme in Nigerian universities in nurturing entrepreneurial intentions among the graduates?* The broad research hypothesis embedded in the RQ and posits that: entrepreneurship education is effective in nurturing entrepreneurial intentions among graduates. The specific questions and hypotheses are presented in Section 4.6.

#### 1.4 Justification and Relevance of Study

This study aims to investigate the effect of the EEP in Nigeria's universities on the graduates' EI. The problem of graduate unemployment which led to the inclusion of the EEP in the curriculum of universities has received significant attention in the press. Indeed, the British Council report of 2014 graduate employability in sub-Saharan Africa suggests that level of unemployment among graduates in Nigeria has become a cause for concern (British Council, 2014). Notwithstanding, the researcher is not aware of any study on evaluating the effectiveness of the EEP in developing entrepreneurial intentions in university graduates as searches conducted in data bases such as Scopus data base, Web of Science, Science Direct, ABI/Inform, Ethos, Google Scholar and EBSCO Host did not reveal any.

Articles for the literature reviews were selected in four search steps which began with the use of the key words 'entrepreneurship education'; 'entrepreneurship education and entrepreneurial intentions' 'entrepreneurship education in Nigeria' and 'entrepreneurship education impact studies'. Other considerations for paper selection for review were:



1. Articles using quantitative studies to demonstrate statistical rigour. For example, study should either be quasi-experimental, use pre-test and post-test measures, post-test with samples from more than one source or large samples or a combination of any of these requirements.
2. Full text of the studies must be available.
3. Studies from variety of contexts to enable the examination of similarities and differences in results.
4. Mixed methods studies published in peer-reviewed journals.
5. Snowballing was also applied to obtain studies from variety of contexts.

Secondly, research in EEP outcomes is thought to be in its infancy, resulting in a scarcity of studies and the few available studies are focused on developed nations whose findings might not be applicable to developing/transition economies (Gorman *et al.*, 1997; Fayolle *et al.* 2006; Solesvik *et al.*, 2012). Thus, to provide empirical evidence of the links between these two elements in emerging economies, studies are required because outcomes could vary based on environmental, technological and cultural differences (Forbes, 1999; Pittaway and Cope 2007; Liñán and Chen, 2009).

Thirdly, EEPs are acknowledged as an important aspect of education and its promotion in higher institutions of learning is consequently encouraged (UNESCO, 1998). It is therefore important to ascertain if the programme (a top-down policy) is producing the desired change in attitude towards entrepreneurial activities which is its main objective.

Fourthly, some scholars have observed that researching EEPs outcomes requires methodological rigour and needs to be theory driven (Lorz *et al.*, 2013; Rideout and Gray, 2013). This research explores the literature to discover and adopt the most suitable theories to guide the study and the most appropriate methodology to conduct it.

Finally, culture is thought to influence entrepreneurial intentions (Ferreira *et al.*, 2015). It is often said that culture affects the degree to which a society sees entrepreneurial activity as attractive or otherwise and that this societal perception has implication for EI development. Research is required to provide depth understanding of the role of culture in intention formation. These gaps make this study relevant and timely.

#### 1.4.1 Scope of the Study

The study focuses on new graduates from Nigerian universities. However, to determine the counterfactual, undergraduates of the same universities as the graduates were surveyed to serve as the control group. The respondents were selected from six of the seven federal universities in the North-central geopolitical zones of the country. Catchment area is practiced in Nigeria and it refers to the geographical area that a university will prioritise in terms of student admissions. Admissions into universities are therefore not wholly on merit, but also based on a quota system to allow equal access to education for all and for the promotion of national integration (Omeje, *et al.*, 2016). The policy is used to redress the perceived educational imbalance in Nigeria (Adeyemi, 2001). This zone was therefore chosen purposively because the study intends to have respondents across all the six geo-political zones of the country, and it is from this zone that respondents from all over the country can be accessed due to the catchment area policy.

The study is limited to the exploration of graduates' entrepreneurial intentions in Nigerian universities. It investigates the EEP pedagogies, the role of culture in the development of EI and the EEP implementation strategy.

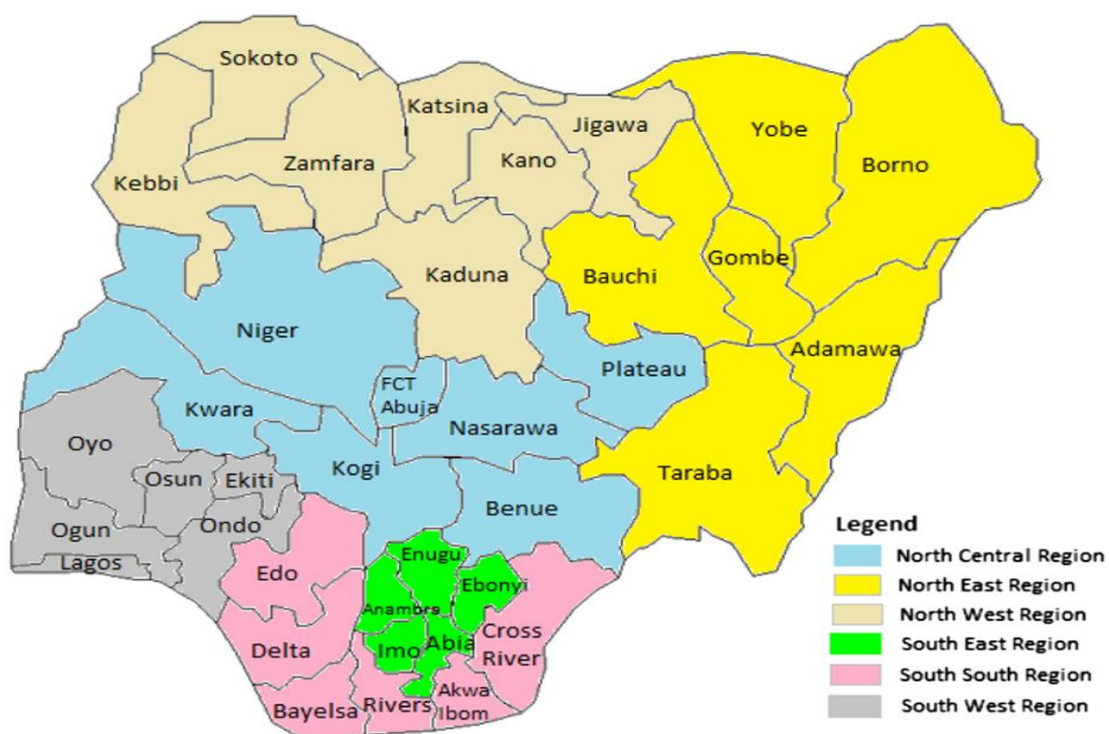
#### 1.5 Research Context

Nigeria is a Sub-Saharan African country in the West African sub-region. It borders the Gulf of Guinea, between Cameroon and Benin Republic. The country covers a land area of 910,768 square kilometres, including 13,000 square kilometres of water (The World

Factbook, 2009) and has an estimated population of about 200 million (Central Intelligence Agency, 2019). Nigeria is the most populous country and the largest economy in Africa. Consequently, it is a major player in the political and economic activities of the West African sub-region and Africa in general and events in the country have the potential for regional impact. It could be the source of the growth of the African continent (Dabalen *et al.*, 2000). Thus, research on an educational programme such as EE in Nigeria could have implications for other African countries.

The simplified common country assessment of the UN Country team report of June 2012 notes that one of the challenges to economic growth and performance of Nigeria is the paradox of solid economic growth that is accompanied by rising poverty and growing unemployment (UNCT - Nigeria, 2012). Thus, there is a need for research on the country's EEP which is designed to tackle graduate unemployment.

***Figure 1-1: Map of Nigeria***



Source: Google Maps

Nigeria is divided into 36 administrative states and a federal capital territory grouped into six non-administrative geopolitical zones (Figure 1-1). These zones are inhabited by different ethnic groups and research suggests that the Igbo in the South East are reputed to be the most entrepreneurial (MG Modern Ghana, 2013; Orugun and Nafia, 2014). Federal universities in the North Central geo-political zone were selected for the study. The zone (coloured blue in Figure 1-1) comprises the Federal Capital Territory (FCT), Benue Kogi, Kwara, Nassarawa, Niger and Plateau States. The zone was chosen because the catchment area of the individual universities extends to the surrounding zones resulting in the combined catchment areas of universities cutting across the different zones of the country. The zone has representation of students and graduates from all the regions of the country, thus, it is suitable for the study. However, due to attacks by Fulani herdsmen at the time of the data collection, travelling to some states was dangerous. Consequently, data could not be collected from one of the universities earlier identified.

## 1.6 Thesis Structure

The rest of the thesis is structured as indicated below. Chapter 2 provides the review of the pertinent literature. It covers the relevant concepts and traces the inauguration of entrepreneurship education as a course of study. The chapter also provides a critical review of entrepreneurial intention studies and indicates the new directions of research on the subject. The gaps identified in the literature that warranted the study are highlighted. Finally, it presents EEP impact studies in different countries and a summary.

In Chapter 3, the literature review continued with a focus on the reviews of entrepreneurship programmes in Nigeria. The implementation of EEPs was also reviewed with focus on pedagogies and a reflection on how a holistic approach to EEPs through the development of an entrepreneurship ecosystem might be important to a successful EEP in Nigeria. In

addition, a critical review of the connection between cultural values and entrepreneurship was undertaken. The chapter concludes with a summary.

In Chapter 4, theoretical models for researching the impact of entrepreneurship education and various outcomes were explored. Thereafter, the theoretical frameworks guiding the study was set out. Next, a conceptual framework was developed to be specified in the SEM – AMOS as the *priori* model and tested for fit with the data in chapter six. The chapter also indicates that the Ajzen (1991) theory of planned behaviour was the most suitable of the several intentionality theories considered. Additionally, the chapter presents the variables for the model specifications and the research questions and hypotheses.

Chapter 5 presents the consideration of the philosophical perspectives of the study in the bid to arrive at the most suitable methodology for the research. It indicates that the study adopts realism which supports mixed methods research design. It is further revealed in the chapter that the study is a sequential explanatory and quasi-experimental design. The data collection mechanism and the analysis tools applied for both the quantitative and the qualitative studies are detailed in the chapter. Similarly, it is shown in the chapter that ethical matters were duly considered, and that a risk assessment of the study was conducted based on guidelines set by the Safety, Health and Environment team of the University of Northampton. Chapter 6 contains the data analysis while the results and the discussion for both studies are in chapter 7. Chapter 8 is the conclusion and it contains a summary of the key findings and the contribution of the study to knowledge. It also outlines the implications of the study, suggests areas for further research and closes the thesis with concluding remarks.

## 1.7 Thesis Statement

There is the general acceptance that EEP aids the development of EI. However, it might not be the silver bullet for nurturing entrepreneurial intentions, especially when the EEP is made compulsory, given its adverse effect on the entrepreneurial intentions of the graduates in this

study and the negative effect found in some previous studies. Hence, this study argues that the compulsory EEP in Nigerian universities are unlikely to nurture entrepreneurial intentions that will translate to entrepreneurial behaviour and it is doubtful that in its current state, it is a potent mechanism to resolve graduate unemployment in the country.

## 1.8 Summary

This chapter provided the background to the study, explained the research context, and provided the aims and objectives of the study. The chapter also provided a synopsis of the structure of the thesis and concluded with this summary. The next chapter will review pertinent literature on entrepreneurial intention and entrepreneurship education. It will specify the gaps in the literature which this study aims to fill.

## Chapter 2 Literature Review: Part 1

### 2.1 Introduction

This chapter reviews the literature on EI and EEPs and reviews EEP impact studies. These subjects are core and they relate to the objectives of this study. It concludes with a summary and links the present study to the literature.

There is a general agreement that entrepreneurship is a vital element and a major factor of international competitiveness, economic growth, and innovation (Wong *et al.*, 2005; Başı and Alkan, 2015). Accordingly, the development of entrepreneurial competency has become highly sought after by both practitioners and policy makers (OECD, 2011). Thus, von Graevenitz *et al.* (2010) reasoned that policy makers believe that new venture formation is instrumental to technological progress and economic growth by policy makers. Accordingly, attention is directed at universities to provide formal EE with the aim of promoting aspirations for entrepreneurship among the highly educated (DTI, 2000; Lüthje and Franke, 2002). Hence, alumni of universities are considered as indispensable sources of future entrepreneurs who can engage in innovative and dynamic businesses (Lüthje and Franke, 2002) It is therefore not surprising that EE has been accorded special attention for the future benefit of economies (European Commission, 2014; Young, 2014).

Similarly, universities are to teach entrepreneurship, support research and development in different disciplines given the recognition of entrepreneurial activities in economic development and its significant contribution to job creation (Loucks, 1988; Consortium for Entrepreneurship Education, 2004; Herrmann, 2008; Raposo and do Paço, 2011; Haase and Lautenschläger, 2011; Raposo and do Paço, 2011; Matlay, 2012; Elaine and Gray, 2013; Zhang *et al.*, 2014; Başı and Alkan, 2015). It is also understood that most jobs are started by individuals who are entrepreneurially minded (Consortium for Entrepreneurship Education, 2004). In view of the dynamism in the present global marketplace, it seems essential that

universities build students to become entrepreneurial, recognise opportunities, generate ideas and turn the ideas into business ventures (Consortium for Entrepreneurship Education, 2004).

Against this background, the establishment of more EE programmes in universities is perceived as a speedy way to increase both the quantity and quality of new venture creation (Matlay, 2012). It could also serve as a source of competitive advantage if it results in increased numbers of entrepreneurs who control and can employ rare key resources and capabilities that are difficult to substitute and hard to reproduce (Jones and English, 2004).

Despite the positive perception of EEPs, however, there seems to be limited empirically rigorous studies that link entrepreneurship education with entrepreneurial outcomes (Byabashaija and Katono, 2011; Matlay, 2012) and particularly across cultures (Liñán *et al.*, 2013). Given the value placed on entrepreneurship by nations resulting in its promotion in higher education institutions as OECD (2012) indicates, research is required to determine the contribution of such programmes to different economies to further our knowledge and understanding of its effects in diverse contexts given the reality of cultural differences.

## 2.2 Defining Entrepreneurship Education

Entrepreneurship education does not have a commonly accepted definition. Definitions reflect the objectives which an EE programme hopes to achieve given the various target audiences (Mwasalwiba, 2010). Matlay and Carey (2007) argue that the diversity in EE makes it necessary to explore different areas of the programme. In his semi-systematic review of 108 articles, Mwasalwiba (2010) assessed the alignment of each of the objectives of each EE programme with the target audience and the teaching methods to determine the impacts. The author found that 32% of the articles reviewed related entrepreneurship education to the process that aims at stimulating participants' intentions, attitudes, values and behaviours towards entrepreneurship either as a career option or to create an entrepreneurial community.



Although research in entrepreneurship education is growing, especially in advanced economies, the emerging body of knowledge is still affected by contextual and conceptual problems (Matlay and Carey, 2006; Mwasalwiba, 2010). A conceptual complication arguably is the simplistic one that identifies EE just with the training for the creation of businesses. An example of this is captured in the definition of EE by McIntyre and Roche (1999:33):

the process of providing individuals with concepts and skills to recognize opportunities that others have overlooked, and to have the insight and self-esteem to act where others have hesitated. It includes instruction in opportunity recognition, marshalling resources in the face of risk and initiating a business venture.

Contrary to this view, wider conceptions embrace objectives and stages that involve actions throughout the entire educational system and not just the creation of businesses. As Williamson *et al.* (2013) have suggested, it is important to have a clear understanding of the processes (soft outcome) that lead up to new venture creation (hard outcome). This would perhaps help to galvanise the actions required at the various stages to achieve the hard outcome. The various perspectives from which EE are conceptualised might still be summed up as venture creation given that it is that aspect of entrepreneurship that serves as the major tool for economic growth and development, job creation and poverty reduction. The initiatives of developing countries related to the utilisation of EE as an economic development tool may well be consistent with the lifelong learning model (see EC, 2016 in Table 2-1).

Table 2-1 shows selected definitions of EE. The European Commission (2016) definition captures the main ingredients of EE, which it considers to involve turning ideas into action, gaining the knowledge needed to function positively in a society and includes social and

commercial entrepreneurship. The definition incorporates social enterprise, which is lacking in most other definitions.

The QAA (2012) defines EE as a prerequisite for learners to function effectively as entrepreneurs. It is criticised on the basis that many corporate entrepreneurs are university drop-outs while some others have no exposure to entrepreneurship education or training. However, the EU (2006) definition seems to point at the crucial responsibility of institutions and educators in bringing together necessary stakeholders to enable the attainment of the objectives of any EE programme. Fayolle *et al.* (2006) nevertheless describe EEP as not entirely devoted on the instantaneous establishment of businesses but encompasses the acquisition of attitudes and skills for entrepreneurship (see Table 2.1). While each scholar as Table 2-1 shows, defined EEP with a focus on different aspects of entrepreneurship, Kurczewska (2016) explains EEP as having its legacy in general education. This study adopts the definitions of Jack and Anderson (1999) and Fayolle (2009). The definition of Jack and Anderson (1999) is adopted because it indicates that students who attend EE classes will have the capacity to evaluate career options, which could include the choice of entrepreneurship. It also shows that the choice of career is in the future. It also recognises the time lag between study time and engagement in entrepreneurial activities. Equally, Fayolle (2009) reflect the concepts of entrepreneurial mind-sets and attitude that are core to this study.

Linked to the definitional issues in EE is the subject of nomenclature. It is variously called enterprise education and entrepreneurial education and some authors, e.g. Colton (1990) and Garavan and O’Cinneide (1994), attempted to draw fine distinctions between the terms Hynes (1996) and Jones and English (2004) replaced entrepreneurship education with enterprise education and entrepreneurial education respectively. Meanwhile, Gibb (1993) explains that the term ‘entrepreneurship education’ is mainly used in the United States and

**Table 2-1: Defining Entrepreneurship Education**

<b>Authors</b>	<b>Date</b>	<b>Definitions</b>
European Commission,	2016:21	Entrepreneurship education is about learners developing the skills and mind-set to be able to turn creative ideas into entrepreneurial action. This is a key competence for all learners, supporting personal development, active citizenship, social inclusion and employability. It is relevant across the lifelong learning process, in all disciplines of learning and to all forms of education and training (formal, non-formal and informal) which contribute to an entrepreneurial spirit or behaviour, with or without a commercial objective.
Kurczewska	2016	One of the branches of education that relates to venture creation and entrepreneurial mindset.
QAA	2012	EE equips learners with the extra understanding, qualities and competences required to apply these abilities in the context of creating new firms or businesses.
OECD	2010	Education for entrepreneurship refers to the instruction in a range of skills and attributes that include the ability to manage risks, think creatively, work in teams and handle uncertainties.
Fayolle	2009:3	All activities that aim at fostering entrepreneurial mind-sets, attitudes and skills that cover a range of parts like idea generation, start-up, growth and innovation
Ministry of Education, Finland	2009:12	EE mainly refers to wide-ranging work done within the educational administration with a view to enhancing entrepreneurship. It is also provided and supported by many labour market parties and organisations.
Herrmann,	2008:12	A process which develops individual mind-sets, behaviours, skills and capabilities and can be applied to create value in a range of contexts and environments from the public sector, charities, universities and social enterprises to corporate organisations and new venture start-ups.
Wilson	2008:2	Provides a mix of experiential learning, skill building and most importantly mind-set shift.
Isaac, Visser, Friedrich and Brijlal	2007	The purposeful mediation by a tutor in the life of a learner to teach entrepreneurial qualities and skills to empower learners to survive in the business world.
Fayolle <i>et al.</i>	2006:702	Any pedagogical programme or process of education for entrepreneurial attitudes and skills which involves developing certain personal qualities. It is therefore not exclusively focused on the immediate creation of businesses.
European Union	2006	EE has dynamic role in developing eco-system that can encourage innovation.
Jones and English,	2004	A process of providing individuals with the ability to recognise commercial opportunities and the insight, self-esteem, knowledge and skills to act on them.
Jack and Anderson	1999	An avenue through which learners can appraise future career choices.
Hynes	1996:10	The process or series of activities which aims to enable an individual to assimilate and develop knowledge, skills, values and understanding that are not simply related to a narrow field of activity, but which allow a broad range of problems to be defined, analysed and solved.

Source: Compiled by the author

Canada, while ‘enterprise education’ is preferred in the UK and Ireland. Erkkila (2000) clarifies that the US uses only the term entrepreneurship education. Hence, some authors argue that both terms refer to the same subject and can be used interchangeably (Gibb, 1993; Mwasalwiba 2010). However, Garavan and O’Cinneide (1994) claim that whereas entrepreneurship education and enterprise education are conceptually the same, they are contextually different. Given the complexity of EEP in relation to definitions, pedagogies, content etc., differentiating based on context could further complicate the issues arising from definitional diversity. Nevertheless, UK and Irish authors are beginning to use the term ‘entrepreneurship education’ (see Matlay and Carey, 2007 and Henry *et al.*, 2005).

Despite the myriad definitions, there seems to be a consensus that EE is an educational process focused on influencing learners’ entrepreneurial attitudes, personal skills, entrepreneurial mindsets, new venture creation, all directed towards perceiving entrepreneurship as a career option. Overall, the lack of definitional agreement has not stopped the continuous growth of EE and irrespective of the terms used, the aim is to facilitate the development of an entrepreneurial mindset in people, resulting in engagement in entrepreneurial activities which supports socio-economic growth.

### 2.3 The Development of Entrepreneurship Education: A Synopsis

The initial identification of entrepreneurship with the entrepreneur (Cassis and Minoglou, 2005) was perhaps because the entrepreneur is the dominant figure in business. This emphasis however, shifted over time and business history research moved from the entrepreneurs as individuals to the study of firms (Cassis and Minoglou, 2005).

From the time entrepreneurship education was introduced in the United States in 1947, it has continued to enjoy growth with numerous modules and programmes being designed and implemented world-wide (Daniel, 2016). Although a contrary claim holds that the history of

EE can be traced to Japan in 1938 (Matlay, 2016), it is the American trajectory that is richly explored with ample information that can be easily accessed. Thus, it is assumed that the first entrepreneurship programme named Management of New Enterprises (MNE) was at the Harvard Business School (Cruikshank, 2005). Consequently, entrepreneurship programmes became domiciled in business schools (Olsen and Mykletun, 2012).

The University of South California (USC) launched the first MBA programme focused on entrepreneurship in 1971 and by 1972 it introduced entrepreneurship at undergraduate levels (Kuratko, 2003). Solomon *et al.* (1994) showed that by the beginning of the 1980s more than three hundred universities in the US had courses in small business and entrepreneurship (Kuratko, 2003). EE therefore brought about a significant dimension to education in terms of course presentation and the idea of self-employment. In sum, the EE discipline which started as MNE in the United States in 1947, has grown in popularity globally and obtained legitimacy even among other disciplines (Kuckertz, 2013).

#### 2.4 Entrepreneurial Intentions (EI)

Since EI has been identified as a key factor in the process of venture creation, it became the focus of research and has witnessed increased attention. Many academics have demonstrated that education and training in entrepreneurship are essential to nurturing entrepreneurial intentions that predict entrepreneurial behaviour (Noel, 2001; Fayolle *et al.*, 2005; Souitaris *et al.*, 2007; Liñán *et al.*, 2011; do Paço *et al.* 2011; Zhang *et al.*, 2014). Similarly, a direct positive correlation between HE investments in EEPs and student entrepreneurs has also been found (Varela and Jimenez, 2001).

However, like EE, EI does not have a universally accepted definition but unlike EE, the various definitions of EI are closely related and associated with both time and plan. The

differences in EEP and EI in definitions bring variations in practice. This may help explain why different countries have variations in their programmes.

**Table 2-2: Defining Entrepreneurial Intentions**

<b>Author and Date</b>	<b>Definitions</b>
de Pillis and Reardon (2007:383)	“The intention to start a business”
Wu and Wu (2008)	A state of mind in which people desire to establish new businesses or a adding a new value within existing organisations
Fini <i>et al.</i> (2009)	A cognitive representation of the action by a person to start an independent business
Liñán and Chen (2009)	In relation to the TPB, EI demonstrates the energies that an individual put in to engage in entrepreneurial activities.
Thompson (2009:676)	A self-acknowledged conviction and conscious effort by a person that they will create a business at a future time.

Source: Compiled by the author

This thesis endorses the definition of EI as a self-acknowledged determination by a person that they will create a business and that a conscious effort will be made to engage in it at a future time (Thompson, 2009). This definition seems suitable considering that the module being investigated is expected to result in self-employment which takes place sometime after graduation.

Research into the field of entrepreneurial intentions has long been an important subject because EI is believed to be vital in the journey of entrepreneurs and is thought of as the conscious consideration and belief of a person to create a new venture with the plans to carry out this conviction in the future (QAA, 2012; Thompson, 2009; Neneh, 2012; Zhang *et al.*, 2015). Entrepreneurial intention as a state of mind directs people’s attention and action towards entrepreneurship instead of paid employment and it serves as an important factor in entrepreneurial decision-making (Ozaralli and Rivenburgh, 2016; Souitaris *et al.*, 2007). Therefore, several studies use entrepreneurial intentions as the principal measure of EEPs’

outcomes (see Gerba, 2012; Nabi *et al.*, 2018). However, despite the many quantitative and qualitative studies of the relationship between EE and EI, there are still questions to be answered and areas of ambiguity.

Likewise, the effectiveness of the different EE variants is recognised as a significant factor which influences the relationship between the two (Liñán and Chen, 2009). For example, both the elective and compulsory EE programmes increased learners' entrepreneurial skills. However, the effect of the compulsory programme was conditional on the participants' perception of the performance of their parents as entrepreneurs (Hahn *et al.*, 2019). In consideration of the influence of specific variants and their definitive objectives, any entrepreneurship programme would require evaluation to assess its specific efficacy. The compulsory EEP appears to be a good means of producing a relatively large number of potential graduate entrepreneurs. However, the idea of imposing such a specialised form of career path on all students tends to create negative results as Oosterbeek *et al.* (2010) and von Greavenitz *et al.* (2010) have found. Thus, the EEP may itself be a hindrance to the achievement of its objective due to its compulsory nature. Research is necessary to discover the effects of this potential weakness and how best to address it.

Although the time lag between intention and behaviour makes the destiny of intention unclear (see Lange *et al.*, 2011), it remains the main antecedent to and the predictor of entrepreneurial behaviour (Bagozzi *et al.*, 1989) and consequently a good measure of EE outcomes. The time lag between graduation and engagement in entrepreneurial activities has been a subject of discussion as only a few graduates establish businesses immediately after graduation (Cruishank, 2005). It would therefore seem that an increase in attitude with a corresponding high EI could sustain the motivation to create a new venture despite the time lag.

Indeed, entrepreneurial intention has been empirically demonstrated as unbiased and the most effective predictor of potential entrepreneurial behaviour (Bird 1988; Krueger and Brazeal 1994; Wang *et al.*, 2011). As Brush *et al.* (2008) assert, intention is a conscious state of mind which steers attention towards a certain behaviour. However, they argue that it does not precede new venture creation. This claim might explain why some intentions never translate to business formation. In contrast, Lee and Wang (2004) believe that intentions precede venture creation and other researchers (Liñán and Chen 2009; Ferreira *et al.*, 2012) reason that attitude, beliefs, needs and wants, affect entrepreneurial intentions. Yet some others (Krueger *et al.*, 2000; Peterman and Kennedy, 2003; Souitaris *et al.*, 2007) think that intention is useful in predicting planned behaviours that are rare, hard to observe or behaviours that involve time-lags that are characteristic of entrepreneurship (Bird, 1988; Krueger and Brazeal, 1994; Krueger *et al.*, 2000; Peterman and Kennedy, 2003; Souitaris *et al.*, 2007). Entrepreneurship demands planning and conscious efforts which result from the intention towards it. Therefore, research on the formation of intention and its connection to entrepreneurship will provide more clarity.

Notwithstanding the divergent views on whether intention leads to venture creation, it is essential to gain more insight of the relationship between the EEP and EI as EEPs are often designed with the development of EI as outcome. Moreover, although there is evidence in the literature that there is a connection between intention and the potential to start new firms, there is still much to learn regarding the factors that motivate entrepreneurial intentions, particularly in developing countries (Ozaralli and Rivenburgh, 2016). Autio *et al.* (1997) demonstrated the importance of intention formation to entrepreneurial behaviour, finding that intentions made up of 30% of the alteration in behaviour towards entrepreneurship. Therefore, the nurturing of entrepreneurial intention seems to motivate the desired entrepreneurship (Bager, 2011). Consequently, more studies to provide clarity and



understanding of the relationship between EEPs and EI in developing countries seem necessary (Pittaway and Cope 2007; Liñán and Chen, 2009). This study makes a contribution to knowledge in this regard as it investigates the subject in Nigeria, a developing country.

Souitaris *et al.* (2007) believe that inspiration drives attitudes and intentions and Martinez *et al.* (2010) feel that there is a relationship between interest in entrepreneurship and the perception that new venture creation is feasible. Hence, because EEP is a specialised education that focuses on presenting the gains of entrepreneurship positively compared to other career options, it can be expected to reinforce learners' attitude positively. Consequently, the greater the number of EEP participants, more people making entrepreneurship career choices is to be expected. It is thus important to research attitude and intention towards entrepreneurship to determine how these factors can be improved and where lecturers need to direct more efforts. Moreover, in view of entrepreneurship being a process that takes place over time (Lee and Wong, 2004; Liñán and Chen, 2009) the measurement of entrepreneurial intention is required, bearing in mind the level of attitudinal change in relation to the propensity towards new venture creation.

#### 2.4.1 Entrepreneurial Intentions Studies

Across countries, several studies have been conducted on entrepreneurial intentions. This section presents a review of some of these studies. Using Ajzen's (1991) theory of planned behaviour (TPB), Autio *et al.* (1997) investigated the elements that influence EI among Scandinavian and USA university students. The researchers emphasised that the positive perceptions of entrepreneurship as a career choice by students was due to the availability of resources and support mechanisms which the universities provided. In this sense, students' support and resource availability seem crucial in choosing entrepreneurial career paths. The study also found empirical evidence for the entrepreneurship ecosystem in universities as a positive causative factor to the development of entrepreneurial intentions.

To evaluate the impact of EEP on the EI of science and engineering (non-management) students in London and Grenoble – European universities - Souitaris *et al.* (2007), also guided by Ajzen's (1991) TPB, applied pre-test and post-test control group (quasi-experimental) designs. The respondents were a mix of students who had participated in EEP either as a compulsory or elective module. The findings indicated that the EEP increased participants' attitudes and improved their EIs. They further found a significant increase in subjective norm which they suggested could be due to the formation of a new circle of entrepreneurial-minded friends. The authors suggested that the lack of significance of perceived behavioural control (PBC) could be because the respondents were elite students who perhaps already had high PBC. This study can be considered robust in comparison with similar studies due to the design and theoretical framework it applied. However, as Liñán *et al.* (2013) observe, a drawback of the study is the use of ANOVA (a linear regression model), which is considered not sophisticated enough to provide in-depth understanding of the effects of TPB constructs on EI.

One of the most cited entrepreneurship education intervention pieces of research since its publication and perhaps the most related to this study is Oosterbeek *et al.* (2010). The researchers investigated the impact of EEP on students' motivation and entrepreneurial skills in the Netherlands in a mixed method study involving surveys and interviews. The respondents in the survey were students, while those in the interviews were lecturers. The study featured a quasi-experimental design with the survey sample comprising 219 high school students in the experimental group and 343 students in the control group. In the data collection process, the lecturers collaborated with the researchers by stressing the importance of completing the survey instrument to the students. The experimental group were students who participated in the programme whereas the control group were students who did not participate in the programme 'for whatever reason' (Oosterbeek *et al.*, 2010). The control

group had a significantly higher percentage of students aged above 21 than the experimental group had.

The study found that the programme had a negative impact on participants' EI. Accordingly, the researchers concluded that the compulsory programme did not have the desired effect due to lack of participants' interest. A weakness of Oosterbeek *et al.* (2010) is that the involvement of the lecturers in the questionnaire's administration may have created bias. Another weakness of the study is that it failed to control for age even though the control group had a greater number of older participants. Although the authors claimed that the treatment and the control group are not significantly different, age has been proved to be a confounding factor in the entrepreneurship literature and can impact on study outcomes (Wang and Wong, 2004; Verhaul *et al.*, 2012; Haus *et al.*, 2013). The design adopted in this study mirrors Oosterbeek *et al.* (2010). However, in this study, steps were taken to control for the weaknesses identified in their study (see sections 4.6.4 and 6.3.7).

In a related study, von Graevenitz *et al.* 2010 investigated a compulsory entrepreneurship module to measure the entrepreneurial intentions of university students in Germany. The study utilised a pre-test and post-test on a sample of 357 students from one university. They reported a decline in the entrepreneurial intentions of the participants; 17.9% of the students who responded to both surveys had changed their intention to create businesses, resulting in 5/7 moving from positive to negative and only 2/7 moving from negative to positive. The pre-course survey showed that 71.4% of the 196 students who participated in both surveys had EI, but the post-course survey showed a decrease to 63.8%. The authors could not exclude the possibility that students' perception was driven by extraneous factors because it did not control potential confounders. However, they believe that the entrepreneurship training was an avenue through which learners were informed about career options to enable them to

assess the most suitable careers. Oosterbeek *et al.* (2010) is a comparable study considering that both investigated a compulsory EEP, used pre-test, post-test and found negative impacts.

In a comparative study of British and Spanish university students from business related subjects, Liñán *et al.* (2013) applied an extended Ajzen's (1991) TPB. One of the aims of the study was to address the scarce studies on EI and the motivation for new venture creation in literature identified by Peterman and Kennedy (2003). The study addressed one of the limitations of past researches of EI that are grounded on the TPB by adopting Structural Equation Modelling (SEM), also used in the current study, as against the linear regression model hitherto used by researchers. The application of SEM permitted a more sophisticated, robust and recursive model including the simultaneous testing of the relationships between the variables which provided an improved understanding of the effects of the TPB constructs (Liñán *et al.*, 2013). The UK sample comprised 456 undergraduates of the business school of a university in the North West, while the Spanish samples consisted of 549 respondents drawn from two universities in the North East and South of Spain. The British respondents were students attending various classes in business-related subjects. The Spanish sample were final year students pursuing a business degree course consisting of 56% females and 44% male with an average age of 23 years.

The hypothesised cross-cultural difference was confirmed and was one of the strongest findings of the study. The study suggests that the role of culture in explaining intention might be quite significant and further revealed that subjective norm could be significant if analysed as a mediator. The model explained 65% of the variance in EI which the authors reasoned was a highly satisfactory percentage given that previous studies that used linear models have only been able to explain less than 40% of the variance in intentions. The strengths of this study include that it is cross-cultural, grounded on a theory (an extended TPB) and the application of the two-stage SEM, which is a rigorous statistical analysis tool. However,

unlike Oosterbeek *et al.* (2010) and Souitaris *et al.* (2007), it lacks a control group, which has become desirable in entrepreneurship education intervention studies. In view of the array of entrepreneurial views resulting from the values and norms that are shaped in consistence with cultural contexts (Ozaralli and Rivenburgh, 2016), a controlled study in a developing country with diverse cultures such as Nigeria tends to be desirable.

Furthermore, the entrepreneurial intentions of Malaysian university students resulting from their participation in an entrepreneurship education programme was examined by Rengiah and Sentosa (2015). Their results revealed that the students' interest in pursuing entrepreneurial activities increased after the programme. Although the SEM tool that the authors used is rigorous, the respondents comprised mostly students who have entrepreneurs in their families which is considered a confounder in entrepreneurial intentions studies and should have perhaps been controlled to prevent an alternative explanation to the result obtained. The entrepreneur family members' influence on the students may have added to the positive outcome of the study. Similarly, as the students self-selected into the programme, this outcome seems not unexpected. Entrepreneurship students should be disposed to entrepreneurial intentions and more so when they have entrepreneur family members. Consequently, it would seem that the selection bias has an effect on the result. Therefore, evaluating a compulsory variant could prevent this selection bias.

All these studies except Regiah and Sentosa (2015) are based on Western countries. Notwithstanding this, the findings are varied. These variations might not be limited to the differences in the measures used as the literature suggests but could be related to other factors such as the functionality of institutions that is apparently different in emerging economies (Doh *et al.*, 2017). Other factors that might affect variation in result include the methods of implementation of EE and differences in cultural values and norms.

#### 2.4.2 New Directions in Entrepreneurial Intentions Research

Entrepreneurial intentions (EI) research is growing and to further its development, Fayolle and Liñán (2014) examined the future of research in EI. The authors found that the absence of categorisation and systematisation of research within the entrepreneurial intentions research constitutes part of the gaps in the discipline. Further, they appraised literature extensively and reflected on Krueger's (2009) idea for a profound reconsideration of research to awaken the 'dead' entrepreneurial intention studies. In consideration of Krueger's (1993) earlier recommendations for more refined measures and richer models of testing entrepreneurial intentions, Fayolle and Liñán (2014) developed ideas for future research in entrepreneurship. They indicated five major areas and new directions where future entrepreneurship intention studies should focus as follows:

1. 'Papers studying the core entrepreneurial intention model, either deepening knowledge of some theoretical nuances, or analysing methodological issues
2. Analysing the role of personal-level variables in the configuration of entrepreneurial intentions
3. The interrelationship between entrepreneurship education and the entrepreneurial intention of its participants.
4. The role context and institutions play in the configuration of entrepreneurial intentions
5. The entrepreneurial process and the intention-behaviour link' (Fayolle and Liñán, 2014: 663-664).

The current study sits within the third and fourth components of the gaps that Fayolle and Liñán (2014) identified. Examining these two areas is imperative given the expectation that undergoing formal training in entrepreneurship should propel participants towards start-ups

(Clercq and Arenius, 2006; Roxas *et al.*, 2008). However, given the complexity of the relationship between EEPs and EI, and the multi-dimensional nature of EEPs, it remains a grey area for research leaving a gap that this study aims to fill. Similarly, the role that institutions play in the configuration of EI is yet to be explored. Consequently, and extending from prior research, a focus on the pedagogies in EEPs that inevitably increase EI is essential.

The formation of new ventures demands time and a substantial amount of planning (Baron, 2004) and this can be made possible when intention is sustained. The need for considerable planning makes entrepreneurship precisely the type of behaviour for which the intention models are most appropriate (Bird, 1988; Katz and Gartner, 1988; Krueger *et al.*, 2000). Therefore, the analysis of how the conscious and voluntary decisions to engage in entrepreneurship are arrived at becomes important. Given this scenario, it is important to examine the drivers of entrepreneurial intentions so that efforts can be appropriately directed.

#### 2.4.3 Entrepreneurial Intentions and Attitude

The reason individuals follow entrepreneurial paths and the degree to which the choices they make are voluntary is a subject of importance in entrepreneurship research (Dawson and Henley, 2012). Different reasons have been thought to be accountable for these choices in relation to entrepreneurial paths. The factors include attitudes and intentions believed to be learnable and associated with the perception of the individuals (Ajzen, 2005). Hence, motivating people to adopt these elements becomes important to the advancement of entrepreneurship (Law and Breznik, 2017). Similarly, entrepreneurial attitudes both at personal and communal levels are reasoned to enlighten how entrepreneurial intentions are shaped (Packham *et al.*, 2010; Law and Breznik, 2017). Likewise, decisions regarding entrepreneurship are usually influenced and modified by individual or household attributes, including socio-cultural attitudes towards entrepreneurship (Bosma and Schutjens, 2011). The presence of an entrepreneurial attitude in a community can also be a substantial pointer

that a cohort of entrepreneurs potentially exists in that society. In this regard, an entrepreneurial society might constitute members who have positive attitude towards entrepreneurship even in the absence of other important apparatus such as infrastructure and institutional support on which most start-ups depend. Accordingly, entrepreneurial attitudes take place at micro and macro levels (individual and society). However, the macro level entrepreneurial attitude impacts on the micro level attitude. Perhaps, the entrepreneurial attitude at societal levels are certain cultural attitude components which mirrors the continual values and beliefs of members of a community (Packham *et al.*, 2010; Bosma and Schutjens, 2011). This therefore proposes that culture is consequential in the promotion of positive attitudes towards entrepreneurial intention and will be discussed fully in chapter 3.

Having entrepreneurs in families is thought to foster positive attitudes towards entrepreneurial activities (Krueger, 1993; Misoka *et al.*, 2016). Equally, it is believed that the more positive attitude an individual has towards taking risks, the more propensity to act entrepreneurially- (Douglas and Shepherd, 2002). In consideration of the importance of attitude to intention development, there is the need to explore the nature of the effect that entrepreneurship education has on the entrepreneurial attitudes of EEP graduates to learn the components of the curriculum that necessitate improvements or the elements that need be added to boost the nurturing of entrepreneurial attitudes among the graduates.

The entrepreneurial attitude of persons is thought to be captured by the mixture of the knowledge and skills for start-ups, the way start-opportunities are perceived including the fear of failure (Bosma and Schutjens, 2011). The researchers claim that people's values, preferences, their capabilities and abilities to perceive opportunities differ and these factors are believed to impact on the decisions to participate in entrepreneurial activities. In this logic, the feelings of individuals towards behaviours are largely affected by their dispositions to the behaviours. Notwithstanding the part that entrepreneurship plays in the economic



growth of nations and given that positive attitudes drive entrepreneurship, attitudes towards entrepreneurship are largely thought to differ remarkably in different countries (Bosma and Schutjens, 2011). Accordingly, the capacity to positively affect such a disposition appears vital to entrepreneurship and this has the tendency to depend on a group's acceptance of entrepreneurship or not. In terms of the differences in attitude towards entrepreneurship in various countries, examining it in emerging economies where studies are limited seems necessary to increase the understanding and knowledge of attitude towards entrepreneurship in the perspective of developing economies.

It is understood that positive attitude towards entrepreneurship are essential for a free market and a key source of job creation in many countries and entrepreneurial activities are essential for the restoration of economies (Jackson and Rodkey, 1994; Hisrich and Peters, 1998; Jones *et al.* 2017). Consequently, Jackson and Rodkey (1994:358) went on to say that entrepreneurship and entrepreneurial actions are characterised by

The willingness to take risks and accept the possibility of failure, the perceived difficulty of starting new firms, the importance and respect accorded to new and small firms and their owners, and the socialization children are likely to receive from their parent.

Zhang *et al.* (2015), who investigated university students' entrepreneurial intentions, found that subjective norm (SN) and entrepreneurial intentions were positively related. However, personal attitude had no significant effect. This result indicates that the SN dimension is a determining factor of the probability that an individual will engage in entrepreneurial activities (Misoska *et al.*, 2016). Additionally, it implies that subjective norm has impact on entrepreneurial intentions. Regarding the finding that attitude had no significant impact on

entrepreneurial intentions, Zhang *et al.* (2015) theorise that the result may suggest the lack of entrepreneurial experience by the students. This is because a little or inconsequential attitude score is assumed to be less likely to cause intention towards entrepreneurship and doubtful that it can result in entrepreneurship. Equally, Henry *et al.* (2003) reasoned that industrial bases are transformed, and economic structures are preserved through entrepreneurial actions and the importance and ability of entrepreneurship to sustain a successful evolving economy is consequently indisputable.

Other factors that can impact on attitude towards entrepreneurship include the “push” vs “pull” developed to elucidate knowledge on entrepreneurship (Armit and Muller, 1994). The “push factors” result from the lack of alternatives and redundancy among other reasons, whereas the “pull factors” emanate from market opportunity and innovation (Dawson and Henley, 2012). In place of “pull” and “push”, the Global Entrepreneurship Monitor uses the term “opportunity” and “necessity” entrepreneurship (Reynolds *et al.*, 2001). This categorisation seems to assume that entrepreneurship is only a factor of human action but external factors like competition, the state of the economy and government regulations also play key roles in entrepreneurship (Shane *et al.*, 2003). However, whether entrepreneurship results from push or pull, it impacts on the attitude towards it. For example, if the inspiration is mainly market opportunities (pull factor), it tends to generate a positive attitude that usually leads to the exploration of creative and innovative entrepreneurial opportunities and in turn improvement in the quality of life. In contrast, when entrepreneurship is linked to the absence of alternative (push factor), then it could be perceived less positively (Dawson and Henley, 2012) or perhaps negatively. Consequently, businesses created due to pull factors tend to be successful and those resulting from push factors are often less successful (Armit and Muller, 1995). Hence the need to nurture increased attitude towards entrepreneurship.

Whether financial motivation demonstrates opportunity instead of necessity is yet to be clarified (Dawson and Henley, 2012). More so because entrepreneurship may become attractive if salaries have fallen (push) or because return on investment has increased (pull) or a combination of both factors (Dawson and Henley, 2012). Similarly, job dissatisfaction, where employees feel that employers are not operating businesses as they should, could make employees set up businesses in direct competition to former employers (pull) (Kirkwood, 2009). However, where a nation goes into recession as was the case in Nigeria in 2016, the balance between the two tends to shift. As an illustration, rising unemployment during economic crises and the absence of alternatives might push individuals to entrepreneurship (Dawson and Henley, 2012). Necessity could be the push factor, even though it is arduous to establish the extent to which individuals are either pushed or pulled towards entrepreneurial activities. Nonetheless, investigating developing economies, and in particular those on the road to recovery from economic crises, might offer suggestions of the procedures by which entrepreneurship can be applied to make comparable economies increasingly resilient (Dawson and Henley 2012; Williams and Volery 2014). Having this knowledge and insight regarding Nigeria is essential not only to determine what drives entrepreneurial activities, but also to know the procedure through which entrepreneurship can be increased especially among graduates.

In conclusion, since EE is thought to be useful for increasing the number of start-ups and have a positive influence on the general attitude to entrepreneurship thereby enabling participants to perceive it as a respectable and valuable career option, knowing the relationship between attitude and EI in specific programmes is important. Additionally, given the growth of EE in institutions due to its perception as a mechanism to increase the production of more effectively equipped entrepreneurial individuals capable of identifying

businesses that are viable makes the assessment of attitudinal change resulting from the compulsory EE programme necessary.

## 2.5 Entrepreneurship Education Impact Studies

The evaluation of educational programmes is important to their success (Duval-Couetil, 2013; Fayolle *et al.*, 2006; Hernández-Sánchez *et al.*, 2019). Assessing EE appears challenging given its diverse nature, varying objectives and differing appraisal methods as Fayolle and Gailly (2015) observe. Accordingly, it is essential to determine the objectives that suit specific EE programme, and this involves a holistic look at its pedagogical issues (Ahmad *et al.*, 2018). The complexity in EEP evaluation is compounded by the heterogeneous nature of its pedagogies. Therefore, matching instructional pedagogy with the objective of specific programmes becomes important. To measure the impact or outcomes of EEPs, many academics rely on subjective procedures perhaps due to their relative ease of use, access and speed in data collection. These measures are additionally advantageous owing to the availability of well-established intentionality theories such as Shapero and Sokol, (1982); Ajzen, (1991); Krueger and Brazeal (1994). For example, Ajzen (1987) illustrated that attitude explains about 50% of variance in intentions, while intention explains about 30% of variance in given behaviours.

The evaluation of entrepreneurship education programmes is still in its initial stages (Carey and Matlay, 2010). Therefore, academics suggest more impact studies in diverse cultures to gain an improved understanding of the subject in various contexts. However, EE evaluation has progressed from the use of models based on personality traits that are associated with entrepreneurship (McClelland, 1961) to demographic variables like gender, age, education, etc. (Storey, 1994). Although these models enabled the identification of the relationships of some traits and demographic characteristics of the individuals and entrepreneurial behaviours, their predictive capacities were limited (Reynolds, 1997). Indeed, various

scholars challenged these approaches for their low explanatory capacities and conceptual limitations (Liñán *et al.*, 2002; Krueger *et al.*, 2000). Other models including Shapero and Sokol's (1982) entrepreneurial event (SEE) and Ajzen's (1991) theory of planned behaviour (TPB) emerged, following the criticisms of the various models that were hitherto applied. Consequently, the intentionality models became commonly adopted for their robustness as theoretical frameworks when examining EE outcomes thought to be key to the entrepreneurial process (Bird, 1988; Katz and Gartner, 1988; Krueger 1993 (Kautonen *et al.*, 2015).

A major challenge however, remains how best to attain the objective of each EE type given the limited understanding that still permeates the discipline (Wang and Chugh, 2014). This tends to make entrepreneurship educators consider more than one goal in the delivery of the programme, thus creating confusion in relation to the outcome expected and indeed as Fayolle (2013) observed, the ability to align pedagogy to programme objective becomes challenging. The assessment of EE like its contents is also devoid of satisfactory measurement system and has suffered neglect in the EE discipline despite its importance (Pittaway, *et al.*, 2009; Gibb, 1998). Carey and Matlay (2010) wrote that the subject of assessment in EEPs is recent and comparatively under researched.

Earlier, Pittaway and Cope, (2007) accentuated the rarity of knowledge in EEPs assessment. As Penaluna and Penaluna (2009) determined, educational activities demand outcome statements and corresponding performance indicators so far as they are not extra-curricular. Similarly, Kandlbinder (2003) explained that it is through assessments that educators determine how well students have learned and how to improve students learning. In this regard, the place of assessments in EEPs cannot be over-emphasised. Therefore, since business plans is a major element in EEP, literature suggests its adoption as part of the assessment technique, because it guarantees the completion of business plans and incorporate

students' perceptions (Falkang and Alberti, 2000). This might yield results only if students write business plans on businesses that they are interested in, and teaching/learning can be rewarding based on correct processes (Penaluna and Penaluna, 2009). It will also imply a deviation from the traditional norm of assessing students' abilities since such assessment methods adhere predominantly to the teacher-centred means of delivery which is opposed to the experiential methods required in EEPs (Somervell, 1993; Co and Mitchell, 2006). Currently, research evidence suggests that assessments in EEPs are subject to the procedures as on other programmes in higher education institutions (Carey and Matlay, 2010). The Nigerian government has also seemingly made enormous investment into EE. Thus, research is required to determine the assessments methods used in the context of this study. Similarly, evaluating the effect of the programme in relation to the expected outcome is required because as Charney and Libecap (2000) observe, scholarly doubts on teachability re-emerge now and again because a coherent proof of its impact is lacking.

In sum, EE impact studies are useful for determining their effectiveness and to identify the areas in the programme that need revisions, modifications, or even outright removal. Indeed, the assessment of EEPs is on the increase because policy makers, donors, scholars and students in entrepreneurship are interested in knowing if their investments are worth the money and if more efforts are required (Mwasalwiba, 2010). Given that educational programmes have objectives, impact studies are imperative for appraising the extent to which the objectives are realised. Assessing EEPs in diverse contexts is therefore important particularly because they are primarily educational interventions and even more so since their effects might vary across different contexts.

Evaluating the outcome of educational programmes enables academics to discover the effectiveness of whether the educational practice is impactful as expected. It is believed in academic circles, however, that EPPs are intended to influence entrepreneurial behaviours

(Alberti *et al.*, 2004; Fayolle, 2009; Mwasalwiba, 2010). Generally, many studies on the “outcomes” or “impacts” (used interchangeably) indicate support for the hypothesis that EEPs have a positive impact on entrepreneurial attitudes, intentions and entrepreneurial behaviours (Friedrich *et al.*, 2006; Glaub *et al.*, 2006; Alarape, 2007; Matlay, 2008; Hamidi *et al.*, 2008; Kruzic and Pavic, 2010; Bakotic and Kruzic, 2010). Consequently, the number of new ventures created became the globally accepted measure (Mwasalwiba 2010). Although studies agree that EEPs influence EI, it is also generally thought that there is still a lack of well-structured EEPs (Matlay, 2005; Maritz and Brown, 2013); hence the necessity to evaluate each programme.

### ***EEP and Entrepreneurial Attitudes***

A significant study by Packham *et al.*, (2010) investigated the impact of enterprise education on participants’ entrepreneurial attitude in European HEIs. The study adopted the mixed methods design. The quantitative aspect measured how differences in industrial and cultural heritage influence the effectiveness of enterprise education and entrepreneurial attitudes. The three countries from which samples were selected use entrepreneurship as a mechanism for stimulating entrepreneurial activities and thus they seem similar in this respect. The finding confirmed that the enterprise education had a positive impact on the entrepreneurial attitudes of both French and Polish students. In contrast, the course had a negative effect on the male German students. The result provided empirical evidence that national culture and industrial heritage can affect the relationship between the two variables. Consequently, they should be considered in EE design and delivery to achieve the desired impact and foster graduate entrepreneurship (Packham *et al.*, 2010).

It seems that context played a part in the outcome of the study. The contextual issues could be in terms of the differences in the design of the programme or the pedagogies adopted in each

country since these two concepts require contextual considerations. These are important to improve the experiences of the students and the relevance of the programme to them (European Commission 2006). The study gives additional credence to the role of context and the need for studies in diverse contexts which this study does.

### ***EEP and Entrepreneurial activities***

To investigate enterprise training and entrepreneurial activity in the UK, Jones-Evans *et al.* (2006) obtained samples from university and secondary school students. The research findings indicated that there are different outcomes at various levels of education (Jones-Evans *et al.*, 2006). For example, at the university level a significant relationship between the two variables was found while there was insignificant connection at the secondary school level. This finding confirms that of Volery *et al.* (2013) that found no significant impact on their upper level secondary school participants. Perhaps, the positive relationship found within university respondents is related to their nearness to the point of making career choices unlike the secondary school level where it may be that most of the graduates might opt for further education and are consequently not yet so focused on career issues. It further shows that EEPs can affect different students in diverse ways.

In a later study, Volery *et al.* (2013) examined the effectiveness of entrepreneurship education on a variety of entrepreneurial activities in Switzerland, using participants from upper-level secondary school. The study was guided by the human capital theory and they applied the pre-test, post-test, and post-post-test quasi-experimental design. The post-post-test was performed four to five months after the programme was completed. The results support the conclusion that the programme had limited positive impact on human capital assets - expertise, skills, and knowledge (Volery *et al.*, 2013). Although the programme had statistically significant impact on beliefs and entrepreneurial knowledge, no significant



impact was observed on entrepreneurial intentions. This finding is consistent with Jones-Evans *et al.* (2006) who also found no significant impact on the secondary school samples used. As earlier indicated, it could be the case that most of the secondary school students are more interested in further education than entrepreneurship.

To assess the impact of the Berger entrepreneurship programme at the University of Arizona, Charney and Libecap (2000) compared the graduates of the programme with a sample which was randomly selected among business school graduates who did not participate in the programme. Findings indicated that the programme creates enterprising individuals and contributes to the growth of firms and creation of successful businesses. Accordingly, Charney and Libecap (2000) think that EEPs have the potential to reduce unemployment because when businesses are successfully established, they create employment opportunities.

In sum, a close look at the impact studies in Table 2-3 reveals the inconsistencies in results and the variety of analysis tools used by scholars. Putting these together, the cultural differences, differences in objectives and programmes are likely to contribute to the inconsistent results. Given all the variations and the different types of EE, the investigation of its efficacy can be conducted from varying perspectives because the measurement of the overall effectiveness of the programme is still challenging, though crucial (Gorman *et al.*, 1997). A summary of EE impact studies showing the contexts, samples, analysis tools and the key findings are presented in Table 2-3.

**Table 2-3: Selected Entrepreneurship Education Impact Studies**

Authors	Research Context	Research Sample	Data Analysis Instrument/Research Design	Key Findings
Oosterbeek <i>et al.</i> (2010)	Netherlands	250 University undergraduates	Pre- and post-test design control group	Negative impact (student had lower intentions after the course)
von Graevenitz <i>et al.</i> (2010)	Germany	196 compulsory EEP	Quasi-experimental design (pre- and post-test design) No control group	Found a small negative relationship between EE and EI
Souitaris <i>et al.</i> (2007)	London, UK and Grenoble, France	250 science and engineering students from two universities.	Quantitative - Quasi-experimental design. Correlation and regression to test the relationship between attitudes and intention at time 1 and time 2	Positive -EEP raise the overall EI of the participants
Liñán, Nabi and Krueger (2013)	UK and Spain	1005 sample of university students	Quantitative SEM – multivariate analysis based on PLS	Positive relationship between EEPs and EI
Rengiah and Sentosa (2015)	Malaysia	396 university students	Quantitative SEM-AMOS	Positive relationship between EEPs and EI
Matlay (2008)	UK	64 Graduates from 8 HEIs	Qualitative - Semi-structured in-depth telephone interviews	Positive impact although the graduates were preparing for e career before the commencement of their studies
Packham <i>et al.</i> (2010)	France, Germany and Poland	France – 112 Germany - 66 Poland - 59	Mixed Methods	EE had positive impact on attitude of French and Polish students but negative impact on German students. In general, EE had more significant effect on the attitude of the male students.
Autio <i>et al.</i> (1997)	Scandinavia USA	Combined sample of 3445 university students from Finland, Sweden, USA	Quantitative-Regression	Results indicate positive relationship, except subjective norm
Volery <i>et al.</i> (2013)	Switzerland	494 experimental group 238 control group	Quantitative, Quasi-experimental design	Programme had statistically significant impact on beliefs and entrepreneurial

<b>Authors</b>	<b>Research Context</b>	<b>Research Sample</b>	<b>Data Analysis Instrument/Research Design</b>	<b>Key Findings</b>
Jones-Evans <i>et al.</i> (2006)	UK	University and secondary school students		Programme had statistically significant impact on the university students but not on the secondary school student
Støren, (2014)	Norway	2827 graduates	Experimental and Control group	- Low intention to engage in entrepreneurial activities -Less impact of EE than other European studies
Athayde (2009)	U. S and UK	249	A control group cross-sectional design	Participants exhibited better enterprise potential than the non-participants
Fayolle <i>et al.</i> (2006)	France	20 students on an elective entrepreneurship course in a French engineering school	Descriptive statistics	Positive impact on EI but no significant impact on PBC
Peterman and Kennedy (2003)	Australia	460 sample of secondary students (control and experimental group)	Pre-test-post-test control group (Anova)	Positive relationship between EEPs and EI
Krueger <i>et al.</i> (2000)		97 University business students	Regression Analyses	Positive relationship between EEPs and EI.

Source: Compiled by the author

Furthermore, because EI is a determinant of entrepreneurial activity performance, it necessitates the examination of its implementation strategies to further the growth of the programme. This is particularly important because, despite making the entrepreneurship programme a compulsory module in all higher institutions in Nigeria, the effect of this initiative is yet to be known (British Council, 2014). This study therefore broadens and deepens the understanding of the effect of this government educational intervention.

## 2.6 Summary

The chapter has provided definitions of entrepreneurship education and entrepreneurial intentions. It indicated that there are variations and showed areas of convergence. It also traced the chronology of entrepreneurship in educational institutions and showed that EE has grown despite its initial struggle with academic acceptance. It also showed that EE is a policy measure aimed at stimulating entrepreneurial activities and appears to have been implemented worldwide due to its recognition by government and policy makers (Chell and Huber, 2015).

The chapter illustrated that many studies use EI as the main antecedent to and the predictor of entrepreneurial behaviour and that it is consequently regarded as the principal measure of EE outcomes. It showed that EI is a conscious and deliberate consideration of venture creation with plans to carry out this conviction in the future. However, it noted that the time lag between intention and entrepreneurial behaviour makes the destiny of intention unclear. The chapter nevertheless emphasised that intention is central in the entrepreneurs' journey.

It was noted in this chapter that there are still areas of ambiguity in the relationship between EE and EI and consequently, there are still questions to be answered. It explained that the fact that EEP has varieties seems to affect the relationship between the two. Further, it was noted in the chapter that different analysis methods are used in EE impact studies resulting in contrasting findings. It also indicated that there is a need for studies across cultures to determine the effect of a specific EEP in a specific context.

The chapter deliberated on the possibility of different countries developing appropriate strategies and policies that will work for them given their particular situation. Nevertheless, it noted that lessons can be learned through observing other countries with a view to applying modified versions to suit their country's specific needs. The chapter also observed that since

the impact of entrepreneurship education on entrepreneurial intentions is still poorly understood, more studies are required to better understand the phenomenon. It further showed that the concept in the intention theory has not been given enough consideration in the EE literature particularly in Higher Educational Institutions (HEIs) (Byabashaija and Katono, 2011).

The chapter revealed that a positive attitude drives entrepreneurship and attitudes towards entrepreneurship differ across different nations (Bosma and Schutjens, 2011). It further showed that entrepreneurial decisions are influenced and conditioned by personal or family characteristics, as well as social-cultural behaviours and accentuated that the positive results obtained from EE studies on the self-select variant seem apparent. Consequently, there is a need to address the question of whether voluntarily choosing the programme does not already provide biases indicative of interest in entrepreneurial pursuit and therefore results in the positive findings. Having a singular entrepreneurship model (one size fits all) will not satisfy the different requirements of the different stakeholders of the programme.

It was also indicated in the chapter that assessments in EEPs lack satisfactory measurement system despite its importance (Pittaway *et al.*, 2009; Gibb, 1998). It was also revealed that Carey and Matlay (2010) noted that assessment in EEPs is recent and as a result it is comparatively under researched. It was shown that there is scarcity of knowledge in EEPs assessment as Pittaway and Cope (2007) accentuated. However, it was argued that educational activities require outcome statements and matching performance indicators since they are not extra-curricular as Penaluna and Penaluna (2009) highlighted.

From a consideration of previous work, it appears that carrying out a study in a developing economy where a substantially different culture exists may throw light on some different issues associated with the study of EI and the relationship to EE. Research findings will add

to the body of knowledge in entrepreneurship and will provide an emerging economy perspective as well as addressing issues of context as advised by Forbes (1999); Liñán and Chen (2009) and Liñán *et al.* (2013).

This review has highlighted some gaps in the understanding of the relationship of entrepreneurship education programmes and entrepreneurial intention. The chapter also accentuated the heterogeneous nature of EEP that necessitates a variety of objectives. The fact that studies on the relationship between EEP and EI are sparse in the context of this study provides the necessity to examine the relationship. Hence this study examines the entrepreneurial intention of graduates to determine the effectiveness of the compulsory entrepreneurship programme in Nigeria aimed at fostering entrepreneurial mind-sets to create socio-economic development for both the graduates and the country.

The next chapter will outline the Nigerian entrepreneurship education system. It will explore issues related to national culture as part of the context of this study and examine contextual issues related to EEP, which have been flagged up but not fully addressed in this chapter. Additionally, it will assess the impact of pedagogical practices on the participants' entrepreneurial intentions.

## Chapter 3 - Literature Review Part 2

### 3.1 Introduction

This chapter reviews literature on cultural values and pedagogies (which are core to the research) to gain an in-depth understanding of the two attributes regarding their effect on EI. To provide a deeper understanding of the implementation of EEPs and the relationship between entrepreneurship and cultural values, this chapter which is divided into four sections, reviews these topics. The first section explores EEP in the Nigerian educational system. The second section provides a review of the implementation of EEP and the third section evaluates cultural values and its effects on entrepreneurship. The last section summarises the chapter.

### 3.2 Entrepreneurship Education Programme in Nigeria

#### 3.2.1 The introduction of General Studies (GST) Entrepreneurship

Educational interventions are necessary for the development of interest in entrepreneurial activities (Gasse and Tremblay, 2006). As entrepreneurship is linked to several pressing universal economic imperatives like employment, innovation and poverty reduction (Volkman, 2009) and it is an essential mechanism for the attainment of steady flows of income especially among vulnerable populations (Karlan and Valdivia, 2011; Hermes and Lensink 2007), interventions with EE have become commonplace. In line with this, Nigeria has employed EE intervention aimed at providing learners with the tools, skills, information and knowledge in entrepreneurship primarily for the development of entrepreneurial intentions and eventually, new venture creation.

The objective of the EE programme named General Studies (GST) Entrepreneurship is to develop an entrepreneurial mindset in graduates to recognise business opportunities in a variety of settings and to take advantage of the opportunities in venture creation (NUC, 2011). The programme is expected to eventually reduce graduate unemployment and in the

long run accelerate the economic growth and development of the country. Consequently, its teaching is expected to focus on knowledge, skills and strategies that will facilitate the production of potential entrepreneurs as Lourenço *et al.* (2013) and Harkema and Schout (2008) enunciated. Having been introduced about a decade ago, research is required to assess the attainment of the objective for which the programme was introduced.

The Federal Government's mandate for the injection of entrepreneurship studies into the Nigerian universities' curriculum was in 2002 (National Universities Commission, 2011). Other documents from the NUC indicate that following the Federal Government's mandate, the National Council on Education instructed that entrepreneurship studies should be included in Higher Educational Institutions (HEIs) as a compulsory programme for all students irrespective of their programme of study in 2006. The introduction of the programme was to develop entrepreneurial attitudes among the participants (National Universities Commission, 2011) as a deliberate attempt to provide knowledge and skills about entrepreneurship in the hope that the rate of graduate unemployment could be reduced through self-employed graduates (Eze and Nwali, 2012; Ekoja and Odu, 2016).

Indeed, the rate of graduate unemployment in Nigeria has been worrisome. Between 1992 and 1997, graduate unemployment accounted for 32% of the country's unemployed (Dabalén *et al.*, 2000). As of 2013, it was put at about 60% of the Nigerian labour market (Eneji *et al.*, 2013). Likewise, the National Bureau of Statistics (2016) reports that new graduates constitute the majority of the 52 million economically active but jobless Nigerians. This new graduates, roam offices and establishments in search of paid employments. The unemployment situation in Nigeria is thought to be a major contributor to social crises and terrorist activities in the country (Ajufo, 2013; Asaju, 2014; Eme, 2014; Onodugo, 2015). Considering the place of Nigeria in West Africa and indeed the African continent, the



complications of graduate unemployment have repercussions for the neighbouring countries and it has even resulted in illegal emigration to Europe and North America, which are perceived as lands of opportunities (United Nations, 2005). Kuckertz (2013) has pointed out that collaborations with all necessary stakeholders is important to the success of EEPs. In view of the size of graduate unemployment and its effects on Nigeria, it could be that the active involvement of all stakeholders will help in making the programme more attractive and successful. Although there seem to be inconsistencies in the reported graduate unemployment figures, what is not in doubt is that this socio-economic malaise has reached a dimension that requires a comprehensive and well thought out policy measure. The EEP may be one of such measures and so its introduction might help in resolving the situation.

Although the inauguration of the programme was applauded, and academics then believed that it would reduce unemployment (Uzoegwu and Egbe, 2014), there were some doubts that the compulsory programme could achieve its set goals and objectives given its delivery technique that indicated a lack of appropriate preparation needed in the programme (Ifedili and Ofoegbu, 2011). Research is therefore needed to establish the extent to which the programme is implemented in a way that will enable it to achieve its objectives of nurturing graduates with entrepreneurial intentions.

### 3.2.2 EEP Infrastructural Facilities

The inclusion of EEP in the curriculum of universities also brought about the need for the provision of infrastructural facilities like entrepreneurship centres and incubators to ensure the success of the educational policy initiative (CAEL Publications, 2015).. To meet this need, as some commentators such as Adejimiola and Tayo-Olajubutu (2009) and CAEL Publications (2015) have observed, requires the training of the implementers (human capital) of the programme, especially the lecturers to make them knowledgeable in the best practices for running EEP. In particular, the lecturers would need to be trained so as to be grounded in

the EE pedagogies which will facilitate the success of the programme. This requires both initial training and continuing development programmes. Likewise, the education administrators who will manage the EEP need to be trained in that area to minimise lapses and areas of mismanagement and the provision of entrepreneurship development centres.

It appears the government recognised this need and took some steps to actualise it. Principal officers including Vice Chancellors, Rectors, Provosts, Registrars and Deans of faculties were trained by the Centre of Entrepreneurship and leadership (CEAL) of the University of Wolverhampton. The training was designed to among other things facilitate the adoption of innovative pedagogies employed by the UK universities and to encourage the adaptation of ideas gained to the needs of the Higher Education Sector in Nigeria (CAEL Publications, 2015). A strong focus on skill development was encouraged and was thought to be an essential antecedent of EI and start-ups. However, there is no indication that the lecturers who are directly responsible for training the students were included in the training. Similarly, it is not known, if these senior officers who received the training provide support to the lecturers that teach the programme. Thus, examining the training of the lecturers could provide further insight.

Following the training of the principal officers of Nigerian HEIs, recommendations were made for tripartite collaboration between the universities, local businesses and graduates. This suggests that universities reaching out to other stakeholders is essential and forms part of the changing role of universities. It further highlights the need for redefining, rearticulating and intensifying the awareness to promote entrepreneurship and the provision of public funding to support the effort (Potter, 2008). This sort of relationship between the universities and entrepreneurs within university localities is conceivably advantageous to all the

stakeholders and particularly the graduates because they can learn from the experiences of the entrepreneurs.

Other CAEL recommendations are: campaigns to encourage academics to commercialise research findings; the establishment of incubators where new graduates can be assisted to develop and concretise their business ideas; exploring the possibility of collaborations with other universities both nationally and internationally, and to provide continuing professional development (CPD) at regular intervals for all the staff who are directly involved with management of the EEP. These recommendations were conceivably to support the sustenance of the EDCs and possibly to improve EEP practices within the Nigerian Higher Education sector (CAEL Publications, 2015). However, it is not clear from the literature how the universities are implementing these recommendations or the extent to which they have done so, a situation that creates a knowledge gap. This research addresses this issue and therefore makes a contribution to knowledge in this regard.

The entrepreneurship development centres (EDCs) were established in the universities to enhance the environment of the universities for business opportunities (Adejimola and Tayo-Olajubutu, 2009). This presupposes that the universities will establish contacts with local entrepreneurs which is part of their changing role and confirming that university lecturers are no longer expected to remain within their 'ivory towers'. It further suggests that the role of the universities should progress from the preparation and production of graduates for white collar employment to producing graduates who will choose entrepreneurial career paths.

The National Universities Commission (NUC), the agency responsible for the management of EEPs in Nigerian universities, has the role of ensuring that all universities implement the programme, produce the curriculum content and the instructional manual. It was anticipated that between 2006 and 2010, at least 10,000 of all university graduates would have created

businesses and be self-reliant (Yahya, 2011). Despite the obligation of the supervisory agency, and the good intentions of the federal government, Shefiu (2016), observes that the absence of the requisite human and material resources, inadequate planning and implementation procedures tended to threaten the programme. Further, the lack of appropriate training for lecturers might make them unable to impart the anticipated knowledge and the requisite skills (Olorundare and Kayode, 2014). Research to confirm the training received by the lecturers as a way of monitoring or revisiting the implementation of the programme is important.

The question of whether entrepreneurship can be taught is now regarded as obsolete (Kuratko 2005; Henry *et al.*, 2005). Universities rarely have problems with creating and running entrepreneurship programmes but the choice of appropriate methods that align with the programmes and the learners remains a constant challenge (Mwasalwiba, 2010). Because entrepreneurship has no universally accepted teaching methods, the educator's knowledge of the different pedagogies becomes important to produce effective teaching (Fayolle and Gailly 2008; Arasti *et al.*, 2012). It is necessary to ascertain the competencies of the EEP lecturers to know how effective they could be in providing active teaching in EEPs. Again, the literature appears deficient in this regard and so studies are necessary in the area. Thus, university EEP in Nigeria could be expected to provide a positive influence on students' attitudes towards entrepreneurial career paths and this requires empirical evidence. Therefore the next section will evaluate the pedagogies used in and the assessments of EEPs.

### 3.3 The Implementation of EEPs

#### 3.3.1 Pedagogical Issues

Despite the increasing demand for EEP in educational institutions, how to teach it still lacks attention (Jones and Matlay, 2011; Sirelkhatim and Gangi, 2015). Considering the way it is taught contributes to its outcome hence, examining the pedagogies employed becomes

imperative. The pedagogies are heterogeneous, consequently matching instructional pedagogy with the objective of specific programmes is required to generate the desired expectations.

Fundamentally, the study of the effect of EEP cannot be completely detached from the pedagogical engineering of the subject at both the design and programme implementation levels (Bechard and Gregoire, 2005). Likewise, because EEPs are holistic in nature, comprising several actors or stakeholders, its measurement has various facets (Fayolle, 2013). As entrepreneurship evolves, the debates are centred on effective measures, the application of technology-driven pedagogies and the course content (Maritz *et al.*, 2015; Solomon, 2007).

Currently, instructional techniques should focus on promoting an entrepreneurial mind-set among students irrespective of their programmes of study (Yamakawa *et al.*, 2016). The traditional methods do not seem to impact positively on learners' attitudes and are believed to impede the development of entrepreneurial attitudes among learners (Gibb, 2002; Krueger, 2007; European Commission, 2011). Traditional methods also tend to disregard the uncertainties, ambiguities and the realities that surround the entrepreneurial processes and consequently leave participants in a state of indifference (Higgins *et al.*, 2013). Therefore, the utilisation of innovative pedagogies that promote attitudinal changes towards entrepreneurship appears essential, because the non-application of innovative techniques can make learners miss out on experience-based knowledge, which can influence entrepreneurial action (Fayolle and Toutain, 2013). In consideration of the importance and benefits associated with experiential and indirect learning, the UK HEIs use business coaches and mentors (Monk and Purnell, 2014). It is essential therefore, to understand the mechanisms adopted in the Nigerian EEP, to provide the participants with indirect or experiential learning that can nurture the development of EI.

Another subject for consideration with regards to pedagogies lies in which methods are innovative and those that are traditional. It is widely thought that the traditional methods are theoretical, teacher centred and more suitable for increasing learners' awareness about entrepreneurship, and less appropriate for the education for entrepreneurship, which aims at enabling students to start new ventures (Piperopoulos and Dimov, 2015; Sirelkhatim and Gangi, 2015). Nevertheless, it tends to be that methods that are traditional in some contexts are innovative in others due to technology, exposure and indeed advancement. Thus, the breakdown of pedagogies into traditional or innovative is probably contextual because as some authors have observed, some approaches might be applicable in some circumstances or establishments and not in others (Blenker *et al.*, 2008). For example, whereas Bennett (2006) regards lectures, case studies and group discussions (the three commonly used methods) as traditional, Arasti *et al.*, (2012) found that case study is one of the most important methods for teaching entrepreneurship in Iran. Some methods are apparently generally accepted as traditional and some as innovative; others like business plans and case studies have no clear delineation, thus requiring factor analysis to determine the classification in the context of this study. Furthermore, the EE literature recognises many methods as desirable, but does not provide frameworks for the selection of specific methods that can achieve expected levels of learners' engagement, given the complexity that is inherent in EE (Balan and Metcalfe, 2012). Because this area in the EE discipline is yet to be resolved, research is needed to provide improved understanding.

Pedagogies vary extensively in the teaching of entrepreneurship programmes, and the best methods are contentious (Porter, 1994; Mwasalwiba, 2010). The differences in pedagogies, however, could result from the assumptions of what constitutes an EEP (Olsen and Mykletun, 2012). Because pedagogies in EEPs are heterogeneous, the heterogeneity demands the

application of best-practice concepts to ensure an effective and impactful entrepreneurship education (Haase and Lautenschläger, 2011; Cunningham and Lischeron, 1991).

Further, it is crucial to have coherence between the entrepreneurship programme and the pedagogies applied (Fayolle, 2013). The concept of education for entrepreneurship developed by Gibb (2002) refers to the infusion of entrepreneurial skills and behaviours into learners to become entrepreneurs. Unlike the education about entrepreneurship, the education for entrepreneurship emphasises the analysis of the stages of new venture creation and the development of business plans and involves the more cognitive domain of entrepreneurship (Neck and Greene, 2011), where cognitive skills like opportunity recognition, evaluation of business ideas and how to write business plans form part of the curriculum content (Gibb, 2002). It utilises methods that can equip every participant with the career option of self-employment which can potentially increase the number of entrepreneurs, boost job creation, encourage international competitiveness and consequently increase living standards (Eurydice European Unit, 2002). EE should therefore, provides learners with the knowledge to pursue opportunities without regard to the resources they currently control or indeed the environmental factors which they face.

The EE literature highlights the need for teachers to identify the teaching methods that will possibly be effective and most engaging for their specific group of students (Balan and Metcalfe, 2012). In contrast, Jones (2018) suggests the identification of a signature pedagogy for the teaching and learning of EE. Nevertheless, the engagement of students in entrepreneurship classes seems to be the most crucial factor for attracting students and for achieving learning objectives (Coates, 2009) and not necessarily, having a universal teaching method.

Despite the observation of researchers that the innovative methods are better for motivating entrepreneurial intentions, findings suggest that the traditional methods are mostly applied in delivering entrepreneurship modules (Bennett 2006; Mwasalwiba, 2010; Arasti *et al.*, 2011). Perhaps the continuous implementation of the traditional methods is due to its ease of application without consideration of its relative ineffectiveness (European Commission, 2008). Nevertheless, some scholars including Kent, (1990), Gartner and Vesper (1994) and Solomon (2007) observe that the adoption of innovative methods like guest speakers is becoming widespread in the entrepreneurship classrooms. However, the lecture method appears to have continued to dominate the scene. NIRAS consultants (2008) surveyed entrepreneurship in Higher Education (HE) in 31 countries of Europe, including 27 European Union member states and found that entrepreneurship modules were mostly taught by lecture method while guest speakers were only occasionally invited. In these circumstances, the possibility of EE focusing and achieving success in new venture creation appears bleak. A change in methods to more engaging ones is needed given that the initial approaches to EE had laid emphasis on transfer of knowledge. The adoption of methods that can foster entrepreneurial intentions to enable EE to serve its purpose of producing enterprising graduates is vital.

In general, many EE researchers recommend the incorporation of more action-oriented approaches and reflective practice to stimulate entrepreneurial thinking (Saravasthy, 2008; Neck and Greene, 2011; Esmi *et al.*, 2015). For example, the invitation of guest lecturers to share their experiences and interact with the learners might create a positive image of both entrepreneurs and entrepreneurship and subsequently influence their attitudes and motivation towards entrepreneurship (Diegoli *et al.*, 2018). Other methods commonly found are project-based learning like interviews with entrepreneurs, environmental scans, student entrepreneurship clubs, student business start-ups, feasibility studies, placement with small



firms and business games (Gartner and Vesper, 1994; Solomon *et al.*, 1994; Truell *et al.*, 1998; Solomon, 2008). Perhaps the variety of methods provides the opportunity to choose and combine those that are appropriate to specific learners' interests, the local environment and the objective of the programme. Hence, it is essential that the methods used for each EE variant are examined to determine their veracity in the fulfilment of objectives. This study addresses this theme.

The expansion in entrepreneurship in HEIs is accompanied by an increase in the use of innovation methods for teaching (Potter 2008). These methods emphasise experiential activities/learning. Potter (2008) consequently summarised the main methods used and the main challenges that are associated with each of the methods as shown in Table 3-1. As this Table shows, classroom lecture is challenged by the need to combine it with class activities that are pertinent to real world entrepreneurship problems. Similarly, Sherman (2007) observes that it is important because traditional teaching methods isolate and keep students perpetually in the classroom. Therefore, complementing these methods with experiential approaches to encourage entrepreneurial intentions among learners is essential. Although there are challenges associated with the appropriate methods in the EE classroom, the addition of experiential approaches might indicate the desire to gradually move from lectures and texts that predominate the traditional methods. Traditional methods make creating real-life entrepreneurial experience in the classroom challenging (Peterman and Kennedy, 2003; Sherman *et al.*, 2008).

**Table 3-1: Entrepreneurship Teaching Approaches**

Type of Approach	Main Activities	Challenges
Classroom Lectures	Market analysis, venture creation, new product development, project management, financing, strategy development etc.	Classroom lecture need to be combined with more experiential approaches to learning. Theory to be combined with practice lectures must be made relevant to real world entrepreneurship problems
Business Plans	Preparing business plans individually or in teams. Competitions and prizes for the best business plans	Business plans must be made realistic. Ways are required to test business against market conditions and potential shocks. Teaching must also look at turning business plan ideas into real practice
Case studies	Presentations and Discussions of real company/entrepreneur experiences in lectures and discussions in the classroom or in their enterprise	Significant resources are required to develop case studies. Case studies must focus on problems potential entrepreneurs will face.
Entrepreneurs as guest speakers	Entrepreneurs invited to present their experiences in lectures and discussions in the classroom or in their enterprise	HEIs must find ways of attracting entrepreneurs to teaching programmes. They must also support entrepreneurs in their teaching practice, notably in drawing out the learning from their experiences
Student business start-ups	Student start real or virtual businesses individually or in teams	Funds will be required to create start-ups and to develop virtual firm technologies. Rules must be established for sharing rewards from successful starts.
Business Games	Computer-simulated or other business games	The requirements for developing of purchasing the technology should not be underestimated. Efforts are needed to integrate games with other teaching. Teachers need training to provide a framework for learning from the games
Student entrepreneurs' clubs and networks	Student societies and networks to discuss entrepreneurship issues, create entrepreneurial teams, obtain mutual support and increase confidence	Nurturing is required to make networks successful. Activities must be found to animate the networks. Networks should be expanded to include experienced entrepreneurs, investors, consultant etc.
Placement with small firms	Short-term assignments with small firms to assist with business development projects such as, market or technology development	Firms must be found to provide good quality placement. University staff must support the student during the placement
Feasibility Studies	Exploring the feasibility of business ideas with environmental scans, market investigation, competitor analysis etc.	It can be difficult to assess how well feasibility studies have been undertaken with real conditions on the ground.
Communication	Presentation techniques,	Communication skills need to be developed

training	inter-personal communication.	under pressured and real-world conditions.
<b>Type of Approach</b>	<b>Main Activities</b>	<b>Challenges</b>
Consulting for SMEs	Student participation in consulting projects for new and small firms with the support of university staff	It is necessary to find suitable companies and consulting opportunities. Although academics will often be expected to lead, ways must be found to involve students in the projects
Support for graduate students' start-ups following the course	Seed money, mentoring, incubation, consultancy etc.	Sufficient funds must be generated for the support. Decisions must be made about the right amount and duration of support. Where possible links should be made with existing support providers outside of the HEIs
University-wide entrepreneurship education	Spreading entrepreneurship teaching out to faculties beyond the business school	The right point must be found in a trade-off between the benefits of proximity and tailoring to subject specificities through separate courses for each department and the benefits of economies of scale and greater experience through centralised and inter-disciplinary courses.
Specialist entrepreneurship degrees	Undergraduate and post-graduate degrees majoring in entrepreneurship	It can be difficult to obtain academic rigour from purely entrepreneurship degrees. It can also be difficult to attract student to these degrees. Practical entrepreneurship outcomes are not guaranteed
Distance education programmes	Use of electronic media including web-based programmes, interactive DVDs and electronic discussion groups	Student learning rhythm must be maintained, and student isolation avoided
External partnerships	Creation of entrepreneurship centres with financial support from business and public agencies. Advisory boards with external experts.	It is necessary to maintain academic rigour and HEI independence whilst adapting to the concerns of other stakeholders.
Courses for entrepreneurship teachers	Courses for prospective teachers of entrepreneurship to understand the entrepreneur's environment and behaviour and to develop their teaching approaches.	Ways are required to develop insights on the world of the entrepreneur for teachers who have no entrepreneurship experience and to develop teaching abilities in existing or former entrepreneurs.

Source: Potter (2008:323-324)

In consideration of the EE approaches, Potter (2008) developed, it is likely that the missing puzzle in most entrepreneurship classrooms is the incorporation of experiential pedagogies

that can give students the holistic learning experience required. Although, Fiet (2001) reasons that entrepreneurship students require theory in the classroom to enable them to know what to do to be successful while also ensuring that students practise skills of interest, Mousa (2014) observes that pedagogies in the entrepreneurship classroom are changing from the conventional lecture approach to modern methods that are focused on experiential learning. However, it appears that the required change is not so much the relinquishment of the traditional methods as Mousa (2014) observed, but the balancing of teaching with the inclusion of the experiential pedagogies. Bygrave (1993) sums up in a personal conversation in Fiet (2001), the two ways to destroy an entrepreneurship module is to make it either entirely practical or entirely theoretical. Hence, finding a suitable balance between the two methods would seem to be the suitable approach.

In an investigation into the appropriate teaching methods used for EE in Iran by Arasti *et al.* (2011) lecturers listed case study, individual projects and group projects (traditional methods) as the most appropriate in business planning modules and role play and scientific visits as less suitable. This finding could mean that different methods are fit for different aspects of the contents in EEP and certain methods could be inappropriate for some contents. It can also be argued that lack of knowledge of the application of those methods could have made the lecturers conclude that the methods were not fitting. However, it is essential that EE lecturers have knowledge of varied methods and the capacity to identify the methods that are apt for the different contents of the curriculum.

Methods like participative discussion sessions, team projects and simulations that allow learners' self-discovery are apposite for nurturing entrepreneurial intentions. They include active participation and do not limit students to listening and note-taking (Garavan and O'Connell, 1994; Rae, 2000; Fiet, 2001). In view of this, lecturers might require training in

these pedagogies to be able to act as facilitators of learning, which could assist them to adopt the appropriate methods for the attainment of EEP goals.

There is evidence that a positive link between having education and entrepreneurship exists (Ferreira *et al.*, 2012; Dragomir and Panzaru, 2015). Although this relationship can be ambiguous, evidence suggests that the highest levels of entrepreneurship are associated with persons with some college education (Raposo and do Paço, 2011). Thus, using the right method of implementing entrepreneurship education in universities will further ensure that it motivates entrepreneurial activities. Accordingly, the more the teaching methods are hands-on, the more the likelihood of success (Edelman *et al.*, 2008).

To summarise, there is a consensus that the traditional teaching methods are less effective in motivating entrepreneurial characteristics. Since teachers are regarded as the most influential actors in education (Sagar, 2015) the need to equip them for teaching through training becomes even more vital. Getting the lecturers to develop the right mindset towards entrepreneurship appears to be an important starting point to the success of EEP in Nigerian universities. Similarly, complementing traditional teaching methods with innovative pedagogies could provide the opportunity for ‘live’ learning - entrepreneurial practice (Herrmann, 2008).

In Nigeria, various initiatives were adopted at the federal level to promote EEP. This includes enumerating the teaching methods, the forms of assessments and ensuring that academics with requisite professional knowledge teach on the programme (Ekoja and Odu, 2016). To examine the extent to which this entrepreneurship programme provides skills and trades, Ogah and Emesini (2013) used a sample of 400 students from one university in South East Nigeria. Their findings revealed that students had only the theoretical knowledge of skills with no practical learning provided. Similarly, some earlier studies including Ifedili and

Ofoegbu (2011), Ukoha (2012) and Gabadeen and Raimi (2012) found that lecture and discussion were the most applied methods while innovative methods like role play, guest entrepreneurs and entrepreneurial projects which can motivate EI were seldom employed. Essentially, Ofemile and Chukwuma-Nwuba (2018) found that the communicative attitudes exhibited by the EEP lecturers during interviews, indicated that the participants identified the local entrepreneurs (that would have served as guest lecturers) as uneducated associates. This suggests that they were not considered to be important in the implementation of the programme. This thus makes it essential to determine the pedagogies used in the implementation of EEP in Nigeria.

To investigate the imperatives of pedagogies for improving entrepreneurial competencies Nwokike (2016) had samples of 109 business education graduates of universities in the South East and South-South zones of Nigeria. The respondents agreed that demonstration and experiential methods including mentoring activities might improve their entrepreneurial competencies if applied. This implies that the lecturers were not employing demonstration and experiential methods, but perhaps used the methods they were familiar with in their fields of specialisation as Bennett (2006) observed. Nwokike (2016) further found that the entrepreneurship programme is taught for passing examinations and not for the attainment of its objectives and consequently suggested the application of experiential pedagogies to improve entrepreneurial learning. Oyenji (2013) condemned what he termed the mono-method of loading university students with information without encouraging discovery. Given these findings, research is necessary to substantiate the methods used in the teaching and the effects of the teaching methods on participants' attitude, and to determine the preparation or training that the lecturers of the EEP have received and their training requirements to facilitate the success of the programme.

Fiet (2000) topically analysed 18 syllabi provided by entrepreneurship lecturers and found 116 different topics with only about a third of the topics overlapping. Fiet (2000) noted that the 18 syllabi were enough to create six and half different modules based on their course contents. The dissimilarities in the entrepreneurship course contents have implications for curriculum development and pedagogy. Similarly, the level of the variety in the entrepreneurship content perhaps makes the objective of the programme varied. These diversities in the entrepreneurship programmes offered in universities are possibly due in part to the construction of an entrepreneurship curriculum that seems to rest with individual institutions (in the western world). This results in an on-going debate concerning the efficacy of entrepreneurship courses (Henry *et al.*, 2005; Mwasalwiba, 2010). In the context of the current study however, the curricula for all the Nigerian universities have identical contents referred to as ‘minimum standard’ (National Universities Commission, 2018). This has implications for practice. For example, the trainees at the CEAL were to reflect the peculiarities of the context of each university in both curriculum design and implementation. This presupposes that each university has autonomy in curriculum design like the UK, which is not the case in Nigeria. Although the Nigerian university curriculum designers term the curriculum as the ‘minimum standard’, the size of the content and the unstable semesters due to workers’ strikes tend to make any additions challenging. In effect, all the universities implement virtually the same curriculum.

As a discipline, EE is more than just a course or subject because it has complementary activities without which it seems difficult to achieve its objectives. Drawing on the description of entrepreneurship programmes, Gartner and Vesper (1994) and Souitaris *et al.*, (2007) recommended that a good practice entrepreneurship programme should encompass four components namely: (1) a taught component that should comprise one or more modules; (2) a business plan component that should include advice on developing specialised business

ideas and business plan competitions; (3) a practice component which should involve talks given by entrepreneurs and networking events; and (4) a university support component that should include meeting spaces, resources market-research and even seed funds for student-groups. Other authors including Hynes (1996) also developed models of EE with the aim of ensuring that the programmes produce the desired outcomes. Hynes' (1996) process model is presented in Table 3-2 and it characterises the range of factors to consider in the implementation of EE.

**Table 3-2: Hynes' 1996 Entrepreneurship Education Process Model**

Inputs		Process	
<i>Students</i>	<i>Content Focus</i>	<i>Teaching Focus</i>	<i>Outputs</i>
Prior Knowledge base	Entrepreneurship defined	Didactic (Reading/lectures)	Personal (confidence, communication)
Motivation	Innovation	Skill Building (case studies, group discussions, presentations, problem solving, simulations, teamwork, projects)	Knowledge (enterprise, initiative, self-employment, business, management and market skills, analytical, problem solving, decision making, communication, presentation, risk taking)
Personality	New product development	Discovery (brainstorming, personal goalsetting, career planning, consultancy)	Career (improved knowledge, broader career options, broader less structured career perspective)
Needs/interests	Idea generation		
Independence	Market research		
Parental influence	Feasibility of idea		
Self esteem	Finance		
Values	Production		
Work experience	Regulations		
	People management		
	Teamwork		
	Business		
	Marketing		
	Management		

Source: Hynes (1996)



The entrepreneurship education process model developed by Hynes (1996) include: what the content of the module should comprise, consideration for learners' needs and the various teaching methodologies that should be applied. Further, the model shows the expected outcome following the implementation of the contents, learners' specific situations and the teaching pedagogies. Although Hynes' teaching methodologies were written in the mid-1990s, they are still being advocated by academics (see Bennett 2006; Mwasalwiba 2010) as suitable methods for imparting the programme and generating the outcomes that are commensurate with its goal.

The wide variation in entrepreneurship programme content sometimes tends to question the general suitability and effectiveness of the programme (Matlay, 2005). Nevertheless, the variation in entrepreneurship education programme contents seems acceptable due to contextual differences requiring that EE contents be relevant to where it is domiciled (Mwasalwiba 2010). The curriculum for EE is the same throughout Nigeria despite the cultural and entrepreneurial environmental differences in the country's set up. In this sense, the contents appear to be devoid of consideration for local contents despite the diversities in culture and industry.

The graduate unemployment situation in Nigeria is attributed partly to the nature of university curricula, which still emphasises education for employment seeking (Adejimola and Tayo-Olajubutu, 2009). This is despite the limited job vacancies and the compulsory EEP which should have shifted the focus of students' preparation towards equipping them for entrepreneurial career options. Indeed, the Nigerian graduate report of 2016 revealed that 68.30% of graduates surveyed agreed that the education received prepared them for employment (Stutern: Nigerian Graduates' Report, 2016).

There is evidence that participation in EE in UK universities suggests a positive stimulus between entrepreneurship and EE (Williamson *et al.*, 2013), but this is yet to be empirically established in Nigeria in relation to the intervention that GST entrepreneurship is to serve. Although the UK does not appear to have fully embraced the culture of entrepreneurship in universities as seen in the USA (Technopolis Group, 2015) entrepreneurship has emerged as a significant part of UK university education (Business Enterprise and Regulatory Reform, 2008). Researching the EE programme in Nigerian universities (a strategy for producing entrepreneurial mind-set) is therefore useful for discovering its role towards increasing graduate entrepreneurship and obtaining a clearer picture of the relationship between the programme and the potential for entrepreneurship

### 3.3.2 The Entrepreneurial Ecosystems

The notion of the entrepreneurial ecosystem can be traced to the 1990s (Wadee and Padayachee, 2017). It is used in management research to describe the situation whereby people are brought together for wealth creation and economic development (Bajjnath, 2015). Considering that the entrepreneurship ecosystem has become an important and almost an indispensable efficient mechanism for business community-university engagement, EEP is an ecosystem of group, system and a network of interconnected individuals and activities, created by the interaction of organisms within its local community or the alliance of an entrepreneurial group of stakeholders (Maritz *et al.*, 2015). Thus, EEP could acquire the benefits accruing from the many but diverse levels. Nevertheless, the absence of the ecosystemic approach of implementing the programme might present a challenge. Consequently, Jones and Matlay (2011) noted that the explanation of the outcomes of the EEPs in universities without the adoption of its holistic perspectives could be challenging, because it is the implementation of ecosystems that tend to make the interaction of all elements reasonable and the programme successful.

Considering the foregoing, the promotion of EEPs seems to necessitate implementing it as an ecosystem where universities have the essential position to collaborate with all stakeholders (Wadee and Padayachee, 2017). The several components of the ecosystem mean that a change or absence of one factor will have an effect on the other factors and possibly on the entire ecosystem (Coleman and Robb, 2018; European Commission, 2014). A sustainable entrepreneurial ecosystem requires that many aspects should be interlinked to enable it to form a balanced whole. For example, the domains of an entrepreneurship ecosystem include a conducive culture, funds, enabling policies and leadership, venture-friendly markets for products, quality human capital and variety of institutional and infrastructural supports (Isenberg, 2010). Further, it supports the advancement of innovative pedagogical techniques (Anzelika, 2017). Indeed, the entrepreneurial ecosystem has become central to the holistic approach to EE and enables it to yield the best results if not the desired results (European Commission, 2014; European Commission, 2010). Consequently, each component of the ecosystem has the potential to enhance or inhibit entrepreneurship and thus become increasingly difficult to ignore (Coleman and Robb, 2018). Although, there are apparent hurdles to overcome particularly at the outset, like the resources required in terms of time and finance. This suggests that HEIs should endeavour to bring all the components together for successful EEP outcomes because as Wyness and Jones (2019) determined, the strategic decision makers of universities need to develop and encourage this conversation of interactions and collaborations for best practice.

More recently, culture, education and training, markets, regulatory framework and infrastructure, human capital, funding and finance were identified as parts of an entrepreneurship ecosystem (The World Economic Forum, 2013). In view of this, societal or communal efforts seem to be needed to develop and maintain a vibrant entrepreneurship ecosystem (Brush, 2014). The entrepreneurship ecosystem in recent years has been attracting

attention particularly in policy as communities seek to develop and expand entrepreneurial ventures in specific areas and is being extended to include other factors like human capital development (The World Economic Forum, 2013; Brush, 2014). As Kirkley (2017:18) succinctly puts it,

the formula for successful cultural adaptation to entrepreneurship lies in participation, inclusion, sharing and support across all community stakeholder group.

In this regard, the factors are crucial for the attainment of the desired EEP outcome from the outset of its implementation, consequently placing the educator in an indispensable position in planning, organising and coordinating the ecosystem. To embed entrepreneurship appropriately, make possible contributions to society and achieve the best possible results seems to require the holistic technique involving the adoption of the ecosystem approach (Stephan, 2009). It is, however, noteworthy to remark that entrepreneurial ecosystems are dynamic, long term, an adaptive process and can change (Brush, 2014; Matt and Schaeffer, 2018), hence the need for periodical evaluation to determine when and what changes are necessary to the ecosystem constitution. Perhaps the most serious challenge with the ecosystem approach to building a result-oriented entrepreneurship programme in universities lies in its creation which involves a lengthy process that can be divided into various parts, depending on the goal of the programme. For example, where the goal of the programme is to emphasise students' entrepreneurial culture and inspire entrepreneurial activities in new venture creation, Matt and Schaeffer (2018) suggest starting from the cultural dimension of the ecosystem. This could be in form of the diffusion of success stories that can encourage students to launch new ventures. It is believed that storytelling in EE classrooms improve knowledge and stimulates students' EI (Liu *et al.*, 2019). The authors further argue that entrepreneurial stories like that of Steve Jobs are usually employed as an effective pedagogical mechanism to promote entrepreneurial intentions among individual learners in

the entrepreneurship education classroom. From this standpoint, perhaps the role of the media is essential in terms of how entrepreneurs are portrayed in the Nigerian society. The way entrepreneurs are perceived in a society can affect the attitude that people have towards entrepreneurship. Investigating the success of this in a different cultural setting may give a different view.

Other steps in the development of an ecosystem are: first, the progressive formation and transformation of the actors promoted in the EE policy (Matt and Schaeffer, 2018). In this sense, universities capitalise on the opportunity provided through national policies to become strategic players that influence the formation of the entrepreneurial ecosystem, beginning with the indigenous resources that can be exploited. Contextual factors in university environments can facilitate or inhibit either the occurrence or the intensity of entrepreneurial behaviours. Thus, the role of universities in creating ties with local communities and providing a conducive environment seems to be a crucial facilitator of entrepreneurial behaviours among learners. Hence, it is important to examine the extent to which universities engage with the entrepreneurs within their localities.

Secondly, ‘the collaboration of the actors underpinning concrete actions to promote and support academic entrepreneurship’ (Matt and Schaeffer, 2018:25). Indeed, the presentation of a positive image of entrepreneurs within educational institutions could serve as incentives to students towards entrepreneurial career choices (Fayolle and Gailly, 2005) without disregarding the role of the media. Similarly, the interactions between universities, service providers, entrepreneurs and faculties feature both in the press and online (Swift, 2008) and specifically, a university-based entrepreneurship ecosystem is beginning to occur at multi-levels - *the individual* comprising the students, staff, entrepreneurs and administration; *groups* which consist of organisations like incubators and entrepreneurship centres, and then

*community stakeholders* including government, policy-makers, and industry. These and other aspects, like trained lecturers, experiential learning activities, variety of pedagogical approaches and the various facilities are required for a successful EE and all point to the importance of a holistic approach, since a failure in one affects the entire system (European Union, 2014). Entrepreneurship is thus acquiring an unprecedented and more comprehensive dimension perhaps to eliminate some of the drawbacks relating to its outcomes. Hence, implementing EE by adopting an ecosystem seems to be one of the ways to redress some of the challenges and it also seems essential for producing learners who can turn creative ideas into entrepreneurial action as Herrmann (2008) has noted.

Although, EEPs have enjoyed financial support from policy and government, funding still appears unstable and a commonly accepted model of impact measurement is yet lacking. Similarly, the links between universities and industries are not strong enough thus, more consolidation seems essential. Likewise, more specialists tend to be required for improved results. Accordingly, while it is important for universities to establish worthwhile links with industries, they have to ensure that qualified lecturers who are capable of applying experiential pedagogies are engaged. The availability of these elements could make the production of entrepreneurial graduates effective. In view of this, the EU observed that there is the need to raise awareness of the ecosystem approach (South East European Centre for Entrepreneurial Learning, 2015) because the interconnectedness of these elements is relevant to the attainment of EE goals that its sponsors and governments desire.

Overall, there are strong arguments in support of institutions offering entrepreneurship education to be entrenched in the local stakeholder communities, participate actively in joint ventures and incubator activities and essentially to judge their performance through the eyes of the ecosystem (Gibb, 2002) and not just based on students' performances in examinations.

### 3.4 Institutions and Entrepreneurship

Institutions are important factors to new venture creation and the sustainability of the existing institutions are important factors to new venture creation and the sustainability of the existing ones. They are amenities, customs and guidelines that are devised by people as rules guiding behaviour or the organs that guide the internal associations of people within a society (North, 1990). Institutions include laws and governmental regulations such as traditional norms (Puffer *et al.*, 2010). They play crucial roles in the promotion of development and economic growth through the process of financial intermediation and provide linkages for the diverse sectors in economies (Babajide *et al.*, 2015). In contrast to developed countries which have myriads of functional institutional environment with efficient governmental structures, rules and policies, standards and cultural norms, emerging economies often face institutional voids which impact negatively on entrepreneurship (Doh *et al.*, 2017).

The neglect of the all-important intermediation role and the apathy of the commercial banks to small and micro savers impede access to affordable and steady funds resulting in high bank lending rates in Nigeria (Babajide *et al.*, 2015). In this regard, loans from banks or financial resources for new venture creation or business expansion are almost non-existent and where they are available, the conditions and collaterals to access loans are practically impossible to meet by small business owners let alone potential entrepreneurs (Adisa *et al.*, 2014). In addition, interest rates on loans capped at 21% in 1994 and subsequently lifted to be determined by market forces made loans unattractive (Makinde, 2016). Moreover, loans to small businesses are subject to even higher rates because of their higher risks. This scenario creates an institutional void, which is detrimental to new venture creation, impact adversely on entrepreneurial intentions and makes the “reference others” the preferred choice with regards to seed capital and other business loans. Hence, the likelihood that subjective norm may significantly impact on university graduates’ entrepreneurial intentions.

Institutional void is the absence of amenities or services, norms, and procedures that are required to have a well-functioning economy (North, 1990). It ensues when supporting institutions do not exist and operating without them pose specific challenges and in some situations, provide opportunities (Khanna and Palepu, 2010). Institutional voids echo institutional environments that hinder the ease with which people interact especially in business (Doh *et al.*, 2017). The behaviours of people in specific societies are therefore, shaped by the incentives, restrictions or the resources made available through formal and informal institutions, which can be compatible (Ute *et al.*, 2015). Consequently, when there is institutional void, it tends to create environments in which potential entrepreneurs should rely on family and friends. Really, self-made Africans and indeed Nigerians spread their wealth to help family, friends and networks (Austin *et al.*, 2017) and this can be impactful on entrepreneurial intentions. Moreover, institutional voids can derail entrepreneurial activities, and reflect the ambiguous and tough conditions that entrepreneurs and potential entrepreneurs in emerging economies handle constantly. This contrasts with the western nations where institutional support play principal role in economic growth and development and indeed venture creation.

In Nigeria, the situation is not the absence of germane institutions but their weaknesses resulting from deficiency in institutional policy implementation (Makinde, 2005). Poor public service delivery where inducements are used to either obtain justice to get one's right is a major factor (SERVICOM, 2017). As this creates obstructions in good public service and effective implementation of government policies, SERVICE COMPACT with the acronym SERVICOM, was initiated by the then President of the country and inaugurated in June 2003. The agency was inducted to redress the combined malevolent of corruption and inefficiency in the Nigeria's public service (SERVICOM, 2017). Consequently, policies that should produce effective practices are vague and practitioners simply exercise their discretion in the



implementation which oftentimes are contrary. Similarly, the institutional environment in Nigeria appears synonymous to Honadle, (1979:6) scenario which he likened to a building plan, writing that:

implementation is the nemesis of designers; it conjures up images of plans gone awry and of social carpenters and masons who fail to build to specification and thereby distort the beautiful blueprints for progress which were handed to them. It provokes memories of “good” ideas that did not work and places the blame on the second (second-class) member of the policy and administration team...

For example, courts cannot guarantee the implementation of law and access to bank credits is still an uphill task for potential entrepreneurs. Discussing the lending situation in developing countries Ghosh *et al.* (2000) argued that lending transactions typically occur in the informal market where the lenders and borrowers are known to one another and this assertion portrays in clear terms, the informal lending set-up in the Nigerian business environment. Similarly, the bureaucracy involved in obtaining loans from banks, make the loans usually not worthwhile hence, about 80% of Nigerian small enterprises do not thrive (Chukwuemeka, 2006 in Adisa *et al.*, 2014). As an alternative and often as the main source of business funding, potential and present entrepreneurs access funds primarily through bootstrapping and rely mainly on loans or help from family, colleagues and friends. Therefore, when individuals perceive that the ‘significant others’ would not support an entrepreneurial aspiration, it becomes difficult if not impossible to consider entrepreneurship as a career option.

### 3.5 Cultural Values and Entrepreneurship

The focus on cultural values in this thesis stems from the widely held view that it has effect on entrepreneurship (Davidsson, 1995; Guiso *et al.*, 2006). Similarly, Hayton *et al.* (2002) in consideration of the cross-cultural studies of Hofstede (1981), explained that certain cultural

values foster more entrepreneurial activities than others. It is thought that a country can have multiple cultures (McSweeney, 2002) and that a society's cultural values determine its propensity to risk-taking like entrepreneurship (Lee and Peterson, 2000). Additionally, there is a possibility that cultural values will deepen and extend the understanding of the influence of culture on entrepreneurial activity (Liñán *et al.*, 2016). The researchers further observed that as the differences in entrepreneurial activities among nations tend not to be fully explained by factors like institutional economic variables, several of these differences could be attributed to culture. In this regard, some values, norms and socio-cultural practices are likely more prone to driving or inhibiting entrepreneurial activities and intentions. Other authors (Wennekers *et al.*, 2002; van Stel, 2005; Van Praag and Versloot, 2007; Bosma and Schutjens, 2011) also believe that the differences in entrepreneurial activities might relate to socio-economic benefits that accrue to countries and these are components of cultural norms, values and beliefs of a people.

Some authors including Busenitz *et al.* (2000) have argued that entrepreneurial activities cannot be detached from their contextual occurrence, stipulating that cultural differences are useful to acquire knowledge about entrepreneurial phenomena. Likewise, Welter (2011) shows that the understanding of how, when, and why entrepreneurship occurs for those who engage in entrepreneurship, and the context is of importance. Hence cultural values manifest themselves in the choices that people make including decisions relating to entrepreneurship. Our knowledge of cultural values therefore tends to deepen our understanding of the elements in culture that influence entrepreneurship. Cultural values create the tendency to favour certain events against others (Hofstede, 2005). Accordingly, a substantial amount of the variations in entrepreneurial activities can be credited to culture, and it is evident that cultures - values and norms - that reinforce and are more conducive to entrepreneurial activities could facilitate risk-taking, while those that value and strengthen control and conformity (public

service) are less likely to support entrepreneurial behaviours (Hayton *et al.*, 2002). It is a complex and difficult subject to tackle, and this often makes it invisible within development (Marana, 2010). It is thus important to gain a deeper understanding of the relationship between cultural values and entrepreneurship in different contexts, considering its implications for economic growth and development.

It is thought that to have value means the preservation of an enduring belief that certain modes of behaviour are preferred to alternatives (Rokeach, 1972). Consequently, values can be held by communities and individuals and when communities hold values, it becomes a component of the culture of the people in addition to other beliefs, as culture exists within the context of a social unit (Kilby, 1993; Morris and Schindehutte, 2005). As Hofstede (2001) states, values are learned processes and inclinations for averting negative consequences or generating positive results. Although cultural values evolve slowly over time, they are thought to be kept intact and generally preserved due to pressure from the social unit. Accordingly, the presence of patterns suggests the values that are shared by members of a group (Morris and Schindehutte, 2005). Understanding cultural values in relation to entrepreneurship could help to provide a better understanding of EI in the context of this research.

As Morris and Schindehutte (2005) clarify, culture occurs at various levels such as ethnic, gender or even at an organisational level. In the context of entrepreneurship, if values relating to commerce are not consistent with the typical traditions of the group, the tendency is that the group will be less likely to wish to become entrepreneurs. Culture gratifies needs, hence, as the needs of the members of the group change, certain aspects of culture become less capable of satisfying societal needs, and consequently it adjusts to serve the group members better. Considering that there are differences in entrepreneurial activities in different cultural

settings and the dynamic nature of culture, examining the effect of cultural values on entrepreneurial intentions is beneficial.

Culture is thought to be an integral part of people's attitudes and beliefs. It can be thought to be stress conformism, fitting-in and care about relationships (Gill, 2017). According to Hofstede (1980), culture is 'the collective programming that differentiates the members of one group from another'. Culture is defined in various ways but nonetheless the definitions tend to indicate a collection of characteristics that are shared at least in part with other individuals who either belong to the same group or live within a social environment (Bergmann, 2008). Therefore, the values and norms that prevail in a social environment could influence on the people's tendency to be entrepreneurial (Etzioni, 1987). Essentially, the past four decades have seen the rapid and continued academic interest in the impact that culture has on entrepreneurship and researchers have explored the effect that organisational, regional and national cultures can have on wealth creation through entrepreneurship (George and Zhara, 2002). Indeed, the literature on the association between cultural beliefs and entrepreneurial motives and behaviours has grown significantly (Hayton and Cacciotti, 2014). Notwithstanding on-going debates about the relationship between entrepreneurship and cultural characteristics over decades, it became the focus of empirical scrutiny only recently (Hayton *et al.*, 2002). Yet, there are still questions and unresolved inconsistencies to be addressed (Hayton and Cacciotti 2013). Thus, although considerable progress has been made over the past four decades of continuous academic interest of the effect of culture on entrepreneurship, the exploration of the manifestations of culture and its impact on entrepreneurial outcomes is limited. Opportunities therefore exist for scholarly inquiry, particularly in contexts where studies are limited and where the few available studies lack methodological and theoretical rigour.

Empirical findings have indicated some patterns of significant relationships (George and Zhara, 2002), and thus it becomes essential to look more closely at the deeper beliefs of people that anchor the suppositions for entrepreneurial decision-making to better the understanding of the processes for entrepreneurial intentions development (Liñán *et al.*, 2013). Typically, values and norms guide our attitudes, choices and behavioural patterns which in turn exhibit uniformity to our cultural contexts (Ozaralli and Rivenburgh, 2016). Therefore, beliefs, needs, and values can affect the intention to engage in entrepreneurial activities (Lee and Wong, 2004; Bird, 1988). Likewise, culture acts as a powerful tool that can stimulate members of a society to exhibit certain behaviours that may not be found in some other societies (Mueller and Thomas, 2000). Therefore, the cultural values of a society might either motivate or inhibit certain attitudes and shape perception towards entrepreneurship (Zahra *et al.*, 1999).

Kent (1990), found that there is generally an unfavourable attitude towards entrepreneurs in the United States. However, several other studies found that American students are more entrepreneurial when compared with students from other countries (Lee *et al.*, 2005; Autio *et al.*, 1997). This is perhaps due to the American educational system which emphasises independence. Similarly, Lee *et al.* (2005) write that the USA encourages risk-taking attitudes which has enabled entrepreneurship to flourish in the USA. A possible explanation is that the policies at the local levels support start-ups to boost the economic engines of their localities which in turn inform national policy. Accordingly, Mueller *et al.* (2002) propose national culture as a reliable predictor of entrepreneurial potential.

Culture can also have an influence on the extent of the effect of entrepreneurship education in a country as this is said to vary according to an individual country's unique cultural context (Lee and Peterson, 2000). Even in situations where people are motivated by way of financial

rewards, social, achievement, career and individual accomplishment, they still need a societal culture that encourages and supports entrepreneurial behaviours to act entrepreneurially (Lee and Peterson, 2000). Culture, therefore, is becoming increasingly a priority for governments as a focus of interest and it is thought that a supportive culture can be instrumental in encouraging entrepreneurship for individual and national economic growth and development (Russell *et al.*, 2008). Hence, entrepreneurial culture is used in many ways to explain some of the differences in economic development across nations. In view of this, governments have roles to play with respect to stirring national cultures towards innovation and risk-taking to promote entrepreneurship and safeguard economic development (Chakraborty *et al.*, 2015). Hence, understanding the extent to which culture affects the desirability of entrepreneurship is something that can play a part in developing the growth of entrepreneurial behaviour and this requires a deeper understanding in developing countries.

Another cultural dimension to the promotion of EE in Nigeria is the parental expectations of children's careers. Most parents envision and expect their children to work in telecoms companies, banks, multinational organisations and oil and gas industries after graduation (Wale-Adegbite, 2011). This seems to reflect a cultural bias against an entrepreneurial career after university education despite the government's efforts towards producing graduate entrepreneurs. Even as having a parent entrepreneur encourages entrepreneurship among the children, parents' preference for jobs may well discourage in their children the intention towards entrepreneurship.

Other explanations that tend to make the choice of entrepreneurship as career options less likely include the practice of collectivism/communalism where people tend to lean more towards shared benefits than personal interests (Hofstede, 1980; Wu, 2006). The higher the degree of collectivism, the more the tendency that the opinion of their significant others will

have effect on their attitude towards entrepreneurship (Silapan and Edralin, 2019). Nigerians value close and long-term commitment to family, extended families and all relationships. The practice of loyalty to family, age group and immediate community can even be subconscious. Indeed, such cultural values are believed to be deep-rooted in the 'Nigerian DNA'. It is common in Nigeria to find an employed individual in a family supporting numerous other members of his extended family and community members in one way or another (Ajekwe, 2017). These communal practices tend to have implications on entrepreneurship because they do not encourage the culture of savings to allow for 'bootstrapping' given the circumstances of institutions in the country (see section 3.3.3). In this sense, the culture of collectivism tends to inhibit entrepreneurial practices. This may also mean that results from western countries may not apply to Nigeria where collectivism is a highly accepted cultural value. Research in Nigeria is therefore necessary, to ascertain the effect of collectivism on the EI of graduates.

Additionally, a cultural practice that appears to hinder entrepreneurship in Nigeria is related to tolerance for hierarchical relationships understood as power distance in the work of Hofstede (2011). Respect for elders and superiors is prioritised over most societal rules and regulations. This has crept into the country's educational system. Since learners are taught this conformist ideal, it tends to make educational institutions grounds for weakening entrepreneurship because as Ajekwe (2017) demonstrates, questioning the decisions of seniors or authority is regarded as disrespectful. Considering that cultural values have an impact on entrepreneurship, more knowledge and understanding of this in a cultural context different from Western cultures where research on the subject has concentrated would seem to be a valuable area for research. This study contributes to knowledge in this respect.

### 3.6 Summary

This chapter explored the entrepreneurship education programme in Nigeria. It demonstrated that the programme was implemented to accelerate Nigeria's economic growth and development through the development of an entrepreneurial mindset among graduates to facilitate the creation of potential entrepreneurs and employers of labour. It was shown that the programme was added to university curriculums to assist with the reduction of unemployment that continues to grow at an alarming rate. The chapter explained the importance that the Nigerian government attaches to EEP in relation to socio-economic development expectation and concludes that a clearer understanding of the programme is necessary to highlight areas where reforms might be necessary. The potential for redressing the socio-economic situation through the various initiatives planned was discussed. It also argued that it may be that the success of the programme in Nigeria might offer an EE blueprint that other developing countries and especially other African countries can adapt. In view of current developments, the need for research to determine the extent of graduates' intentions towards entrepreneurship was proposed.

Despite the good intentions of the federal government and the obligation of the NUC, the EEP in Nigeria would seem to be plagued by inadequate planning and execution of the procedures required for successful outcomes. Additionally, the programme appears to be threatened by inadequate requisite human and material resources and lack of training. Consequently, monitoring or revisiting the implementation of the programme seems imperative.

The chapter explored the implementation of EE as an ecosystem and suggests that doing this may well make EEPs at HEIs more results oriented. It was also noted in the chapter that a coherent all-inclusive (ecosystem) approach may be needed and this appears to be a major step towards maximising the impact of EE. It further echoed EE as a programme that should



not be treated as a one size fits all. Therefore in adopting the entrepreneurship ecosystem, the chapter demonstrated that consideration should be given to the needs of the participants, the objective and context of the programme. Hence, it submits that research is required to examine the implementation of EEP, especially in Nigeria.

The chapter reflected on the concerns of researchers regarding the concentration of entrepreneurship research on developed countries and illustrated that the results emanating from the studies differ. Consequently, it is proposed that research is needed to examine the relationship between EEP and EI in Nigeria especially now that the country is going through a worsening socio-economic situation notwithstanding its abundant human and natural resources. It also suggests that the result of the research could offer an emerging economy perspective and hence make both theoretical and contextual contributions to knowledge.

It was shown in the chapter that most often the traditional methods were applied, while innovative methods are thought to be more helpful in motivating EI. It therefore suggests that any educational programme in this set of circumstances calls for the examination of the relationship between the pedagogies adopted and the attainment of its objectives. The chapter thus illustrated how this research might contribute to the growth of research in EI and extend knowledge in the relationship between EEPs and EI.

In consideration of the role of context in each EE type and the differences in learners' needs, it is assumed that the strategies required to make the EE functional could differ from country to country. Consequently, the Nigerian EE programme seems to need an examination and an understanding of the pedagogical techniques that underpin its implementation, particularly because there is no evidence that such studies have been conducted.

Although national culture is a complex issue for Nigeria because the country has over three hundred ethnic groups with diverse cultures (Nnoli, 1980) identical practices do exist across

some ethnic groups. The discussion showed that cultural values create the tendency to favour certain events against others like entrepreneurship. Further, it revealed that cultural values can create the opportunities for intellectual inquiry particularly in contexts where studies are limited or the where the few that are available seem to lack methodological and theoretical rigour thus prompting a need to take culture into consideration in research of this kind.

It was indicated in this chapter that there has been debates about the relationship between entrepreneurship and cultural values and that entrepreneurial activities cannot be detached from their contextual occurrence. Hence, cultural differences are useful to acquire knowledge about entrepreneurial phenomena. Consequently, the differences in entrepreneurial activities among nations could well be explained by cultural values.

It was highlighted in the chapter that despite the multicultural nature of the country, parents' visions and expectations of their children in general are homogenous and based upon them excelling in their studies and work in blue chip companies (Wale-Adegbite, 2011). This was also shown to reflect a cultural bias against entrepreneurial careers after university education, notwithstanding the government's efforts towards producing entrepreneurial graduates.

The next chapter will explore various relevant theoretical models with the aim of choosing the most fitting for these research questions. The chapter will then outline the theoretical grounding adopted and propose a conceptual framework that will guide the development of the hypotheses to be tested.

## Chapter 4 Theoretical and Conceptual Framework

### 4.1 Introduction

Drawing on the review of literature presented in the two preceding chapters, and in consideration of the research questions and objectives of this study, various theoretical models for studying EI are explored in this chapter with the aim of choosing the most appropriate to guide the study. Following this review, a conceptual framework (CF) for the study will be proposed. The proposed CF presents the relationship between the study variables and charts the necessary actions that this research will follow. The CF is therefore the foundation on which the research question propels the investigation to be reported given the research problem stated. The CF consequently lies within the theoretical framework for the study. The exploration of the various theories is presented below.

### 4.2 The Evolution of Intentionality Models

The 1980s and 1990s witnessed the development of several entrepreneurial intentions models: Shapero and Sokol's (1982) Entrepreneurial Event (SEE); Bird's (1988) Implementing Entrepreneurial Ideas (IEI); Ajzen's (1991) Theory of Planned Behaviour (TPB); Robinson *et al.*'s (1991) Entrepreneurial Attitude Orientation; Krueger's (1993) Entrepreneurial Intentions Model (EIM) and Krueger and Brazeal's (1994) Entrepreneurial Potential Model. These theories are explored to choose the most suitable for this research.

Shapero and Sokol's (1982) entrepreneurial event (SEE) model appears to have started the rapid growth in the entrepreneurial intention literature (Fayolle and Liñán, 2014). The model regards the creation of business as an occurrence explained by the interaction between abilities, initiatives, management, risk and relative autonomy (Guerrero *et al.*, 2009). It considers an individual's choice to start a business as dependent on: (a) the perception of the desirability, (b) the propensity to act, and (c) the perception of feasibility. The model has been tested empirically in several studies (Peterman and Kennedy, 2003; Gird and Bagraim,

2008) and found to be efficient in testing intentions (Krueger *et al.*, 2000). For example, Krueger *et al.* (2000) found that both the SEE and the TPB models are useful for examining entrepreneurial intentions. However, in this study, there is need to include more constructs with predictive abilities than provided in the models. Consequently, it is deemed not suitable for this study.

Furthermore, Bird (1988) developed a model of intention that accentuates the significance of intentions for implementing entrepreneurial ideas and organisational development. Bird (1988) argues that entrepreneurial intentions are directed at either creating new businesses or generating new values in existing businesses. The model indicates that intentional process starts with personal needs, wants, values, beliefs and habits. It further assumes that intention and action are structured by an individual's analytic, rational and cause-effect-oriented psychological processes and further accepts that holistic, intuitive and contextual thinking frames entrepreneurs' intention and action (Bird, 1988). Additionally, the model portrays entrepreneurs as being inspired by their vision of untapped wealth and that the feeling of a business potential makes them persevere. However, the model seemed inadequate in its form. Therefore, Boyd and Vozikis (1994) developed extended Bird's (1988) IEI into entrepreneurial intention model (EIM) by proposing self-efficacy as a critical antecedent of entrepreneurial intentions and behaviour. Nonetheless, Fayolle (2007) argues that the model is yet to be empirically validated for testing entrepreneurial ideas. Further, the model was specifically designed for understanding the implementation of entrepreneurial ideas and consequently the model has no consideration for "entrepreneurs by force", popularly known as need entrepreneurs in literature, that are mostly found in developing countries. Given these observations, the model is not considered appropriate for the current study.

Ajzen (1991) theory of planned behaviour (TPB) is an offshoot of the theory of reasoned action (TRA) by Fishbein and Ajzen (1975). The TPB built on the notion of perceived behavioural control (PBC). The premise of TPB lies in the assumption that all behaviours require planning to a certain extent and can therefore be predicted by the intention to act (Ajzen, 1991). The theory further hypothesises that intention is an important predictor of behaviour and a function of some behavioural views that connect specific behaviours with certain outcomes (Kautonen, *et al.*, 2013). In fact, it is argued that non-intenders who exhibit entrepreneurial behaviours are rare (Sheeran, 2002). Thus, having intention is not a matter of yes or no but a question of the extent to which one has intention that ranges from very low to very high (Thompson, 2009). Following this line of thought, questionnaires structured on the Likert format will be appropriate for generating data for measuring entrepreneurial intentions.

Additionally, Robinson *et al.* (1991) advanced Entrepreneurial Attitude Orientation (EAO) scales. The model benefitted from testing and validation by entrepreneurship researchers (Tkachev and Kolvereid, 1999; Shariff and Saud, 2009). The theory consists of cognitive, affective, and conative or behavioural reaction types. The reaction type further comprises sub-scales. The cognitive involves beliefs and thoughts about an attitude item, the affective entails positive and negative feelings towards the item, and the conative or behavioural component encompasses behavioural intentions and predisposition to act in each manner towards the item (Robinson *et al.*, 1991). The Robinson *et al.* (1991) model was not considered suitable because the EAO survey instruments are based on constructs that are not related to the research questions in this study. For instance, the four attitude sub-scales are: achievement in business, perceived personal control of business outcomes, innovation in business and perceived self-esteem in business, which are not the items being investigated in this study.

By 1993, Krueger developed the entrepreneurial intention model (EIM). The model assumes perceived desirability and perceived feasibility to be the two elements that predict the intention to become an entrepreneur and indicates the establishment of a new firm as an intentional process. However, Krueger (1993) argues that just having relevant skills is not sufficient for new venture creation. Krueger therefore suggested that attention should be on increasing the desirability and feasibility perceptions of students (Krueger, 1993) because social norms have not always been shown to have a significant impact in predicting entrepreneurial intentions (Krueger *et al.*, 2000). The theory concludes that subjective norm (SN) has no place in the prediction of EI contrary to some findings that have shown its significance. This study will utilise SN as a mediator in the prediction of EI following the suggestion of Liñán *et al.*, (2013) to discover its effect in the context of the study. Evidence from Spain and Taiwan suggests that the weakness of SN in predicting EI, could be reversed if it is applied as a mediator (Liñán, 2008; Liñán and Chen, 2009). Following these authors this study will utilise SN as a mediator between CV and EI to discover its effect in the context of the study. The EIM is consequently regarded as not suitable for this study.

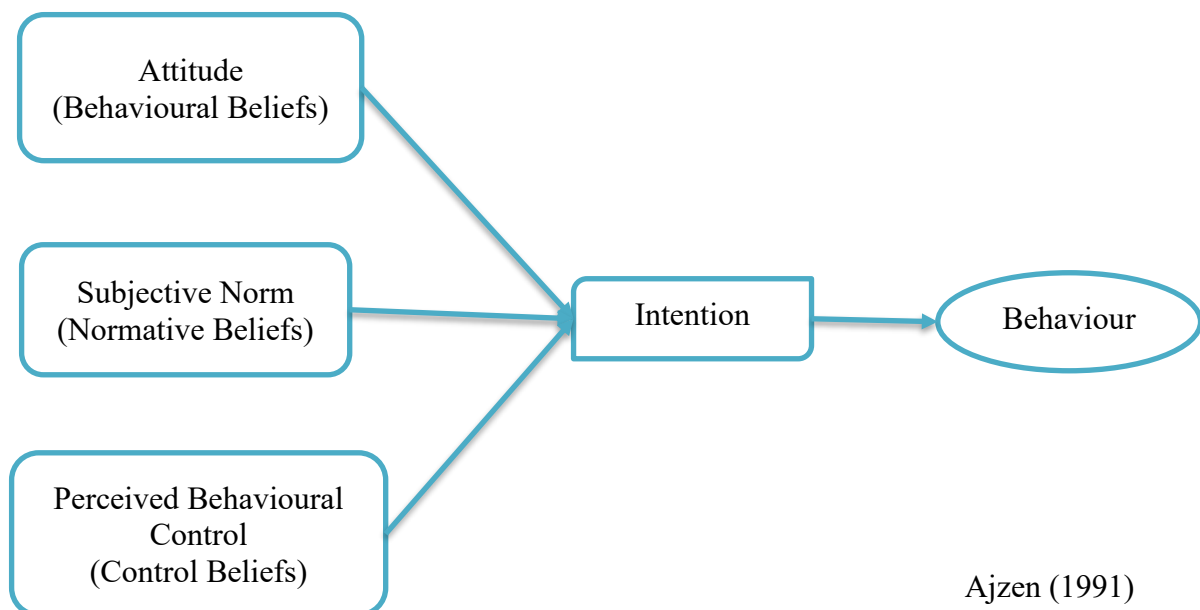
The different models reviewed above have been used by entrepreneurship researchers to identify how entrepreneurs emerge and the formation of new ventures. Likewise, each of the models have contributed to the understanding of entrepreneurs and new venture creation process (Sequeira *et al.*, 2007). However, considering that the primary objective of this study is to empirically utilise entrepreneurial intentions to explore EE in Nigerian universities, these theoretical frameworks are considered not suitable for the current study.

#### 4.3 The Theory of Planned Behaviour (TPB)

Intention, according to Ajzen (1991), encapsulates the three global constructs or motivational factors, namely: perceived attitudes towards the behaviour (PA), which indicates the extent to

which an individual appraises an act to be positive or negative (see figure 4-1). It relates also to how advantageous or otherwise the individual in question evaluates an action (Ajzen, 2002), which affects the decision to engage or not in the behaviour. The second is the Perceived Behavioural Control (PBC), which denotes the extent to which the action of new venture creation is viewed as easy or difficult (Ajzen, 1991). The PBC encompasses control beliefs and they may be established partly on the past involvement of an individual with the behaviour and this relates in part to entrepreneurial experience. Ajzen (1991) added that these control beliefs are more often influenced by ‘second-hand information’ of the experiences of friends and acquaintances concerning the behaviour and are capable of increasing or reducing the perceived difficulty of performing the behaviour being contemplated and have impacts on EI. Thirdly is the subjective norm (SN) that appraises the perceived social pressure to perform the actions (Ajzen, 2001). In this case, this is the perception that the graduates have of the important people in their lives (otherwise referred to as their significant others), as to whether they want them to engage in entrepreneurial activities or not.

***Figure 4-1: The Theory of Planned Behaviour***



A comprehensive study of the literature and an in-depth examination of the theories used for entrepreneurship in general and entrepreneurship education outcomes studies were conducted with the aim of establishing the most appropriate theory for this study. Ajzen's (1991) TPB seems to be the most commonly used theory for determining entrepreneurial intentions (Souitaris *et al.*, 2007; Gird and Bagraim, 2008; Van Geldren *et al.*, 2008). Several entrepreneurship scholars including Liñán *et al.* (2013), Van Gelderen *et al.* (2008), Fayolle *et al.* (2006), and Shook *et al.* (2003) agree that the theory is more consistent and comprehensive and has more studies dedicated to critiquing, testing and advancing the model in several fields. Likewise, some researchers observe that research into EI as an outcome of entrepreneurship education is usually first and foremost based on Ajzen's (1991) TPB because it offers a strong theoretical grounding (Krueger and Carsrud, 1993; Schilaegel and Koenig, 2014). Recently, Kariv *et al.*, (2019) described the TPB as a well-established theory. Consequently, this study utilises Ajzen's (1991) TPB with the addition of cultural values by Liñán *et al.* (2013) and teaching methods delineated into traditional and innovative methods.

Additionally, the TPB shown in Figure 4-1 has a widespread application in various fields of study as shown in Table 4-1 and has been applied widely to entrepreneurship (Krueger *et al.*, 2000; Fayolle *et al.*, 2006). The widespread use of the theory perhaps is due to its ease of applicability and its efficiency in determining intentions. Furthermore, it has been successfully used in forecasting a variety of social behaviours (Conner and Sparks, 2005) including entrepreneurial behaviours.

TPB helps to forecast future behaviour irrespective of unanticipated situations that can limit individual control (Carmack and Lewis-Moss, 2009). This is important to the current study because of the time lag that is common between graduation and entrepreneurial activities. The model explicates that actions resulting from intentions are consequences of the



individual's outlook towards the specific behaviour (Ajzen, 1991) and the way people react to external events is dependent on their opinion about what alternatives are available. Furthermore, somebody's explicitly stated intention to perform an endeavour is the closest forecaster of their behaviour (Hagger *et al.*, 2007).

The first phase of the study is quantitative, and it utilised an adaptation of the TPB questionnaire (Liñán and Chen 2009 and Liñán *et al.*, 2013). The TPB is further considered the most suitable theory for this study because it is the most tested and validated intentionality theory and has been used by several entrepreneurship researchers testing entrepreneurship outcome with considerable precision. Actually, the TPB model has been recommended for use in distinct cultural settings (Nabi and Liñán, 2011; Liñán *et al.*, 2013).

**Table 4-1: The Application of the TPB Across Variety of Fields**

Author and Date	Title	Context	Instrument and Method	Field
Kolvereid and Isaksen, (2006)	New Business Start-up and subsequent Entry into Self-Employment	Norway	Survey Questionnaires Quantitative (Correlation)	Entrepreneurship
Souitaris <i>et al.</i> (2007)	Do entrepreneurship programmes raise entrepreneurial intention of science and engineering student? The effect of Learning, inspiration and resources	UK and France	Survey questionnaires Quantitative Correlation and regression for hypotheses testing GLM and ANOVA	Entrepreneurial Intention
Hagger <i>et al.</i> (2007)	Cross-cultural generalizability of the theory of planned behaviour among young people in a physical activity context	Britain, Greece, Hungary, Estonia and Singapore	Survey Questionnaires Quantitative (SEM)	Leisure
Gird and Bagraim (2008)	The Theory of planned behaviour as a predictor of entrepreneurial Intent amongst final-year University students	South Africa	Survey Questionnaires Quantitative	Entrepreneurial Intention
Carmack and Lewis-Moss (2009)	Examining the theory of planned behaviour applied to condom use: The effect-indicator Vs causal-indicator	US	Survey Questionnaires Quantitative (SEM)	Lifestyle/Health
Han <i>et al.</i> (2010)	Application of the theory of planned behaviour to green hotel choice: Testing the effect of environmentally friendly activities	US	Survey Questionnaires Quantitative (SEM)	Hospitality
Kautonen <i>et al.</i> (2013)	Predicting Entrepreneurial Behaviour: A Test of the TPB	Finland	Survey Questionnaires Quantitative (SEM)	Entrepreneurship
Zhang <i>et al.</i> (2014)	The role of EE as a predictor of University student's entrepreneurial intentions	China	Quantitative Probit Maximum Likelihood Regression	Entrepreneurial Intention

Source: Compiled by the author

Consequently, this study extends the application of the theory to a cultural context which is distinct from the Western culture where research on EEP has concentrated. Moreover, as the theory permits the inclusion of exogenous variables with entrepreneurial intentions predictive abilities, this study also extends the theory by adding teaching methods and cultural values in the model. Accordingly, the study makes an original contribution to knowledge.

Although the target behaviour is self-employment or venture creation, the study is limited to the intention towards the behaviour because the main objective of the EE programme in Nigerian universities is to produce graduates with an entrepreneurial mind-set who will eventually become job creators instead of job seekers. Thus, the study delimits the investigation of the programme to the attainment of the objective of producing graduates with an entrepreneurial mind-set.

Despite its strengths, the TPB has received some criticisms: First, it has been criticised for not possessing universally adequate constructs for testing intentions. However, Ajzen (1991) made the theory open to the addition of constructs with predictive ability. To address the criticism, therefore, researchers have added other components with predictive abilities in a bid to make it a more integrated theory (LaMorte, 2016). In this regard, this study varied the model by adding traditional teaching methods, innovative teaching methods, and culture. These constructs have been proven to have predictive abilities.

Secondly, the TPB is criticised for not accounting for much of the variability in observed behaviour. For example, Orbell and Sheeran (1998) noted the problem of individuals who form intentions and fail to act subsequently. Although this criticism is valid, it does not directly affect this study given that the objective of the EEP being evaluated is the development of entrepreneurial mindset and the study is primarily exploring the participants' mind-sets.

Several entrepreneurship researchers (Kolvereid and Isaksen, 2006; Souitaris *et al.*, 2007; Gird and Bagraim, 2008; Van Gelderen *et al.*, 2008) have adopted the theory of planned behaviour to determine entrepreneurial intentions and the results therefrom, though varied, have been widely accepted. Some researchers have found a significant and direct relationship between the three constructs of the TPB and entrepreneurial intentions (Souitaris, *et al.*, 2007), while others have found a significant relationship between only two of the TPB constructs (attitude and PBC) and EI (see Krueger *et al.*, 2000; Liñán *et al.*, 2013).

The theory has made an immense contribution to research in entrepreneurship and it is a frequently applied framework in EE assessments and evaluation (Fayolle, 2013). In addition, the entrepreneurship literature shows the TPB model as the most commonly used particularly in assessing the effectiveness of EE programmes (Fayolle and Liñán, 2013; Fayolle and Gailly, 2015).

In conclusion, the TPB is regarded as suitable for understanding planned intentions to create new businesses. It is the dominant theory in relation to EI examination (Rueda *et al.* 2015) and it is coherent and robust in determining intentions. Indeed, the Web of Science reveals that the theory has been cited more than 5,000 times since its publication either in its original form or in varied versions. Recently, Tornikoski and Maalaoui (2019) wrote that the TPB article has generated 60,000 citations. These attributes make the theory the most suitable to achieve the objectives of the study. The theory is universally accepted and has been used across different contexts and fields of study but does not seem to have been adequately explored for research in the important area of EI in the Nigerian context. Using it for the research, therefore, will make a unique contribution to EEP research in the African context.

#### 4.4 Predicting Entrepreneurial Intentions with TPB

Studies on entrepreneurial intention are increasing in the entrepreneurship discipline. Some academics have argued that entrepreneurial intentions are the initial strategic master plan of the formation of enterprises and are consequently critical to new venture creation (Bird 1988). Findings from most studies that used the TPB model have indicated that PA and PBC are stronger predictors of EI than SN. Of significant note, nevertheless, is the extensive use of the TPB in Western countries unlike the paucity in African countries.

Table 4-2 exemplifies the different findings on subjective norm. For example, Autio *et al.*'s (2001) study of mostly technology students had 3,445 university students from various cultural contexts. The authors found that subjective norm was non-significant to EI. In contrast, Kolvereid and Isaksen (2006) studied 297 business founders in Norway and the results showed that SN significantly impacted EI. Furthermore, a meta-analysis of 185 TPB-based published articles up to the end of 1997 by Armitage and Conner (2001) revealed that although the subjective norm is generally argued by several authors as a weak predictor of EI, measuring SN by multiple items showed significant correlations with intentions.

Again, findings of Liñán and Chen (2009) with samples from Spain and Taiwan indicated that SN does not have a direct role in determining EI. However, the researchers concluded that SN modifies the levels of PA and PBC. Consequently, its effect seems indirect. Armitage and Conner (2001) concluded that the weak predictive power of the subjective norm construct within the theory of planned behaviour may have resulted from weaknesses in measurements.

**Table 4-2: The Effects of the TPB on EI**

Author	Country	Research Sample	Analysis Technique	Key Findings (TPB)
Krueger <i>et al.</i> (2000)	USA	97 University business students	Regression Analyses	Shows significant support for the theory. Raw correlation between SN and intentions was significant but SN component was non-significant. PA and PBC are significantly linked to EI
Autio <i>et al.</i> (2001)	Finland, Sweden, USA and the UK	Combined sample of 3445 university (mostly technology) students	Multiple Regression and Correlation analyses	PA and PBC emerged as most significant to EI SN non-significant to EI development
Armitage and Conner (2001)	Several (Meta-Analysis)	Meta-analyses of 185 TPB-based articles	Meta-analytic reviews	PA and PBC significantly linked to EI and the SN when used in multiple item-scales. TPB assist in designing interventions that produce behavioural change
Kolvereid and Isaksen (2006)	Norway	297 Business founders		SN impacted EI described as weak positive influence.
Liñán and Chen (2009)	Spain and Taiwan	519 sample from two diverse countries to develop an EIQ	Structural Equation Technique	Effect of SN on EI indirect. SN modifies PA and PBC in both countries. Findings suggest strong support for intention models. EEPs content to increase PA and SN should be included.
Liñán, Nabi and Krueger (2013)	UK and Spain	Combined sample of 1005	Structural Equation Modelling (PLS technique used).	Model satisfactorily explained the variance/antecedents in EI and applicable to both countries. PA is a stronger predictor of EI among the Spanish sample while PBC exerted stronger effect on EI among the British sample. Research shows a strong support for the extended model. The study also revealed the importance of the addition of culture to Ajzen's (1991) TPB.

Source: Compiled by the author

It can be suggested that the weakness of SN in predicting intentions is partly due to measuring SN with single items. Similarly, its predictive ability might be improved when it is applied indirectly. Considering the differing results in the literature regarding SN, it is important to investigate how the variable performs in predicting EI in a modified structure and in a different context to the focus of literature. Accordingly, this study adapted the theory by using SN as a mediator rather than a predictor as Liñán (2008) suggested. Consequently, this changed the causal paths between the IV and DV as Whetten (1989) argues, it is expected that the change in the causal paths will alter the understanding of the relationship between the variables. Applying the theory in this manner and in a different context, the study makes a theoretical contribution to knowledge.

#### 4.5 Conceptual Framework

Evolving from the review of the literature presented in chapters two and three, and the theoretical framework presented in the preceding section, a conceptual framework (CF) was developed for this study. Conceptual framework explains the variables of a study and is used to present the proposed relationships among the variables either graphically or by narration (Miles and Huberman, 1994). It is used to set the stage for presenting the research question that drives the investigation and serves as the structure that a researcher uses to explain the expected progression of the phenomenon being studied (McGaghie *et al.*, 2001; Camp, 2001). Moreover, it is used to specify a logical structure of connected concepts being used to provide a pictorial representation of how assumptions in a study relate to one another within the theoretical framework (Grant and Osanloo, 2014). In this study, the CF offers a coherent and orderly presentation of the theory-driven framework and shows the phenomenon of interest. Additionally, it signposts the assumptions underlying the study from the researcher's perspective and indicates the development of the hypotheses of the study.

It was noted in chapter 2 that the programme being investigated is an educational intervention to motivate participants to develop entrepreneurial mind-sets. The study hence applied an EI model with a cognitive approach to determine the EI of the respondents. Therefore, the CF offers a means to a deeper insight into the elements that influence entrepreneurial perceptions.

In this study, a CF was developed because existing intentionality theories seemed insufficient for the study, as the study includes constructs that are not in existing theories in the format required. The framework was developed using both pictorial representation of the model and a narration of the progression of the proposed relationships between the model variables so as to make the research findings meaningful.

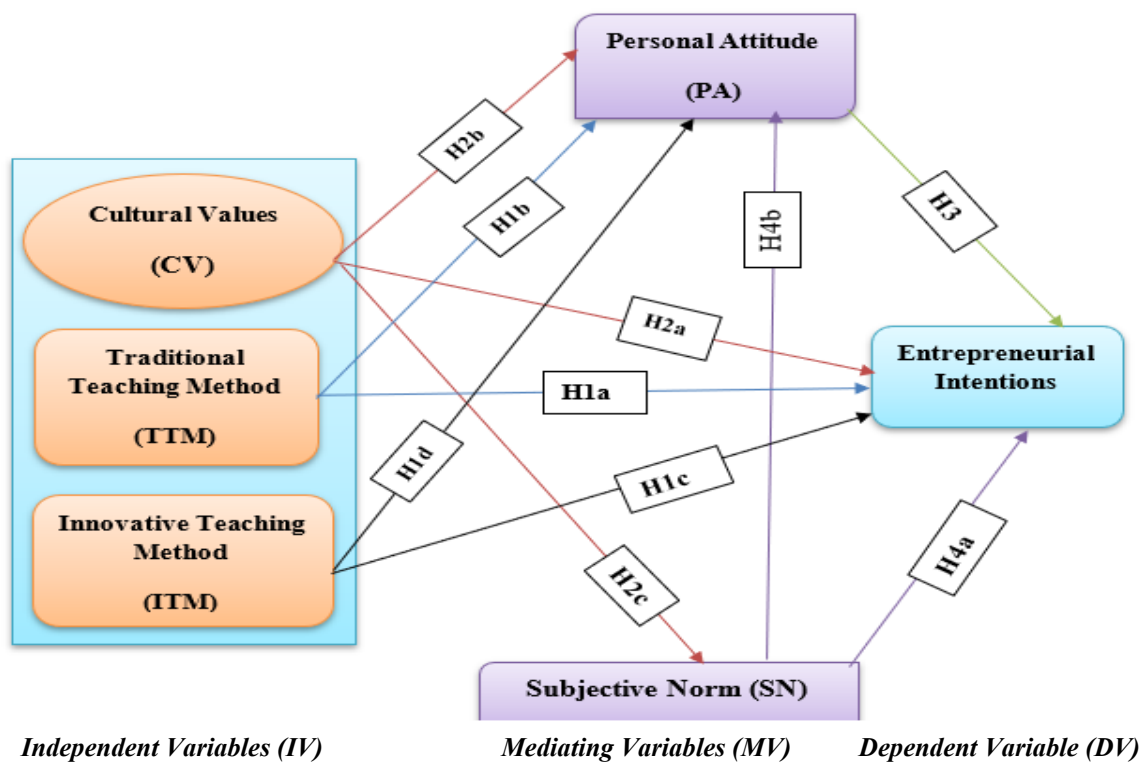
The CF which was developed based on the principal aim of the study namely, to investigate the effect of EE on EI, is shown in Figure 4-2. This section discusses the constructs used as model variables and how the relationships between the constructs are conceptualised. A model was conceptualised and developed which encapsulates the factors proposed to conceivably influence intentions towards entrepreneurial activities. Considering the nature of this study, some hypotheses apply to the two groups of respondents and some (the two teaching method constructs) apply to only the graduate respondents.

The conceptual framework (Figure 4-2) represents the amalgamation of the literature reviewed on how the relationship between EEPs and EI can be explained. It further maps out the necessary actions in the course of this investigation and an explanation of how the variables in this study relate to one another and are consequently used to guide the investigation being pursued. Additionally, and in consideration of the problem statement, the conceptual framework is used in this study to set the stage for presenting the research question that drives the investigation.



The conceptual model seeks to establish the relationship between EEP and cultural values respectively and EI. In the CF, teaching methods are used as proxies for EEP. Thus, the conceptual model theorises that traditional teaching methods (TTM), innovative teaching methods (ITM) and cultural values (CV) influence EI. The relationship between teaching methods and EI is proposed to be mediated by personal attitude (PA) as shown in Figure 4-2. Further, the relationship between cultural values and EI is proposed to be mediated by personal attitude (PA) and subjective norm (SN).

***Figure 4-2: Proposed Graduates’ Conceptual Framework and Hypothesised Relationships***



Source: Developed by the author

Although the active and experiential teaching methods are emphasised as essential to the development of EI, some authors (Mwasalwiba, 2010; Fayolle and Gailly, 2008) have advocated the integration of both theoretical and active learning concepts into the teaching of entrepreneurship education. This makes it necessary for the traditional and the innovative

teaching methods to be combined in the teaching of EE. Accordingly, both methods have been proposed to influence EI in the model. The model specification which is based on the conceptual framework is discussed in the next section.

#### 4.6. Variables for Model Specification

The model specification has one dependent variable, three independent variables, and two mediating variables. The model variables are derived from the literature as discussed in the review. The dependent variable is entrepreneurial intention (EI). The independent variables are traditional teaching methods (TTM), innovative teaching methods (ITM) and cultural values (CV). TTM and ITM are used as proxy for EEP. Two constructs of the TPB, namely personal attitude (PA) and subjective norm (SN), are included in the model as mediating variables. Each of these variables was measured by construct items specified in the questionnaires used for the study (see appendix A and B), which are attached to these thesis as appendices. The relationship between the variables is represented graphically in the CF in Figure 4-2. In addition, variables which were found to have the potential to be confounders were treated as control variables in the modelling. The variables are described below.

##### 4.6.1 The Dependent Variable – Entrepreneurial Intentions (EI)

The dependent variable, entrepreneurial intentions, refers to the mindset of the respondents to create businesses in the future. Studies on the assessment of the effect of EEP have generally accepted EI as an indicator of the effectiveness of the programme as revealed in the literature review (Westhead and Solesvik, 2016; Kurczewska, 2016; Maresch *et al.*, 2016).

##### 4.6.2 The Independent Variables

###### 1) Traditional Teaching Methods (TTM)

This refers to the passive teaching methods. These are thought to be theoretical, teacher-centred and do not provide opportunity for experiential learning (Piperopoulos and Dimov, 2015; Sirelkhatim and Gangi, 2015). The TTM included in the model are the lecture method,

which is the most commonly used, class participation, group project, individual assignment, oral presentation and business plan. The method of teaching EE is expected to influence the development of EI in EE participants. As the traditional methods are thought to be passive, researchers (Gibb, 2002; Kruega, 2007; European Commision, 2011) believe that they do not have positive impact on learners' attitudes that should influence intention but rather impede the development of entrepreneurial attitude which should be an outcome of EEP. Nevertheless, following the recommendations for the combination of both methods into the teaching of EE as indicated in section 4.4, this variable has been proposed to influence EI. Accordingly, it is expected to have a significant positive effect on EI.

## 2) Innovative Teaching Methods (ITM)

Innovation teaching methods are action-oriented (Esmi *et al.*, 2015), learner-centred and as such offer opportunities for experiential learning. The innovative methods used in the modelling are case studies, role play, guest entrepreneur lecturers, company visits, internship in businesses. These methods are believed to be capable of allowing self-discovery (Bennett, 2006) and promoting attitudinal changes towards entrepreneurship (Donckels, 1991). Accordingly, the variable is expected to exhibit a significant positive effect on EI. Fiet (2000) and Bennett (2006) note that the active methods require the instructor to facilitate learning and act as a catalyst, while the students have ownership of their learning and use the methods that allow self-discovery among students.

## 3) Cultural Values

Cultural values (CV), as used in the model, are people's values that manifest in the choices they make such as having preference for certain actions against others. Thus, cultural values could make people prefer entrepreneurship against paid employment and vice versa. They are believed to guide the extent to which communities regard entrepreneurial behaviours as

desirable (Hayton *et al.*, 2002). There is evidence that culture influences the development of EI. However, evidence suggests that this may well not be apparent in some communities (George and Zahra, 2002). Given that Nigeria is culturally diverse, it could logically be expected that cultural values and practices will exert positive or negative stimulus on entrepreneurial path or may not have an effect. This study therefore, aims to clarify the effect of cultural values.

#### 4.6.3 The Mediating Variables

Mediating variables are mechanisms through which independent variables affect the outcome variable (MacKinnon *et al.*, 2012). The investigation of mediators has become prevalent over the past four decades following advances in the statistical systems to conduct the tests (MacKinnon *et al.*, 2012). Mediation has variations in definition. For example, Mackinnon (2008) explains mediation as the relationship in which the predictor variable causes the mediator that in turn cause the outcome variable. It is the consideration of how a variable influences the relationship between the independent and the dependent variable (MacKinnon *et al.*, 2007). In this model, the mediators were hypothesised as variables that transmit the effect of the predictor variable to the outcome variable (Holmbeck, 1997; MacKinnon *et al.*, 2007). The mediators in the current study in consideration of the literature (see Liñán *et al.*, 2013) are personal attitude and subjective norm. They are also considered as intervening variables because they help to explain the relationship between predictor variables and criterion variables. Therefore, mediation analysis will be performed in the modelling to test the hypotheses postulated that the effect of the independent variables (IV) on the dependent variable (DV) is affected by the mediators such that the IV could still affect the DV. This is to provide checks on whether EEP and culture (the IVs) produce a change in EI. The mediators in this study are personal attitude (PA) and subjective norm (SN).

## 1. Personal Attitude (PA)

Personal attitude is one of the independent constructs of the TPB and it means the extent to which a person holds a positive or negative perception about the behaviour in question (Ajzen, 1991). The more favourable an individual's antecedents (personal attitude) to entrepreneurial activities are, the more would be the individual's intention to engage in entrepreneurship. Therefore an increased positive change in attitude is essential for entrepreneurship. Consequently, personal attitude is proposed as a mediator because it has been observed that EEPs have an influence on attitude, which in turn is a main factor that explains entrepreneurial intention (Byabashaija and Katono, 2011; Sihombing, 2012; Yang, 2013; Fayolle and Gailly 2015).

## 2. Subjective norm (SN)

Subjective norm is an exogenous variable in Ajzen's (1991) pivotal TPB model but it is conceptualised as a mediator in this study following the suggestion of Liñán *et al.* (2013). SN refers to the perception of people that their significant others will approve or disapprove of certain behaviours. The literature suggests that the impact of significant others on EI could vary across cultures (Krueger and Kickul, 2006; Brownson, 2014). Similarly, societies where members perceive threat in situations (such as in entrepreneurship) can result in people becoming risk-averse and avoiding entrepreneurship. This buttresses the view that the effect of SN can actually be context dependent and this rationalises the need to examine its influence in the Nigerian setting. Mediators are used because they make it straightforward to understand how the predictor variable affects the outcome variable and what governs the relationship and this is important in this study.

### 4.6.4 The Control Variables

Control variables are covariates and are extraneous variables that are not part of an on-going investigation but have the capacity to offer an alternative explanation to results. Four

confounders were identified in the process of developing the model. They are (age, gender, having entrepreneurial parent(s) and geo-political zone) to 'control' for possible effects on the dependent variable. It was essential to treat geo-political zone as a confounder because empirical evidence suggests that one of the six geo-political zones (South-East that is predominantly Igbos) are more entrepreneurial than the rest of the country (MG Modern Ghana, 2013; Orugun and Nafia, 2014).

Although they are not the main area of focus in this study, they are incorporated because they are thought to have the capacity to impact on the dependent variable as shown in the literature review and consequently referred to as confounders. In this study and with reference to literature, four variables were hypothesised as significant control variables. In general, age and gender are factors that predict entrepreneurship and several previous studies have examined these factors (see Wang and Wong, 2004; Haus *et al.*, 2013). Although age is regarded as an important determinant of entrepreneurship and some studies suggest that EI increases up to a certain age and then begins to decrease, the cut-off age remains inconclusive (Verhaul *et al.*, 2012). Thus, it was considered a confounding variable. Similarly, research evidence from the entrepreneurship literature suggests that students with entrepreneurship family background have the tendency to be influenced to follow entrepreneurial career paths (Zellweger *et al.*, 2011; Laspita *et al.*, 2012; Shirokova *et al.*, 2016). Consequently, several studies investigating entrepreneurial intentions have controlled for these variables (Crant, 1996; Murphy *et al.*, 1996; Bosma *et al.*, 2000; Sequeira *et al.*, 2007).

Following Murnieks *et al.*, (2012), all the confounders in the study, namely age group, gender, having a parent entrepreneur and geo-political zone, were regressed on the outcome variable. In view of the study aiming to prove a cause-effect relationship, the control variables could make the results from the study less accurate if they are omitted.

#### 4.7 Research Questions and Hypotheses Development

The first objective of this study is to determine the effect of EE on graduates' entrepreneurial intentions by examining the teaching methods used in the context of the study. This question provides insight into the nature and extent of the effect of EE on EI by showing, through the testing of hypotheses, the connection between the variables.

EE is an educational intervention aimed at producing graduates who are equipped with entrepreneurial skills and attitudes including the competences needed to be job creators instead of job seekers (Adesoji and Sangoleye, 2017). Having an understanding of this relationship is important to knowing what further interventions are required to make the programme produce improved results given that there is always room for improvements.

EEP is potentially connected to EI. However, studies around EE outcomes present inconsistent results because research shows that the influence of EE might not necessarily be the same in different countries (Liñán *et al.*, 2013) providing additional justification for this study. Following this, research question 1 was designed to increase knowledge on the effect of the EE intervention in Nigeria.

**RQ1: What is the effect of entrepreneurship education on graduates' entrepreneurial intentions?**

RQ1 was developed because of the following reasons: first, there are several studies around the relationship between entrepreneurship education and entrepreneurial intentions. However, there are few studies examining EEP from the viewpoint of teaching methods and perhaps many fewer studies that have investigated the subject by demarcating traditional methods from innovative methods.

Secondly, the few studies investigating EE programmes from the perspective of teaching methods indicate that each training institution has its own approach for implementing an entrepreneurship curriculum (Mwasalwiba, 2010) and different pedagogies are adopted for

instruction in entrepreneurship modules (Garavan and O’Cinneide, 1994; Fiet, 2000; Bennett, 2006; Mwasalwiba 2010). In this sense, there is no consensus among the lecturers as to how the module should be taught (Bennett, 2006). Research is therefore required to provide insight into the methods used in the context of this study.

Thirdly, most of EE studies have student participants who are still more focused on graduating rather than career. A study directed at graduates who are the targets of the EEPs fills this research gap.

Fourthly, Nabi *et al.* (2016) specified that there are few studies linking undergraduates’ or graduates’ entrepreneurial outcomes to different pedagogical methods, and EE impact studies under-describe the actual methods being measured. Hence, the call for deeper examination of EE outcome in relation to pedagogies (Pittaway and Cope, 2007). This study fills this gap by attempting to link the outcome of EEP to traditional and innovative pedagogies. Section 6 of the questionnaire was designed based on methods found in Garavan and O’Cinneide (1994), Fiet (2000; 2001) Bennett (2006) and Mwasalwiba (2010) and delineated as traditional and innovative teaching methods respectively using exploratory factor analysis (EFA) (see sections 5.6.1 and 6.2.3).

In addition, PA is hypothesised as a mediator that transmits the effect of EEP to EI. Moreover, EEPs have been shown to influence attitude, whilst attitude in turn is a major factor that explains EI. Accordingly, four hypotheses stated below were developed to test the relationship between EEP and EI. EEP is proxied by the teaching methods constructs.

*H1a: Traditional teaching methods have direct positive effect on entrepreneurial intentions.*

*H1b. The effect of traditional teaching methods on entrepreneurial intention is positively mediated by personal attitude*

*H1c. Innovative teaching methods have direct positive effect on entrepreneurial intentions.*



*H1d. . The effect of innovative teaching methods on entrepreneurial intentions is positively mediated by personal attitude.*

**RQ2: How do cultural values affect graduates' entrepreneurial intentions?**

Cultural values and practices can exert influence on the entrepreneurial path positively or negatively (Liñán *et al.*, 2013). For example, the more a culture or society legitimises entrepreneurship, the more the members of the society in question develop entrepreneurially (Stephan, 2008). Thus, cultural values will shape the influence the significant others have on the graduates' EI.

Furthermore, as cultural values influence the entrepreneurial path, it follows that they exert influence on people's attitude towards entrepreneurship because attitude is a precursor to intention. Therefore, apart from the EEP, cultural values are likely to influence the graduates' attitude towards entrepreneurship and consequently, their EI. Additionally, Solesvik *et al.* (2012) showed that subjective norm does not directly impact on entrepreneurial intentions. Due to the conflicting results of studies around SN, Liñán and Chen (2009) suggest its use as an indirect variable to enable a clearer understanding of the interaction between SN and EI.

Following the foregoing, PA and SN are entered in the model as mediating variables. PA and SN are postulated as mediators between CV and EI. Four observable items adapted from Liñán *et al.* (2013) are used to determine the effect of cultural values on entrepreneurial intentions.

Thus, three hypotheses are advanced as stated below.

*H2a: Cultural values have direct positive effect on entrepreneurial intentions of university graduates.*

*H2b: The effect of cultural values on entrepreneurial intention is positively mediated by personal attitude.*

*H2c: The effect of cultural values on entrepreneurial intention is positively mediated by subjective norm.*

**RQ 3: What is the effect of personal attitude on entrepreneurial intentions?**

The constructs of the TPB differ in strength as to their effects on EI (Autio, 2001; Krueger *et al.*, 2000). However, Ajzen's (1991) seminal work indicates that personal attitude has the highest effect on entrepreneurial intentions. Subsequent research has supported this. For example, Van Gelderen *et al.* (2008) indicate that the EI of participants is moulded by their attitudes towards entrepreneurship. Similarly, Liñán (2004), points out that the more favourable an individual's personal attitude to entrepreneurship, the more the individual's intention to engage in entrepreneurship. It further believed that educational interventions like EE modify attitudes towards entrepreneurial activities (Peterman and Kennedy, 2003; Liñán *et al.*, 2011). In addition, Solesvik *et al.* (2012) studied 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> year students of economics and business administration in three Ukrainian universities and found that the students with high variance attitude towards entrepreneurship were more likely to demonstrate greater intention to entrepreneurship. Thus, in the entrepreneurship research, attitude is a significant factor in determining entrepreneurial intentions. The assessment of the role of attitude is essential in this study because it can increase knowledge on the formation of EIs and the process that leads from intention to behaviour and consequently areas to target for reforms in Nigeria's EEP. The study postulates that personal attitude will positively influence EI, as stated below.

*H3: Personal attitude has a direct positive influence on entrepreneurial intentions of university graduates*

**RQ4: What is the effect of subjective norm on entrepreneurial intentions?**

Ajzen's (1991) seminal work on the TPB found that subjective norm had no effect on intentions. Subsequently, some researchers have excluded the construct from analysis with the TPB due to its weak predictive ability. Subjective norms are thought to be less pertinent to intention especially among participants with who have strong orientation towards entrepreneurship (Bagozzi *et al.*, 1992). Nevertheless, other studies (Kolvereid and Isaksen 2006; Tkachev and Kolvereid, 1999) have found significant effect of subjective norm in predicting EI. Moreover, research evidence from Spain and indicate that SN influences EI indirectly through PA and PBC.

These contrasting findings motivated the desire to examine both the direct and indirect roles of SN in explaining EI in a context distinct from these previous studies. Accordingly, the following postulations are made:

**H4a:** *Subjective norm has significant direct effect on the entrepreneurial intentions.*

**H4b:** *Subjective norm will influence EI indirectly through PA.*

**RQ5: What are the levels of entrepreneurial intentions and personal attitude of the respondents and how does the entrepreneurship education programme affect the entrepreneurial intentions and personal attitude of the graduates?**

Following from the literature review, EE positively influences both attitude and EI. This implies that if university graduates have participated in EEP, their attitudes and intentions towards entrepreneurship will be higher. In effect, EEP will positively influence their PA and EI. This research seeks to ascertain whether the compulsory EEP introduced into the undergraduate curriculum of Nigerian universities facilitates the development of entrepreneurial mindset in the graduates that the programme aims to achieve. To carry out

this investigation effectively, the research is designed as quasi-experimental to compare the attitudes and intentions of the experimental group towards entrepreneurship with those of the control group. To address RQ5, therefore, the EI and PA of the experimental group (graduates) will be compared to those of the control group (undergraduates) in the model. The expectation is that the experimental group will have higher values in EI and PA than the control group because the experimental group has participated in the EE programme. The control group is yet to participate in the programme. This is discussed fully in section 5.2.3.

#### 4.8 Summary

This chapter has provided a synopsis of the evolution of intentionality models. It examined the various models and gave justification for the suitability or otherwise of each model. It indicated the TPB as the most suitable due to its robustness, wide acceptability and its consideration as the most appropriate for understanding planned intentions which are characteristic of entrepreneurship. The chapter further specified the need for empirical studies to be supported with sound theoretical framework. It indicated the overwhelming evidence of the application of the TPB to intentionality studies not only in EE, but also across various fields including technology acceptance, health, lifestyle, and leisure.

A conceptual framework (CF) for this study was developed in the chapter because existing frameworks are insufficient for it. The CF was used to illustrate how the literature reviewed and the theoretical framework guiding the study were combined to clarify the direction of the relationship between the study variables. It indicated the study variables used for model specification in chapter 6. It further showed that there are three exogenous and three endogenous variables respectively. It was also presented in the chapter that the research includes mediating variables and identified the control variables to be held constant in the analysis. The research questions were presented in the chapter and the study hypotheses were

developed. It was shown in the chapter that EEP is proxied by the teaching methods constructs.

Finally, it presented the research questions of the study which provide an insight into the nature and extent of the relationship between EE on EI. It also illustrated that the connection between the variables will be confirmed through the testing of the hypotheses. The next chapter will present the methodology. It will discuss the philosophical underpinnings of the study and the methods used in this research.

## Chapter 5 - Research Methodology

The previous chapters centred on the *why* and the *what* of the research. The discussion focused on making a case for the study, showing what it is about, advancing the justification for it, and building a conceptual framework based on a widely accepted, long-lasting tested and validated theoretical model, the TPB, which informed the study. It also defined the research questions and the hypotheses, which guided the choice of the analytical framework. This chapter presents the *how* of the study. It explains how the study was carried out, detailing the methodology employed. The chapter explains the philosophical underpinning for the research, the research design and methods, the data collection and analysis procedures, and the sampling process. It also provides a discussion of the ethical considerations.

### 5.1 Research Philosophy - Philosophical Underpinnings

A consideration of the philosophical perspectives of a study leads the researcher to the most suitable methodology to be adopted for the research. The term research philosophy relates to how knowledge develops and the nature of that knowledge (Saunders *et al.*, 2009). In undertaking research, the scholar is developing knowledge in the field in which he or she is carrying out the study, and the investigation standpoint that is adopted signifies important assumptions about the way the scholar views the world (Saunders, *et al.*, 2009). Whereas, in the social sciences, subjects are approached through implicit and explicit assumptions about the social world and how it might be examined (Burrell and Morgan, 1979), in the entrepreneurship discipline, debate about the boundaries and philosophical underpinnings are still on-going. Thus, entrepreneurship researchers draw on varied ontological and epistemological standpoints and make use of a range of applicable and relevant theories from different fields (Leitch *et al.*, 2010), because the discipline is yet to advance specific unique theories and procedures (Bygrave, 2007). Consequently, this study adopted the TPB from the social psychology discipline.

Ontology, epistemology and methodology form the basis for research paradigms and refer to the perspective held by researchers about research based on a set of shared concepts, assumptions, values and practices (Guba and Lincoln, 1994; Johnson and Christensen, 2010). Paradigms provide sets of confines within which researchers conduct studies and provide frameworks that guide researchers irrespective of whether the paradigms are made explicit or not (Guba and Lincoln, 1994; Cresswell, 2014). Nevertheless, several factors impact the choice of research methodology (Bryman, 2001; Bryman and Bell, 2011). These include the nature of the research questions, the level of control required by the researcher, the phenomenon being studied and the philosophical stance of the researcher (Hussey and Hussey, 1997; Neuman, 2014).

Ontology describes the way we look at the world, or the nature of knowledge and its reality, or the conceptions of reality; by contrast, epistemology relates to our beliefs as to how we discover knowledge about the world, or its sources and forms, and what is considered as acceptable knowledge in a discipline (Pittaway, 2005; Dainty, 2008; Wagner and Okeke, 2009; Dieronnitou, 2014). The next section explores the various paradigms with the aim of selecting the most appropriate for this study.

### 5.1.1 Positivism Paradigm – A Quantitative Approach Paradigm

Positivism predominates in the sciences and views reality as an objective that can be measured and uncovered by a neutral researcher (Gall *et al.*, 2007). It is a scientific approach that utilises numbers in an objective manner and uses statistical tools in data analysis (Orlikowski and Baroundi, 1991; Cohen *et al.*, 2007). Positivism assumes that independent facts about a phenomenon that can be understood are measured quantitatively in scientific disciplines (Guba and Lincoln, 1994), and it is related to facts and causes of social phenomena (Hussey and Hussey, 1997). Consequently, researchers within the positivistic paradigm apply theories, hypotheses, and variables.

However, positivism fails to capture the complexity of social interaction and human behaviour (Jensen, 1989). Objectivism is associated with positivism, thus suggesting that all things exist independent of consciousness. These assumptions reinforce the positivist's perspective that objectivism involves obtaining knowledge in ways that result from direct experiences (Crotty, 1998). The gathering of knowledge in this way encompasses logically deduced hypotheses and confirmed evidences; it does not permit the exploration of a problem and the development of a detailed understanding of the phenomenon being investigated (Charmaz, 2006; Creswell, 2012).

**Table 5-1: Basic Belief Systems of Alternative Enquiry Paradigms**

<b>Item</b>	<b>Positivism</b>	<b>Realism</b>	<b>Critical Theory</b>	<b>Constructivism</b>
Ontology	Naïve realism- “real” reality but apprehensible	Is objective. Critical realism- “real” reality but only imperfectly and probabilistically apprehensible and so triangulation from many sources is required to try to know it	Historical realism- virtual reality shaped by social, political, cultural, economic, ethnic, and gender values; crystalized over time	Critical relativism: Multiple local specific ‘constructed’ realities
Epistemology	objectivist; findings true	Modified dualist objectivist; critical tradition findings probably true	Subjectivist: value mediated findings	Subjectivist: created findings
Methodology	Experiments/ surveys: verification of hypotheses; chiefly quantitative methods	Modified experiments/ manipulative; Case studies/critical multiplism; falsification of hypothesis may include qualitative methods; case studies/convergent interviewing: triangulation, interpretation of research issues by qualitative and quantitative methods such structural equation modelling	Dialogic/ dialectical: researcher is a ‘transformative intellectual’ who changes the social world within which participants live	Hermeneutical/ dialectical: researcher is a ‘passionate participant’ within the world being investigated

Source: adapted from Guba and Lincoln (1994); Perry *et al.* (1997, 1999); Saunders, *et al.*

(2009)



The positivism paradigm detaches the researcher from the research. It was therefore considered unsuitable for the current research because this study used mixed methods which required interaction with the respondents in the qualitative phase. Although this study was testing hypotheses and adopting a theory as in a postivism paradigm, positivism did not fit well with this investigation because it might create complications if the research participants were considered to be autonomous objects as noted in Christie *et al.* (2000), and it could imply ignoring respondents' ability to reflect on a problematic situation and act on it as indicated in Robson, (1993). Likewise, when studying human behaviour and actions, it is difficult to be completely positive and neutral. Consequently, positivism was considered inappropriate for the study.

### 5.1.2 Interpretivist Paradigm

The Interpretivist Paradigm emerged in the 1960s in reaction to the problems associated with the positivist approach to studying social phenomena and from researchers' conviction that the world cannot be viewed as an objective reality, but rather needs to be understood in terms of the subjective interpretations of human behaviour and experiences (Bryman, 2001). Interpretivists believe in the existence of reality and its measurability but posit that the interpretation of the information gathered must be controlled but cannot be completely objective (Hanson, 1958). Qualitative researchers further argue that it is not possible to fully distinguish the causes and effects on which generalisations are usually based.

Considering that it is not possible to separate the knower from the known, the best methodology to know reality is considered to be subjective, not objective (Guba, 1990). Similarly, reality is socially constructed and not objectively determined (Hussey and Hussey, 1997). Consequently, only subjective interpretation might permit a researcher to fully comprehend reality (Davison, 1998).

In addition, when not much is known about a phenomenon and the researcher strives to collect rich information, the qualitative methods are more appropriate (Morse and Field, 1995; Patton, 2002). This study required knowledge of the correlation between the independent and dependent variables which necessitated the use of statistical tools. Similarly, the collection of rich information was important to the study because the programme being explored is relatively new and only limited information is available in the study area. Consequently, the sole adoption of the interpretive paradigm was deemed inappropriate.

### 5.1.3 Realism Paradigm

Realism is concerned with a world view in which, although an actual social phenomenon is imperfect and only probabilistically understandable, it can be ascertained (Guba and Lincoln, 1994). The realist supposition tends to support the use of structural variables as either independent or dependent variables in regression and therefore asserts that structures exist (Olsen, 2009).

Realism provides that there is a ‘real world’ that exists out there (Perry *et al.*, 1997) and further argues that reality exists but can only be imperfectly and probabilistically apprehensible (Guba and Lincoln, 1994) – see Table 5-1. Perception does not constitute reality as in constructivism; rather perception for the realist researchers is a window (Perry *et al.*, 1999) to a “blurry external reality” (Sobh and Perry, 2006:1199). Thus, realists acknowledge the difference between the world and specific perceptions because although there is only one reality, there are several perceptions of it and triangulation with other perspectives is required to obtain an improved picture (Perry *et al.*, 1999).

Furthermore, Hunt (2003) posits that one external reality has multiple perceptions that are amenable to different research methodologies. Following this, realism as a paradigm is known as post-positivism because it comprises elements of both positivism and constructivism (Guba and Lincoln, 1994; Perry *et al.*, 1997). Therefore, to gain an improved

understanding of different perceptions of entrepreneurship education and implementation strategies, realism may be the most appropriate of the three paradigms reviewed (Table 5-1; Figure 5-1) because it enables the use of elements of positivism and constructivism in a single study.

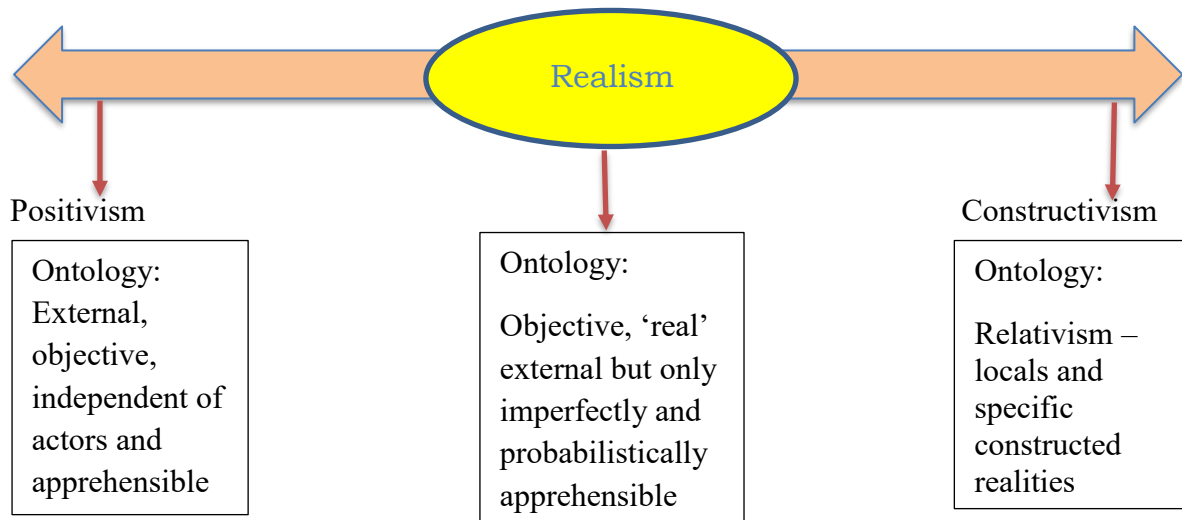
The philosophical assumptions supporting realism relate to the ontological assumptions about the basic elements of reality and epistemology that are used to examine the relationship between reality, researcher and methodology (Parkhe, 1993; Guba and Lincoln, 1994). Additionally, realism supports the use of SEM which was utilised in this study. Consequently, the highlighted column in Table 5-1 shows that the research paradigm used in this study was amenable to both quantitative and qualitative methods employed to perform the investigation. The study applied statistical tools which researchers (Perry, *et al.*, 1997; Bryman, 2001; Muijs, 2004) consider useful for making subjective interpretations of human behaviour and experiences and for gaining in-depth insights into the phenomenon being investigated.

Realist researchers approach the field with prior theories (Riege, 2003), as in this study. In addition, realists believe that other people have either researched or experienced aspects of the external reality that exists, and thus, their perceptions of it serve as some of the several means to that reality that deserve consideration before the commencement of data collection (Perry, *et al.* 1999). Realists support the advice of the development of a conceptual framework from literature about the underlying structures and mechanisms before proceeding to the field for data collection (Miles and Huberman, 1994), an approach which was adopted for this study. Methodological pluralism is important for this kind of study because it allows the exploration of the chosen theories and considers how well the evidence obtained seems to support or falsify the theories.

Regarding the relationship of realism to the current study and in terms of the ontology, it is argued that entrepreneurial opportunities do exist and the knowledge of the participants' perception of their EI is a major window to the choice of entrepreneurship as career options (Sobh and Perry, 2006:1199). In terms of the epistemology, data was obtained from various sources and analysed the data using multiple methods, to gain an improved understanding of the multiple perceptions of the implementation strategies of EEP (Hunt, 2003; Ramoglou and Tsang, 2016). Creative imagination was further used to explain the phenomenon that could not be observed directly in line with the epistemology of realism (Ramoglou and Tsang, 2016).

Realism sits between positivism and constructivism and has elements of both paradigms (see Figure 5-1).

**Figure 5-1: The Position of the Realism Paradigm**



Source: Developed by author with adaptation from Guba and Lincoln (1994); Saunders, *et al.* (2009).

Within the same study, the qualitative aspect affords the understanding of human behaviour and entails gaining the actual meanings and interpretations that elements within the existing

structures ascribe to phenomena to explain their behaviour. The status of entrepreneurship as a practice-based discipline (Schatzki, 2001; Gherardi, 2006) suggests that the knowledge of it is bounded by its contextual nature (Leitch *et al.*, 2010). Accordingly, the philosophical argument, and debate about the nature of entrepreneurship, have implications for methodological choice, and thus suggests pluralism instead of the traditional quantitative approach. This reinforces the suggestion that several important entrepreneurship questions can only be asked and answered using such approaches. Table 5-2, is an illustration of the variety of methods that have been applied within the realism paradigm as indicated in Olsen (2009).

**Table 5-2: Methods Used Within the Realist Methodological Framework**

<b>Data Collection</b>	<b>Data Analysis</b>	<b>Writing-Up; Interpretation; Elaboration</b>
Questionnaires Complex Sampling and Associated Survey Methods Systematic Case-Study Methods Comparative Data Collection	Induction (as a technique) Retroduction about data Qualitative Comparative Analysis Action Research Evaluation	Critical Social Science Configurational Analysis Explanatory Analysis Explanatory Critique
Historical Enquiry Oral History Interviewing Ethnographic Research Participatory Research Gathering Texts and Translating	Grounded Theory Realist Social Statistics Testing Hypotheses -about causal mechanisms -about discourses Explanatory Analysis at Multiple levels	Critical Theorising Reframing of Hypotheses Pluralist Modelling Re-Theorising Meta-Theorising
NVIVO Database Construction Qualitative Case-Study Development Organising Data in Spreadsheets	Content Analysis Critical Discourse Analysis Retroduction from data to “what must exist in order for these data and these patterns to have been observed” i.e. <i>why</i> Dialectical Retroduction from future to present interpretations	Moral Realism Theoretical Pluralism Dialogue about the good across Geographic Space and Across Layers of Stratified Societies Methodological Pluralism

Source: (Olsen, 2009:18)

Within the realism paradigm, the development of knowledge is founded on careful observation and the measurement of objective reality that exists out there in the world, and which involves numeric measures of those observations. As numeric measures are needed for the observations, the paradigm embraces the use of structural equation modelling as shown in Table 5-1. Furthermore, in research situations where the causal processes being investigated are represented by a series of structural equations, the structural relationship can be modelled pictorially, as in this study, to allow a clearer conceptualisation of the theory (see Figure 4-2). Thus, SEM is considered the most suitable statistical analysis tool for a realism researcher (see Table 5-2). Moreover, as the philosophical underpinning of this study is realism, a mixed method approach was considered fitting in line with the research philosophy.

## 5.2 Research Design and Methods

The research utilised a mixed method design. It combined a quantitative method conducted through cross-sectional surveys and quasi-experimental design, and a qualitative method involving personal interviews. The use of mixed methods research (MMR) in the social sciences is growing and extending to other disciplines including entrepreneurship education (Harrits, 2011; Molina-Azorin *et al.*, 2012). MMR is the integration and analysis of both quantitative and qualitative data in a single study, whereby the data are collected either by concurrent or sequential design (Creswell *et al.*, 2003; Tashakkori and Teddlie, 2003; Morgan, 2013). The use of MMR involves the combination of data at one or more stages during the research process (Creswell, *et al.*, 2003). The integration of quantitative and qualitative methods increases the richness, validity and credibility of the results (Mingers, 2003). The adoption of mixed methods in this research was to enable the achievement of two important goals in data collection. One goal was the collection of a large amount of data from a population spread across a wide geographical area, which the survey facilitated. The other was to obtain a deeper understanding of the implementation of the EEP from the lecturers

who had direct contact with the EEP participants. This was addressed through the personal interviews. Secondary data was also obtained from the EEP module guide. It was thus expected that this research design would enrich the data and increase the validity of the results.

Despite the advantages of mixed method research, its application in entrepreneurship research is still scanty (see Coviello and Jones, 2004; Ritchie and Lam, 2006), a situation that creates a gap in the literature. Therefore, the application of the mixed methods approach here may help to address the methodological challenges in entrepreneurship studies. The mixed methods approach will facilitate deeper understanding of the phenomenon being investigated (Malina *et al.*, 2011). Furthermore, the approach will enable complementarity (clarify results from one with findings from the other) and allow expansion (using different methods for different components) (Greene, *et al.*, 1989; Bryman and Bell, 2003).

The study recognised that MMR has some weaknesses, such as being expensive to administer, time consuming, and causing difficulty in analysing conflicting results (Johnson and Onwuegbuzie, 2004). There was also the possibility of including the weaknesses of both methods within the study. However, the advantage of using the mixed method approach is that the strengths of one method often make up for the weaknesses of the other. This fact, in addition to the potential for the integration and cross-validation of results, and the possibility of using numbers to add precision to narratives and provide stronger conclusions, made the strengths of the mixed method outweigh its weaknesses.

Following Creswell *et al.* (2003), the study considered sequential design and giving priority to the integration of results in implementing the mixed methods design. In establishing the priority, the quantitative was given greater emphasis than the qualitative. Accordingly, in the

application of the mixed method, the study adopted the sequential explanatory design (SED). The design is discussed in the next section.

Table 5-3 presents the methods and methodological choice of the quantitative aspect of this study.

**Table 5-3: Methodology and Methods**

Philosophical Stance	Realism	
	Quantitative	Qualitative
Method	MMR (Sequential Explanatory Design)	
Design	Cross-sectional survey (quasi-experimental)	Semi-structured interviews
Approach	Deductive	Inductive
Strategy	Research Questions and hypotheses testing	Research question
Data Collection Instrument	Structured questionnaire	Interview protocol
Target Population	Undergraduates and graduates of Nigerian universities	Entrepreneurship Education lecturers
Sample Technique	Systematic random sampling	Purposive
Sample	Graduates = 409 Students = 402	Lecturers of entrepreneurship modules = 6 (One lecturer from each of the universities surveyed)
Mode of Administration	Self-administered questionnaires	One-on-one interviews
Statistical Analysis Technique	Structural Equation Modelling (SEM) with SPSS-AMOS	Thematic Network Analysis (TNA)

Source: Compiled by the author

### 5.2.1 Sequential Explanatory Mixed Method Design

The SED encompassed two distinct phases, namely, the quantitative (QUAN) phase, followed by the qualitative (qual) phase. In this design, the researcher collected and analysed the quantitative data in the first phase. Subsequently, in-depth semi-structured interviews comprising questions intended to explore unexpected survey responses in addition to exploring wide-ranging perspectives on the implementation of EEP in Nigerian universities.



The qualitative data was used to offer a more detailed explanation of the quantitative results (Creswell, 2014). This process allowed the researcher the opportunity to analyse the survey data and subsequently adapt the semi-structured interview tool to follow-up on significant and unexpected responses (Appiah-Yeboah et al., 2007). Some authors including Amaratunga *et al.*, (2002) described this process of methodological triangulation as combining methodologies to study the same phenomenon. The qualitative data expanded the explanation of the preceding quantitative results. Furthermore, it was sequential because the qualitative data collection phase followed the quantitative data collection and analysis phase as illustrated in Creswell (2014). The design was suitable for this study because, while the quantitative phase was appropriate for collecting data for the large sample required to develop knowledge of graduates' entrepreneurial intentions, the succeeding qualitative phase was useful to gather deeper information about it and provide explanation for unexpected results that emanated from the quantitative phase. The adoption of the MMR enabled the examination of the EI of the graduates and the exploration of the implementation strategies to provide deeper explanations for the quantitative results, any unexpected findings, how EEP was taught and to determine the challenges facing EEP in Nigerian universities.

## 5.2.2 Procedure in the Application of the Sequential Explanatory Design

### *a. Implementation*

In the implementation of the SED, consideration was given to the process of data collection, which could be concurrent, parallel or simultaneous or in phases – sequential (two-phase design) (Molina-Azorin *et al.*, 2012). The research process of connecting the data from the two methods in an integration process was employed in this study in the sequential two-phase design to allow for any unexpected result in the quantitative phase to be explained with qualitative data. The quantitative survey investigated the effect of EE on participants' EI. It also provided knowledge of the level of the PA and the EI. However, the unexpected result

arising the lack of change in PA and a decrease in EI, made the qualitative research necessary to provide in depth explanation for the result.

#### ***b. Priority***

Priority in MMR refers to whether the researcher emphasises one method over the other or gives equal priority to both methods (Molina-Azorin *et al.*, 2012). The emphasis given can result from the interest of the researcher, what a researcher intends to emphasise in the study, the necessity to comprehend one form of data before proceeding to the next or from audience preference (Creswell 2014). Consequently, mixed methods designs can be divided into equivalent status and simultaneous designs where both methods are weighted equally or 'dominant-less dominant' designs in which case one method is dominant and the other method is complementary (Tashakkori and Teddlie, 1998; Molina-Azorin *et al.*, 2012).

In this study, priority was given to the quantitative phase in a sequential explanatory design because it was primarily focussed on determining causal relationships between the study variables. The qualitative phase was complementary to obtain data on implementation strategies from the lecturers, and to provide an in-depth explanation for some of the quantitative data and results. Thus, data were collected and analysed in two phases using the dominant sequential design.

#### ***c. Integration***

Integration is the stage where the quantitative and the qualitative designs are integrated (Greene *et al.*, 1989; Tashakkori and Teddlie, 1998; Creswell *et al.*, 2003). It involves either mixing at the outset (Teddlie and Tashakkori, 2003) or integrating the quantitative and qualitative findings at the stage of interpretation (Onwuegbuzie and Teddlie, 2003) to connect the two phases. The two phases are typically connected during participants' selection for the qualitative phase based on the quantitative results from the first phase or at the stage of developing the qualitative data collection protocol, grounded in the results of the first phase

to enable the investigation of the results in greater depth (Creswell *et al.* 2003). In this study, the two designs were integrated through the discussion of results.

### 5.2.3 The Quasi-Experimental Design (QED)

The study also employed the QED to determine the effect of the EEP on the respondents who participated in the programme. The QED is used to test causal hypotheses in programmes or policies that are viewed as ‘interventions’ (White and Sabarwal, 2014) as in this study. It comprises an experimental and a control group and is frequently employed in evaluating educational programmes when researchers cannot apply random assignment (Gribbons and Herman, 1997). The QED is a time series design in which data are collected from the experimental and the control groups which are usually non-equivalent and used to determine the effect of treatment in a process that can be post-test only (Gribbons and Herman, 1997). The groups are termed non-equivalent because they are not randomly assigned, and this also means that there could be differences between them. The QED in this study comprised the graduates as the experimental group and the undergraduates as the control group. The groups were non-equivalent. Data were collected from both groups and applied to determine the effect of EEP on the EI of the graduates. To redress the differences that could arise from the non-equivalence and enhance the validity of the results, the multi group confirmatory factor analysis (MGCFA) was employed and the identified confounding variables were controlled. The results indicated that the control variables identified did not confound the relationships specified.

The QED may take the form of pre-test-post-test, pre-test-post-post-test or post-test only. In the post-test only, which was applied in this study, the participants in the experimental group are exposed to the treatment but the control group are not. The control group comprise year one students who are yet to participate in the module given that it is offered in the second semester of year two. Consequently, the two groups are compared on the expected outcome

in the post treatment test. In this study, the graduates were exposed to the treatment (EEP) while the undergraduates were not. The two groups were compared in the post treatment test with structural equation modelling.

As the validity of results in the QED can be improved using various measures, namely, appropriate statistical analyses, a comparison group that is identical to the treatment group, is used to control bias during the experiment (Shuttleworth, 2014; White and Sabarwal, 2014); its use is advocated in the social sciences as an alternative to the true experimental design. In applying the QED in this study, these measures were taken and thus the results from the experiment were considered valid and reliable in explaining the impact of EEP in Nigeria's universities.

Recently, scholars have highlighted the need to adopt the QED in studying the effect of entrepreneurship education (see Martin *et al.*, 2013; Rideout and Gray, 2013; Bae *et al.*, 2014; Chell and Huber, 2015). Indeed, researchers have used the design to study the complex phenomenon of the effect of EEPs because it enables testing hypotheses of cause-effect relations and serves as an effective substitute to the true experimental design (Silva, 2010; Bae *et al.*, 2014; Chell and Huber, 2015). In addition, as Athayde (2009), a researcher who used the design argues, the QED permits the analyses and balancing out of the differences between the two groups and enables the validation of the results obtained. Tsordia and Papadimitriou (2015) also used the QED to investigate the EI of final year students in a Greek business school. The study comprised samples of 186 first year students who had just been introduced to entrepreneurship concepts and 78 fourth (final) year students who had completed the course. The two groups of participants were given the same set of questionnaires, but the fourth-year students had additional questions on curriculum and contents. The Tsordia and Papadimitriou (2015) study is like this study. Thus, the QED adopted in this study situates within the methodology literature in EE research.

### 5.3 Sampling

Samples of students and graduates respectively were selected from six universities in the study area for the survey and experiment. Necessary measures were taken, as detailed below, to ensure that the samples were representative of the population.

#### 5.3.1 Sampling Design

The sample design adopted for the graduates was a combination of cluster and stratified random sampling. In designing the sampling procedure, the study considered the need for an efficient spread of sample and ease of access to the respondents. Consequently, the cluster of graduates in the National Youth Service Corp orientation camps made it a suitable sampling frame. The population was further stratified into the six different universities being surveyed. Further stratification was performed according to programmes of study and geo-political zones. The participants were then selected through a stratified random sampling process. The combination of these two designs enabled access to clusters of graduates from the universities and efficient spread of the sample across the population.

The National Youth Service Corp (NYSC) is a compulsory one-year national service by graduates who are aged below 30 years. It takes place immediately after graduation from the universities and polytechnics. After a successful completion of the undergraduate study, graduates are mobilised and posted to the different states in the country for the service which lasts for twelve months. Participants of the NYSC scheme are referred to as ‘Corp members’ or in everyday parlance, ‘Corpers’. The scheme starts with an orientation programme in which all Corp members stay in NYSC orientation camps in the states for three weeks, after which they are posted to organisations, mostly in the formal sector for their ‘primary assignment’ which lasts for the rest of the service year, including engagement in community development services referred to as CDS (US Embassy in Nigeria, 2012). Usually, graduates from various universities and polytechnics and from the different geopolitical zones in the

country are represented in every camp. Therefore, it was possible to obtain data from graduates of the different universities under survey, from the camps in the chosen zone. Camping generally takes place three times a year at scheduled times.

In each university, the undergraduates were stratified according to programmes of study. The programmes of study in the first year are categorised into three faculties, namely: Faculty of Arts and Social Sciences; Faculty of Business, Education and Management Sciences; and Faculty of Sciences, IT and Engineering. These faculties formed the basis for the study's stratification. They were further stratified using geopolitical zones to ensure that samples were spread across the country's six geopolitical zones (see Table 7-1). These stratifications were further considered important because the South East is believed to be more entrepreneurial than all other zones (MG Modern Ghana, 2013) and in consideration of the proposed publications from this thesis in which EI could be examined based on geo-political zones.

### 5.3.2 Sample Size Determination

A decision as to the size of sample is important in research. In terms of factor analytic study, Gorsuch (1983) recommends a minimum of five participants per construct and no fewer than 100 respondents should be included. In contrast, Harris and Schaubroeck (1990) proposes a sample size of at least 200 to ensure a thorough SEM.

In SEM, a general rule for sampling is for samples of not less than 200 to ensure the delivery of parameter estimates with a degree of confidence (Gerbing and Anderson, 1993) but not more than 500 to prevent SEM from becoming too sensitive that could result in a poor goodness-of-fit measure (Hair *et al.* 2006). In view of the above, a sample size of not less than 400 and below 500 per group of respondents is considered appropriate and was accordingly adopted for this study.

#### 5.4 Instruments for data Collection

The instruments used for data collection were structured questionnaires. Questionnaires are considered as good data collection instruments because they produce information about the past and present and provide the optimum means of obtaining standardised stimuli (Tuckman, 1972), which was important in this study. Moreover, questionnaires minimise respondents' bias and facilitate the collection of a large quantity of data within a relatively short time. These qualities made the use of a questionnaire suitable for data collection in this study. However, a questionnaire survey has the weaknesses of non- and incomplete response (Jones *et al.*, 2013). The survey approach addressed this weakness by making careful on-the-spot checks of the questionnaire at collection points and administering more questionnaires than the sample required to account for possible shortfalls as a result of this weakness (Cornish, 2002).

The questionnaires had two parts; Part A for the respondents' profile and Part B for the constructs measured in the study. Part B had five and four sections for the graduates and the undergraduates respectively. Sections 1 to 4 of Part B were the same for the two questionnaires. The sections were derived from Liñán *et al.* (2013). The questionnaire, except for sections 4 and 5, has been used by different authors in different contexts and formulated to suit a variety of other fields in testing intentions. Section 5 of the questionnaire was a collection of methods used in EE classrooms from Garavan and O'Conneide (1994), Fiet (2000); Bennett (2006), and Mwasalwiba (2010). Only the graduates responded to this section as the undergraduates had not attended EE classes. The questionnaire items were designed based on the various constructs of the TPB on a 7-point Likert-type scale. The respondents were required to show the degree of their agreement with the different items that measured the constructs by ticking the appropriate column. The Likert response format facilitated the rating of respondents' perception about the phenomenon being examined,

through its weighted mean score. It was therefore considered suitable for the survey. However, it also has the limitation that respondents may tick the same box for every item without giving deep thought to the question (Hartley, 2013). To handle this shortcoming, all questionnaires returned were scrutinised for such responses and those found to exhibit such characteristics were removed and did not form part of the analysis. A total number of 92 responses were discarded from the graduate respondents because 7 questionnaires were returned blank and 16 had the same response to all the questionnaire items. In the undergraduate group, 121 copies had similar deficiencies to the graduate group described above.

#### 5.4.1 Reliability of Instrument – Pilot Study

Reliability testing determines whether, given the same situation and circumstance, if a test is repeated it will obtain the same result as it did in the first instance, hence the instrument is consistent in its measurement ability (Tavakol *et al.*, 2008). Therefore, the reliability of measurement instruments is closely related with its validity. Validity checks whether the instrument used in measuring a phenomenon measures what it is expected to measure. Reliability indicates error in measurement and a reliable instrument is necessary to give meaning to validity; therefore, reliability and validity are critical, and neither is adequate on its own (Duval-Couetil *et al.*, 2011).

The questionnaires for the investigation were tested and validated by several authors including Liñán and Chen (2009). However, as the current research focused on a different context, the instrument was piloted in June 2016 and further tested for validity and reliability within the research context.



The coefficient, Alpha, approximates the average correlation between all pairs of construct items and the rule applied for interpreting reliability by Cronbach's alpha is as shown in Table 5-4.

**Table 5-4: Rules for Reliability Test**

Cronbach's alpha	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.9 > \alpha \geq 0.8$	Good
$0.8 > \alpha \geq 0.7$	Acceptable
$0.7 > \alpha \geq 0.6$	Questionable
$0.6 > \alpha \geq 0.5$	Poor
$0.5 > \alpha$	Unacceptable

Source: Cronbach's Alpha

The Cronbach's  $\alpha$  results range between 0 and 1 and the acceptable reliability score is 0.6 and higher (Tabachnick and Fidell, 2001; Heale and Twycross, 2015). Cronbach's Alpha  $> 0.7$  is considered as reliable (Nunnally, 1978). A reliability score of less than 0.50 is considered poor because it makes the reliability of the instrument questionable; however,  $\alpha$  between 0.60 – 0.79 is acceptable; consequently, an  $\alpha > 0.80$  is considered good and excellent when it is  $> 0.90$  (Hair, et al., 1998). Alpha was measured on the same scale as the Pearson's product-moment correlation coefficient which typically varies between 0 and 1, where the closer the alpha is to 1 the greater the internal consistency of items in the research instrument.

**Table 5-5: Reliability Statistics**

Cronbach's alpha	Sample size	Number of Items
0.921	75	42

Source: SPSS Output

Given the result in the table above, the Cronbach's alpha of 0.921 was an indication that the instrument was reliable and consequently as far as internal consistency is concerned, the instrument has **excellent reliability**.

#### 5.4.2 Validation of Instruments

Internal validity is the extent to which a researcher can be confident that the findings of the study result from experimental manipulations (McDermont, 2011). Controlling the variables that are extraneous supports the internal validity of studies and, in this study, this aspect was enhanced by considering the literature and meticulously identifying and controlling for confounders in the analysis to ensure that there were no alternative explanations for the findings. These are potential extraneous variables that can prejudice the relationship between the independent and dependent variables.

External validity, in contrast, refers to the extent to which conclusions from a study can be applied to a different population or the possibility of generalising the findings from a study to other populations (McDermont, 2011). Irrespective of how comparable or incomparable an experiment is to a real-life situation, it is difficult to ascertain the extent to which the results are applicable to other contexts without a systematic replication (Aronson, *et al.*, 1990).

The content and construct validity of the questionnaires were tested to validate the instrument. The content validity ensured that the questionnaires covered the varied meanings and content within the phenomenon being studied, while the construct validity ensured that the measures used for determining the entrepreneurial intentions of the graduates related to other variables within the theoretical construct adopted.

Kendall's Coefficient of Concordance ( $W$ ), an extension of Spearman's Rank Correlation Coefficient, was used to validate the instrument on a random sample size of 75 respondents. Kendall's  $W$  measures the degree of agreement between the several quantitative variables

that assess a set of objects of interest. The validation was done through a test of the null hypothesis, as stated below:

H<sub>0</sub>: There is no agreement between the *k* variables

H<sub>1</sub>: There is agreement between the *k* variables

Test statistic:

$$\chi^2 = k(n-1)W$$

The decision rule is to reject H<sub>0</sub> if  $p < 0.05$ ; otherwise, accept H<sub>0</sub> at the 5% level of significance.

**Table 5-6: Validity Coefficient**

No	Kendall's Coefficient	Chi-Square	Asymp. Sig
42	0.175	169.46	0.000

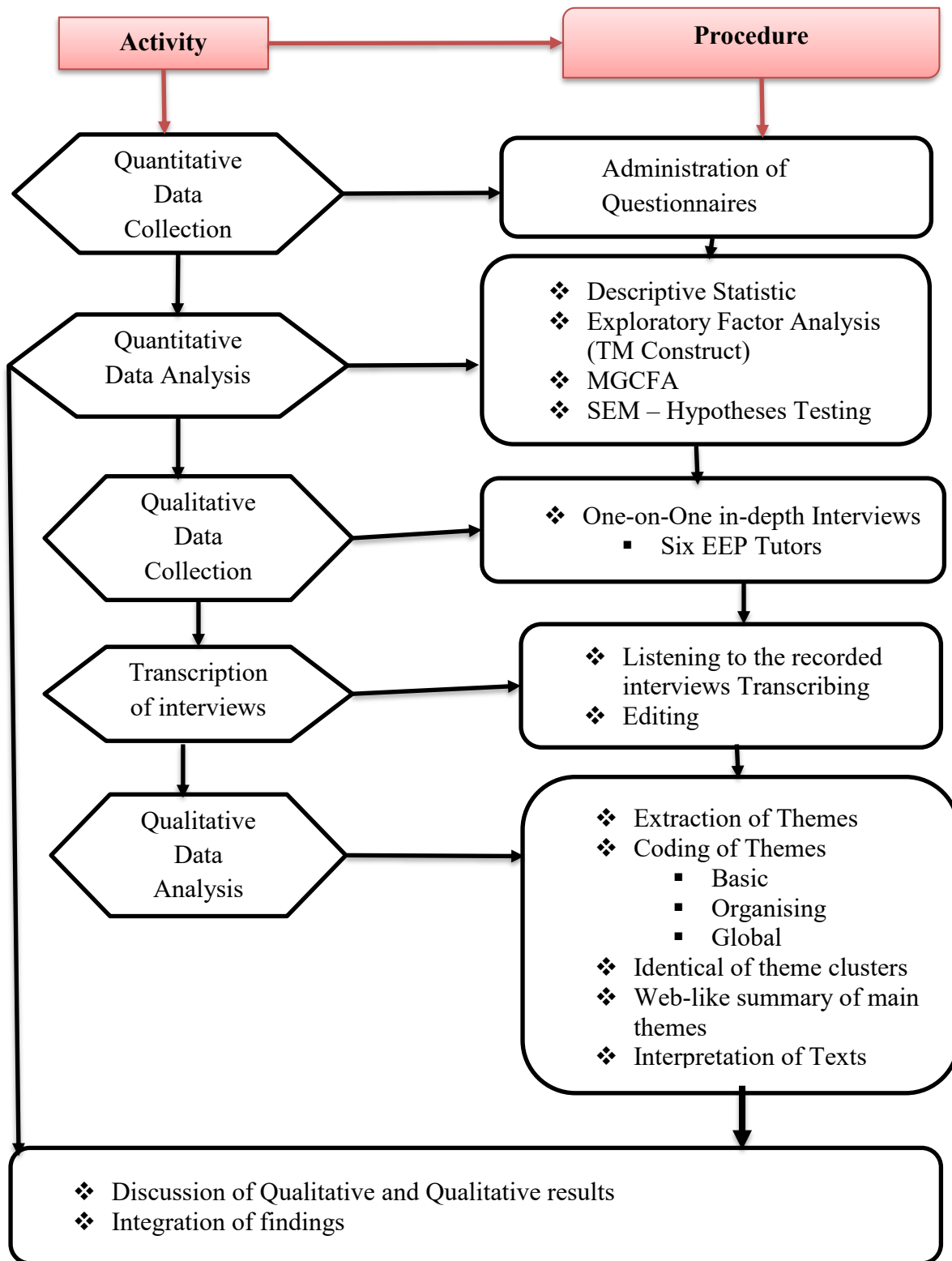
Source: Author's SPSS Output

Table 5-6 shows that the Kendall's Coefficient of Concordance was significant since  $p = 0.000 < 0.05$ . Thus, it can be deduced that the questionnaires used for this study were valid. Consequently, the data collection instrument was expected to measure exactly the various constructs it was expected to measure. Therefore, the result can be used to further infer information about the population under study with a high degree of confidence.

During the collation of data from the pilot study, it was observed that respondents in the pilot survey did not realise that some statements were negatively worded and consequently responded as though all questions were positively designed. To avoid future similar misunderstandings, these questions were rephrased from negative to positive to make room for question harmony.

## 5.5 Data Collection Procedures

*Figure 5-2: Flow Chart for Mixed Methods Sequential Explanatory Design Procedures*



Source: Designed by author

### 5.5.1 Quantitative Procedures

The quantitative data were collected from two sources: graduates and undergraduates.

Survey questionnaires were administered personally in each of the universities after obtaining permission from the National Universities Commission (NUC). The questionnaires for the undergraduates were administered during combined class sessions for various programmes in each university while those for the graduates were administered during training workshop sessions in the orientation camps of the National Youth Service Corp in different states.

**Table 5-7: Questionnaires Administered, Number Returned and Number Usable**

Questionnaires	Graduates (Experimental Group)	Percentage (%)	Undergraduates (Control Group)	Percentage (%)
Number Administered	588	100	588	100
Number Returned	501	85.2	523	88.9
Number Usable	409	69.56	402	68.38

Source: Prepared by the Author

This procedure offered ease of access to the respondents as a good number of them could be reached in these sessions. However, steps were taken to minimise potential bias by ensuring that each respondent completed their questionnaires independently.

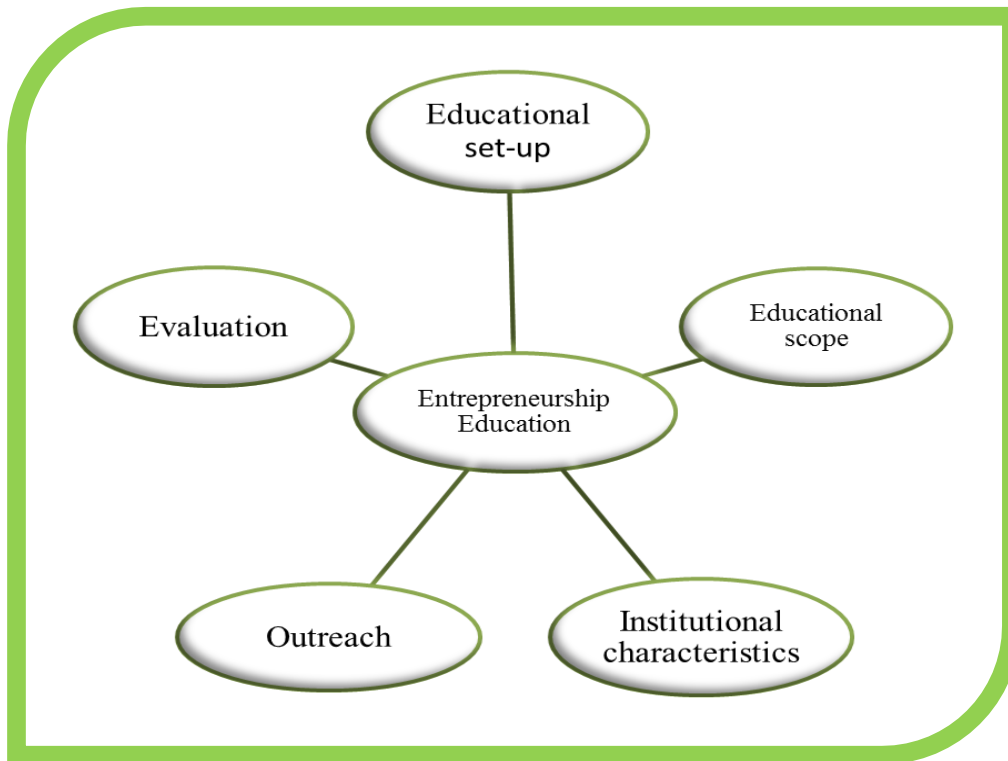
A total of 588 questionnaires were administered in each case in person by the researcher. For the graduates, 501 were returned, representing 85.2% as Tables 5-7 shows. However, among the returned questionnaires, 92 responses were discarded because 7 were returned blank and 16 respondents gave the same response to all the items; for example, they selected 'strongly agreed' on all items. The remaining 69 had incomplete responses ranging between 37.3% and 54% and were hence discarded because responses with more than 10% of missing data are not suitable for multivariate analysis (Hair *et al.* (2006). The removal of these responses from further analysis resulted in a final sample size of 409 representing 69.5% of the originally administered questionnaires. For the undergraduates, 523 were returned. Included in the

returned questionnaires however, were 121 copies with similar deficiencies as indicated above. These were accordingly discarded, leaving 402 representing 68.4% of the number administered for the analysis. While, the deletion of the missing data caused a reduction of representatives from some zones, all the zones still had representation which was a major consideration in the choice of the stratified sampling method adopted (see Table 7-1 for the breakdown of sample by zone).

#### 5.5.2 Qualitative Procedures

The five dimensions of the EEP model developed by the National Agency for Enterprise and Construction (NAEC) (2004) for measuring EE at the university level, specifies that entrepreneurial activities are split into five different scopes. The model regards EE as a discipline that is beyond basic educational programmes (Hoffmann, *et al.*, 2008). The tested NAEC instrument across 27 universities in USA, Canada and Denmark was used to design the interview protocol for the study and is presented in Figure 5-3 and attached as Appendix C.

***Figure 5-3: The Five Dimensions of Entrepreneurship Education***



Source: A reproduction from NAEC (2004)

The model includes educational set-up which covers all academic activities, such as the variety of entrepreneurship courses offered at various levels in HEIs, life-long learning and entrepreneurship research. This dimension also specifies the extent to which practitioners are involved in the programme. The educational scope refers to the promotion of creativity and the enabling of students to experience real-life entrepreneurial practice, while the outreach dimension involves the relationship between the HEIs and competencies and resources that are outside the university walls. The outreach dimension report further includes the provision of indirect measures of accessibility to guidance in grasping business opportunities. Institutional characteristics deal with the provision of formal and financial aid to support EE including the support obtained from all stakeholders.

Finally, *evaluation* encompasses the evaluation of the programme. Evaluation of EEPs is crucial in modifying the programme to suit the needs of current students and other stakeholders like the local industries and the communities within which the universities are located. Additionally, evaluation assists in monitoring and determining the career paths of the graduates. These activities serve as supplements to the core provision of entrepreneurship programmes and are central to the success of the EE programme.

### 5.5.3 Qualitative Data Collection

Semi-structured interview questions were used to elicit responses from a sample of entrepreneurship lecturers from the six universities from which the quantitative samples were drawn. The semi-structured interview was grounded in literature and phrased in a way that the interviewees will easily understand (Hazenbergh, 2012). It was written in English as it is the official language of instruction in Nigerian educational institutions. All the interviewees were academics. The interviews were recorded except for participants F002 who requested that recording should be stopped about halfway into the interview. Subsequently, the interview continued, and notes were taken.

The selection of sample for the qualitative phase considered: 1) lecturers that have taught the GST entrepreneurship being evaluated; 2) the lecturers must have taught the set of new graduates from which the quantitative samples were drawn. Purposive sampling was used to select the lecturers that met the criteria to have a deeper insight into the phenomenon. Given these criteria, the information regarding the tutors that taught the graduates that were sampled was obtained. The information was provided through the teaching timetable and the associated lecturers. Subsequently, the lecturers were contacted and those that consented were interviewed. Information about the lecturers and whether or not they consented to participate in the research was treated with utmost confidentiality. Saturation was achieved after three lecturers were interviewed as the data collection no longer produced additional



information or knowledge (Cresswell, 2014). Nevertheless, six lecturers participated, because having representatives from all the universities from which student and graduated samples were obtained was essential, because it was necessary to determine the EEP implementation strategies across all the universities. Data was gathered through a six-aspect interview guide (educational background, teaching methodology, educational set up, internships, outreach and Assessment).

#### 5.5.4 Researcher's Bias

The author was the first transcriber and annotator. When the transcription and annotation of the transcripts was completed, a second transcriber who was a PhD student of English and Applied Linguistics who has a lot of experience in transcribing verbal interviews and was researching instruction-giving in Human-Agent Interaction in a UK university also transcribed the transcripts. The skilled second transcriber/annotator listened to the interviews and analysed them in conformity with established research practice.

The transcripts of the second transcriber were compared to the author's transcribed results to confirm reliability and validity of the qualitative data analysed in this study. With this, the author was able to minimise the effect of rater bias (allowing bias to affect the evaluation of another) in study since the second annotator is emotionally detached from the study. He was able to provide an independent view which was compared to the transcripts of the authors. The inter-rater analysis indisputably established outstanding levels of agreement among both annotators with the use of identical consistency that made the results more reliable (Dörnyei, 2007; Gwen, 2008).

Interviews were conducted personally by the researcher. Two interviews were conducted in person face-to-face while four were via Skype. Since the interviews were face-to-face, it was thought that it might have created observer's paradox where the presence of the researcher could alter the interviewee's non-verbal behaviour and potentially compromise the accuracy

of the results. However, considering that interviewees are academics of high ranking, the degree of observer’s paradox is considered significantly low and there was no power-imbalance between the participants and the researcher. Participants were offered the opportunity to see the interview transcripts. Furthermore, the researcher mitigated the observer paradox by having a second transcriber and through methodical and precise analysis of the data collected.

## 5.6 Data Analysis Techniques and Procedures

### a. Quantitative Data Analysis

The quantitative data were analysed using the Structural Equation Modelling (SEM) – performed on SPSS-AMOS Version 22. The preliminary data analysis and reliability and validity of instrument were performed on SPSS Version 22. The analysis steps for both the quantitative and the qualitative phases are presented in table 5-8.

**Table 5-8: Steps of Analysis**

Item	Quantitative Analysis	Qualitative Analysis
Data	Numeric	Texts
Preliminary Data Analysis	Data Coding, transformation and description using SPSS	Coding and themes development
Analysis	Multi-group confirmatory factor analysis - Structural models, Hypotheses testing and group comparisons – SEM (AMOS)	Thematic Network Analysis
Results presentation, discussion and integration		

Source: Prepared by the author

### 5.6.1 Factor Analysis

Factor Analysis (FA) is generally characterised as a set of multivariate statistical techniques for data reduction and for attaining a more parsimonious understanding of the measured variables by deciding the nature and number of the common factors required to account for the patterns of correlations (Fabrigar *et al.*, 1999). It is used for summarising or reducing

large sets of variables into smaller sets of components or factors (Hair, *et al.*, 2006) and to understand the structure of a set of variables (Field, 2006). It is also employed to determine the number of factors to retain in the analysis (Hayton *et al.*, 2004). Factor Analysis is categorised into Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA).

Exploratory factor analysis (EFA) is a multivariate statistical tool, that produces smaller sets of factors from a relatively large set of variables, so that the set of factors captures as much information as possible from the data set (Parasuraman, 1991). It is used to identify the underlying factor structure and the number of latent constructs in a set of variables without imposing a predetermined structure on the outcome (Child, 1990; Suhr, 2009). EFA hypothesises the existence of smaller sets of constructs that underlie the measured variables.

There is overlap in the teaching methods in terms of their constitution as traditional and innovative methods. Similarly, the heterogeneity of methods in entrepreneurship, and the differences in technology and development across nations, can result in some methods that are traditional in some contexts being innovative in some other contexts. Consequently, EFA was deemed necessary in this study to delineate the methods into traditional and innovative constructs. EFA was therefore used to understand the relationship between the variables through the understanding of the constructs that underlie them.

Thus, the EFA was performed in this study to achieve the following purposes: (i) reduce the set of data on teaching methodology to a more manageable size; (ii) understand the structure of the set of teaching method variables as assigned by the respondents, and (iii) determine the number of factors to retain, as suggested by Hayton *et al.* (2004); This was necessary, considering the intention of the research, to assess the effect of innovative and traditional

methods separately as there seems to be no theoretical basis for specifying an *priori* patterns of common factors regarding innovative and traditional methods (Hurley *et al.*, 1997).

### 5.6.2 Structural Equation Modelling (SEM) Analysis

SEM is a multivariate statistical modelling technique that allows researchers to investigate both the measurement and the structural components of a model by simultaneously testing the relationships between multiple independent and dependent constructs and providing the overall tests of model fit (Hox and Bechger, 1998; Gefen and Straub, 2000; Tabachnick and Fidell, 2001). SEM is a comprehensive statistical package that is useful for testing hypotheses of observed and latent variables (Hoyle, 1995). It combines factor analysis and regression or path analysis (Hox and Bechger, 1998) and fits the model with the data (Barrett, 2006). The flexibility of SEM permits the examination of complex relationships, the use of different types of data and comparisons with alternative models (Wolf *et al.*, 2013). The causal processes under study are represented by a sequence of structural (regression) equations that are modelled pictorially to provide a clearer conceptualisation of the study. The hypothesised model was subsequently tested statistically in a simultaneous analysis of all the variables to determine the extent to which the hypothesised CF model was consistent with the data. The outputs were subsequently examined and when the goodness-of-fit met the acceptable threshold, it therefore meant that the model supported the likelihood of the postulated relationships between the variables.

This technique combines the measurement (confirmatory factor analysis) and structural model. The approach involves the application of a two-stage testing model. The first stage is confirmatory factor analysis. Considering that there were two groups in the study with survey items comprising sets of items (observed variables) that were combined to assess constructs, the multi-group confirmatory factor analysis (MGCFA) was attempted to determine whether the group analysis could be performed using a single *priori* model. This was deemed

necessary to determine that both groups associated the same meaning, and responded in similar ways, to the constructs. Furthermore, it was important to determine if the specified a *priori* model held across the groups to serve as further basis for group analysis. Therefore, to apply the MGCFA, the study followed the three steps of testing invariance:

- i. Configural invariance also called pattern invariance. Here, the specified model is an unconstrained model and the pattern of the parameters across the groups should be equal (Timmons, 2010).
- ii. Metric invariance: The second of the three-step multigroup invariance tests. This was used to ascertain that the two groups answered the questions in the same way. This step builds on the configural invariance and the factor loadings of items were constrained to be equivalent across the groups (Bialosiewicz *et al.*, 2013).
- iii. Scalar invariance: Scalar invariance suggests that the meaning of the construct, that is the factor loadings and the levels of the underlying items which are the intercepts, are equal across both groups and as such, groups can be compared on their scores on the latent variables (Milfont and Fischer, 2010; van de Schoot *et al.*, 2012). According to Cheung and Rensvold (2002), this means that the groups being compared perceive measurement scales to have the same operational meaning.

Both the CFA and the MGCFA were used in the analysis to examine the validity of the measurement model where the latent variables are measured in terms of the observed variables.

The second stage is the structural model used for testing hypotheses. Two important aspects in the SEM procedure are: i) the causal processes being studied are represented by a series of regression equations, and ii) structural relations are modelled pictorially and this allows for

clearer conceptualisation of the theory under study (Byrne, 2016). Through SEM, the hypothesised relationships were simultaneously tested to determine the extent to which the models were consistent with the data. The fact that SEM permits the specification of a *priori* pattern of inter-variable relations while also providing explicit estimates of error variance parameters (Byrne, 2016), made its use suitable for the analysis of the data in this study. The research adopted the widely used two-step approach (confirmatory Factor Analysis and Structural Models) for analysis.

i. Confirmatory Factor Analysis

The CFA is an important aspect and technique of SEM used to confirm the relationship between a set of indicator variables of a *priori* hypothesis (Byrne, 2001). When the links between observed and latent variables are not certain, EFA is used and this was applied to the TM construct in the analysis. The CFA model specifies the relationships of the observed variables to their underlying constructs to apply free correlations of the constructs (Anderson and Gerbing, 1988). This enabled the researcher to use the hypothesised model for estimating a population covariance matrix that was then compared with the observed covariance matrix.

ii. Structural Equation Modelling

SEM is an appropriate tool for examining relationships between variables and allows the explicit specification of error terms, which facilitates the understanding of patterns of correlation amongst sets of variables, a factor that was essential in this study (Suhr, 2006; Hox and Berger, 1998). Its ability to fit *priori* models to data and enable the assessments of model fit against acceptable threshold (Hair *et al.*, 2010) made it suitable for this study (Christ *et al.*, 2014). SEM also allowed the handling of the many exogenous and endogenous variables, as well as the specification of latent variables as linear combinations of the

observed variables in the study (Christ *et al.*, 2014). Furthermore, it enabled the testing of hypothesised patterns of directional and non-directional relationships among the variables to address this study's objectives. In addition, this technique enabled the clarification of the variance explained of the set of variables within the specified model.

In summary, the use of the SEM technique was based on three main factors. Firstly, it allowed the specification of a *priori* model based on the conceptual framework that, in turn, afforded the testing of the data collected against the model specified to assess the results obtained in consideration of the assumptions of the acceptable thresholds. Secondly, SEM was preferred to linear and multiple regression, as it provides a clearer understanding of the relationship between the variables being assessed and permits robust analysis, and more sophisticated and recursive testing (Liñán *et al.*, 2013). Thirdly, it is recommended for its suitability for causal relationships and its robustness in analysis, hence its use constitutes an empirical contribution.

### *Model Evaluation*

Evaluating the overall fit of a model is imperative to demonstrate a converged and appropriate solution for analysis. However, various statistical indices, such as regression coefficients, variances and the covariance of independent variables, are used to interpret parameters in determining the goodness-of-fit statistic of measurement models. A range of goodness-of-fit indicators are used to assess the SEM model (Arbuckle, 1999). Globally, the goodness-of-fit is measured by four main fit indices, following the suggestion by Hu and Bentler (1999), namely: the  $\chi^2/DF$  (CMIN/DF); the Tucker-Lewis Index (TLI) (1973); and Comparative Fit Index (CFI); and the Root Mean Square Error Approximation (RMSEA). All four of these indices were used in this research.

The Chi-square test ( $\chi^2$ ), CMIN, is one of the measures of absolute fit (Hair *et al.*, 1998) used in this study. It specifies the extent to which data is incompatible with the hypothesis. A non-significant value of  $\chi^2$  implies failure to reject the null hypothesis and is usually accepted as evidence of adequate fit (Cheung and Rensvold, 2002). However, the Chi-square statistics are usually unreliable as a sole indicator for evaluating model fit because of their sensitivity to sample size which can be misleading, especially where samples comprise hundreds of responses, as in this study. Furthermore, with large sample sizes, there is the likelihood for Chi-square results to be inflated resulting in the  $\chi^2$  test being characteristically significant. Thus, a combination of RMSEA, TLI and CFI were used to augment  $\chi^2$  and assess the goodness-of-fit of the specified model (Hu and Bentler, 1999; Brown, 2006; Oregon Department of Education, 2010).

The RMSEA was used to account for the error of approximation in the population, by checking how well the specified model with the parameter values fitted the population covariance matrix. RMSEA values as high as 0.08 represent reasonable errors of approximation in the population, values below 0.06 indicate good fit, and values below 0.05 are indicative of very good fit between the hypothesised data and the observed data (Bentler and Bonnett, 1980; Hu and Bentler, 1999). RMSEA of 0.06 that is indicative of good fit was adopted.

Although, setting an acceptable threshold for some measures is subject to some debate, thresholds are still used and in general, the  $\chi^2$  should have a value of  $p > 0.05$  and a CMIN/DF of less than 3 to confirm a good fit (Ullman, 1996). Whereas, Bentler and Bonnet (1980) suggest cut-offs of 0.90 for TLI and CFI, Hu and Bentler (1999) and Schermelleh-Engel, Moosbrugger and Muller (2003) propose cut-offs of 0.95. However, a TLI and CFI that are equal to or greater than 0.90 are generally accepted and recognised as indicative of



realistic global fits. Barrett (2007) suggests the complete abandonment of ancillary fit indices citing that literature has accentuated and demonstrated that there are shortcomings in adhering to strict cut-offs. Following Bentler and Bonnet (1980), this research adopted cut-offs of 0.90 for TLI and CFI to define the parameters more efficiently, for rigour and the observance of rules guiding the acceptance of model fit.

### 5.6.3 Testing of Mediating Variables

The study consisted of two mediators that required testing. The commonly used methods to test mediating hypotheses include the Sobel (1982) test, the Baron and Kenny (1986) test, the Monte Carlo test, and Bootstrapping, as described below.

**Sobel Test** – This test assumes normality, which is a major flaw. Consequently, Hayes (2009) suggests the use of other more powerful mediation tests, which do not make this assumption

**Baron and Kenny** – Baron and Kenny (1986) test, is a causal-steps approach. In this approach, a researcher estimates each of the paths in the model and by examining if certain statistical criteria are met, the researcher determines whether the variable functions as a mediator. This causal-steps approach is criticised for being one of the lowest in power for testing intervening variables' effect and for merely inferring indirect effect logically through the outcome of a set of hypotheses rather than the assessment of the quantification of the intervening effect (Fritz and MacKinnon, 2007; Hayes, 2009). It was therefore considered not suitable for this study.

**Bootstrapping** – Bootstrapping is a computer-based method that assigns measures of accuracy to statistical estimates (Efron and Tibshirani, 1993). This method of testing mediation treats the sample as a 'population reservoir' and consequently draws several

random samples from the ‘population reservoir’ such that the probability of selecting a given case remains equal with every random selection (Mallinckrodt *et al.*, 2006). Bootstrapping processes were more appropriate in this study because they generate accurate estimates of standard error of correlation coefficients (Switzer *et al.*, 1992). They improve the estimation of parameters in structural models and have the best control for Type 1 error (Bollen and Stine, 1992; ManKinnon and Williams, 2004; Hayes, 2009; Hancock and Liu, 2012). Bootstrapping has been shown to be one of the more valid methods for testing mediation compared with Baron and Kenny (1986) and Sobel's (1982) technique (Hayes, 2009). Given the foregoing, the bootstrapping method was adopted for mediation testing in this study.

The bootstrap sample is the most widely used in the social sciences (Jackson, *et al.*, 2009), despite being criticised for providing bootstrap estimates for total indirect effects compared with specific effects. The study adopted 95% bias-corrected confidence intervals with 2000 bootstrap samples drawn from the parent sample for the mediation test. This is important in order to place a confidence interval around the estimated parameter values calculated from a sample, generally implemented in bootstrapping (Puth *et al.*, 2015). Of the different methods of bootstrapping used to obtain a confidence interval, the bias-corrected is recommended because it gives generally good performance (Puth *et al.*, 2015). This offered a strong basis to make meaningful inferences from the theoretical construct in the study and provided the interrelations between the construct, thus avoiding erroneous inferences.

#### b. Qualitative Data Analysis

The qualitative phase followed the step-by-step guide of Attride-Stirling's (2001) thematic network analysis (TNA). The TNA uses pictorial representation of the network and presents a holistic image of the thematic analysis. It also uses a procedure of a web-like network for organising and representing data. Thus, it makes moving from textual information to interpretation of the texts unambiguous and provides an improved understanding of the

qualitative analysis. With the TNA, the themes emanating from the interview transcripts were determined and organised into graphical illustration, termed “thematic network”. TNA is considered a robust tool for the presentation and systematisation of qualitative analyses and seeks out the relevant themes in texts at different levels (Attride-Stirling, 2001). The TNA possesses the qualities necessary for effective qualitative data analysis in this study and has accordingly been adopted. With the TNA, themes were extracted from textual data and illustrated with a pictorial tool. It was also used to facilitate the depiction and structuring of the themes in the interview texts.

In the analysis, the manual coding process was utilised. To do this, significant statements were highlighted, and patterns were sought out from the interview data of each interviewee across the transcripts to identify the recurring themes. The identified themes were subsequently used to capture the important subjects in relation to the phenomenon being explored and used to represent the pattern of response within the data set.

Following Attride-Stirling, (2001) the organisation of the themes was performed at three levels, beginning with the lowest-order premises, the Basic themes. These were the substantial statements selected from the interview transcripts. Basic themes were used to bring together similar themes emerging from the interviews into identical groups and, consequently, reduce the transcript to a manageable set of significant themes. At the second level in the TNA are the middle-order themes, the Organising themes. The organising themes are obtained by grouping the basic themes into clusters of identical subjects and summarising them into categories. At the top level in the network are the Global themes. These are the super-ordinate themes. The Global theme was used to group the organising themes into sets of common positions regarding the phenomenon under investigation. The Global theme encapsulates clusters of all the lower-order themes abstracted from the data.

These steps in Attride-Stirling, (2001) TNA were carefully and logically followed to analyse the qualitative data, and, given the various other robust measures taken in the study, the results obtained were considered valid and useful in explaining the lecturers' side of the implementation of EEP in Nigerian universities (see 7.4.2).

### 5.7 Ethical Consideration

Ethical issues were duly considered before the commencement of the data collection for the study because it was important to act ethically. This was taken with all sense of seriousness and responsibility. The outset was the attendance of research ethics training. Subsequently, the compulsory online ethics test by the University of Northampton was taken and passed. Similarly, the non-compulsory ethics module on human subjects was also attempted and passed. Following this, an ethics application that included the assessment of the risks relating to this study was made to the Safety, Health and Environment team of the University of Northampton. This received full approval (see Appendix J). The assessment of the risk relating to this study, the ethics consideration developed by the author and a strict adherence to the guidelines as laid out by the University of Northampton guided the entire conduct of the research. Where there were conflicts, the University of Northampton's code took precedence.

Data for this study was collected before the General Data Protection Regulations (GDPR) that is a European Union initiative came into effect in May 2018. The GDPR (2018) redesigned the way personal data relating to demography are collected, used and stored (GDPR, 2018). However, in line with the research ethics of the university of Northampton, United Kingdom, informed consent was obtained from the participants. Permission for access to the undergraduates and graduates were sought and obtained from the universities through the National Universities Commission and the National Youth Service Corp orientation camps respectively (see appendix D - graduates and appendix E - undergraduates).

Survey instruments were coded, and participants were informed to note the codes on their questionnaire in case they wish to withdraw from the study. Participants were informed that the codes provided on the forms were to serve as a way of anonymising the forms and only they knew their individual codes. Subsequently, the data collected was processed solely for the purpose for which it was collected and anonymised so that individual participants cannot be identified in the report. All SPSS files on the university R drive containing the surveys are password protected to prevent unauthorised access to the information in the files in line with GDPR (2018).

Within this study, my interaction with the participants was face-to-face during survey questionnaire administration at the various universities for students' participants, at the orientation camps in the case of the graduates' respondents. The interviews with the six EEP lecturers were also face-to-face, although four of the interviews were via Skype. The respondents used in this research were non-vulnerable adults, nevertheless, they were assured that participation was voluntary and could be discontinued willingly, and that all information obtained would be treated with the utmost confidentiality. Participants were further informed about the purpose, terms and conditions of the research using the information sheets (see appendix F - graduates and appendix G - undergraduates) and then requested to complete and sign consent forms (see appendix H). All the respondents were explicitly informed that they could withdraw from the research within 14 days of the data collection. The information sheet that they could take away for their records after they consented to be part of the research, contained the email address of the researcher. This was to enable the respondents to contact the researcher should they change their minds and wish to withdraw their participation. The respondents also had the opportunity to ask questions if and when they needed clarification.

This research poses neither physical nor psychological harm whatsoever to the participants. Given the design of this study and the nature of the questionnaire items that are based on the theory of planned behaviour, which has been widely used in intentions researches. The survey was anonymous, and the data analysis was group based.

In compiling the research findings, the promise of anonymity to the respondents was observed. Thus, the identity of the universities which the respondents attended and other sensitive information that were provided were carefully protected. However, all truths and valuable insights including those that were exasperating were not edited.

### 5.8 Gaining Access

Gaining access to the survey participants was crucial to being able to achieve the objectives of this study and obtaining answers to the research questions. Bearing this in mind, access to the participants was sought from the regulatory body of Nigerian universities (the NUC) and the researcher was given introduction letters to the various universities. Similarly, a letter from the University of Northampton introduced the researcher to the supervisory body of the National Youth Service Corps (NYSC Headquarters) and the researcher was given access to the participants. Both organisations are in the Federal Capital Territory, Abuja. This method of gaining access used by the researcher resonates with Pettigrew and McNulty (1995) who obtained access to directors by going through eminent board members of the Centre for Corporate Strategy and Change, which produced a 100 per cent response rate. Despite the full access granted, it was actively managed and relationship with the gatekeepers was maintained all through the data collection process to sustain it (Juha, 1997; Okumus *et al.*, 2007). Not minding the physical access granted by the gatekeepers, consent was further sought from the potential participants and only the willing participants were surveyed. All participants were given the opportunity to make the choice of whether to participate (Bell and Bryman, 2007).

## 5.9 Summary

This chapter examined the philosophical underpinning of this study. It indicated that a positivistic approach is unsuitable because it does not allow capturing the complexity of social interaction and human behaviour (Jensen, 1989) neither is it amenable to MMR. Interpretivism was also considered in the chapter and shown to be inappropriate for this study because it required knowing the correlation between the independent and dependent variables which demanded the use of statistical tools. The chapter indicated that the study adopted the realism paradigm because it provided an avenue through which the ‘blurry external reality’ of the subject of this study that might have several perceptions were viewed from various perspectives and triangulated. Similarly, as shown in Table 5-2, the combination of surveys and interviews with which data was collected in this study lends itself to realism. Additionally, the subjective nature of EI that is the core topic of investigation is amenable to realism. The chapter further demonstrated that the SEM and the TNA used for the quantitative and qualitative analysis are amenable to realism. Thus, it was deemed appropriate for the study.

The chapter also demonstrated that the study used a mixed method approach, which utilised the sequential explanatory designed (SED). To implement the SED, it was reflected in the chapter that quantitative data were first collected and analysed before the qualitative data collection. I also indicated that the quantitative phase was a quasi-experimental design, comprising samples of graduates and undergraduates as experimental and control group respectively.

It showed that structured questionnaires and semi-structured interview protocol were utilised for the quantitative and qualitative data collections respectively. The chapter also indicated that data analysis employed SEM, which is believed to be sophisticated and robust and allows

the simultaneous testing of the relationships between all study variables, thus providing a better understanding of the effects of the TPB constructs. It further indicated that the qualitative data was analysed using the thematic network analysis.

Following Hazenberg (2012), Table 5-9 offers a concise presentation of the epistemological and methodological approach to this thesis.

**Table 5-9: Philosophical and Methodological Synopsis**

<b>Philosophical and Methodological Synopsis</b>	
<b>Methodological Part</b>	<b>Approach</b>
Ontology	Objective reality
Epistemology	Realism
Methodology	Mixed-Method
Research Approach	Quasi-experimental
Research Aims	<ol style="list-style-type: none"> <li>1. Investigate the relationship between entrepreneurship education and graduates' entrepreneurial intentions</li> <li>2. To assess the implementation strategies in the qualitative phase for explaining the quantitative results</li> </ol>
Quantitative Research Tools	<ol style="list-style-type: none"> <li>1. Survey Questionnaires</li> <li>2. Two-stage Structural Equation Modelling</li> </ol>
Qualitative Research Tool	<ol style="list-style-type: none"> <li>1. Semi-structured Interviews</li> <li>2. One-on-one interviews</li> <li>3. Thematic Network Analysis</li> </ol>

Source: Compiled by author

The next chapter focuses on the analysis of the data collected from the graduates and a presentation of the results obtained with a brief discussion of those results.



## Chapter 6 - Data Analysis

### 6.1 Introduction

The research methodology used and the justification for the various choices made were described in the previous chapter. This chapter presents the analysis of data. It is divided into four sections comprising data screening, quantitative data analysis, qualitative data analysis and a summary.

### 6.2 Data Screening

Data screening is the foundation for meaningful quantitative research because the quality and output of acceptable analysis is usually a subject of initial data screening (Abdulwahab *et al.*, 2011). It was performed in this analysis to check the integrity of data by checking for missing data and examining the presence of outliers. Despite the efforts taken to minimise incomplete questionnaire response, there were still cases of missing data comprising surveys that were about 37.3% or less completed. Following Hair *et al.* (2006) who wrote that survey responses with more than 10% missing data are not suitable for multivariate analysis, these responses were removed. The complete responses totalled over 400 cases; therefore, complete case analysis became the most viable method and was consequently adopted. The adopted complete case analysis is the commonest method and, considering that the potential problem of inadequate cases for analysis did not apply (Pigott, 2001), it was deemed suitable.

The bootstrapping method (see section 5.6.3) which does not rely on the postulation of normal sample distribution, was adopted for the mediation test. The analysis covered 2000 bootstrap resampling of the survey data, containing information from which inferences can be drawn on the 409 and 402 samples to generate an empirical distribution.

#### 6.2.1 Validity Assessment (Discriminant Validity - Latent Factors Analysis)

The validity of the scale was assessed using discriminant validity which is a statistical tool used to demonstrate the lack of correlation between the different constructs of a study that

should not be theoretically related to each other (Kinnear and Taylor, 1996). Meaning that items should correlate higher within their constructs than with other items from other constructs (Zait and Berteau, 2011). It was important in the analysis to gain a successful estimation of discriminant validity to ascertain that the measures of each of the different constructs were only correlated with their constructs and not with the other items that were designed to measure theoretically different concepts. The first assessment showed that the perceived behavioural control (PBC), which was planned as a mediator with the other constructs of the TPB was loading on the outcome variable. Consequently, it was removed from further analysis because the EI is the focus of the research. The rotated matrix was used to examine the discriminant validity of the data (see Table 6-1).

**Table 6-1: Rotated Component Matrix**

	Component				
	1	2	3	4	5
BEA			.714		
ORB			.859		
BEGS			.854		
FRA		.861			
FAA		.825			
COA		.869			
CNE				.769	
ECW				.805	
PCEW				.685	
IA					.774
GP					.829
OP					.629
GL	.851				
VC	.919				
IT	.895				

Extraction Method: Principal Component Analysis. Rotation Method:  
Varimax with Kaiser Normalization. Rotation converged in 5 iterations.

Loadings below .50 not included

Source: SPSS Output

As demonstrated in Table 6-1, all items were loaded with their expected factors thereby confirming discriminant validity and demonstrating that respondents in the survey perceived them as belonging to their theoretical constructs.

**Table 6-2: Reliability Statistics - Cronbach's Alpha (Combined group)**

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.805	.810	19

Source: Cronbach's Alpha Output

Additionally, internal consistency was assessed with item-to-total correlation and to determine the extent to which all the observed items in the test measured the attribute being investigated. A measurement instrument is internally consistent to the extent that the observed variables measure the same attribute (Polit and Beck, 2008). Cronbach's  $\alpha$  was used for the measurement because it is commonly applied in instruments that are made up of Likert-type scales with multiple items.

The highlighted .805 Cronbach's alpha coefficient score in Table 6-2 indicates high internal consistency and shows that the instrument is reliable see 5.4.1. The Cronbach's alpha for the questionnaire is .805 showing that the items are correlated or share covariance and probably measure the underlying concept. Therefore, with a score of .805, the questionnaire for data collection can be considered reliable and the strength of the internal consistency can be considered good.

Table 6-3 was used in deciding whether any item should be removed to improve the internal consistency. In the table, the columns of interest are: column 4, 'Correlated Item – Total Correlation', which shows the extent to which each item correlates with the overall

questionnaire score; and column 6, 'Cronbach's Alpha, If Item Deleted', which specifies the Cronbach's alpha if the corresponding item is removed from the questionnaire.

**Table 6-3:Item - Total Statistics (Graduate)**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
BEA	87.60	184.701	.405	.296	.794
ORB	87.30	185.991	.477	.567	.791
BEGS	87.53	185.971	.467	.531	.792
FRA	88.20	182.072	.447	.517	.792
FAA	87.84	180.384	.520	.556	.787
COA	88.08	181.628	.479	.544	.790
DAE	88.14	183.650	.386	.351	.796
MEE	87.57	182.579	.563	.504	.787
DBV	87.52	181.432	.552	.440	.787
PGE	88.00	182.623	.462	.329	.791
CNE	88.81	183.890	.300	.261	.803
ECW	88.07	186.773	.350	.362	.798
PCEW	88.16	186.768	.329	.267	.799
IA	87.92	190.109	.318	.281	.799
GP	87.93	191.954	.267	.299	.802
OP	88.36	185.965	.337	.217	.799
GL	90.88	192.583	.238	.504	.804
VC	91.06	195.298	.195	.670	.806
IT	91.21	195.600	.181	.617	.807

Source: Author's SPSS Outputs

Therefore, all the scores that go down if an item is deleted are to be retained. However, if scores go up when an item is deleted, such item might be considered for deletion because its removal will make the questionnaire more reliable. In this study, however, only VC and IT would have produced a slightly higher score, if deleted. Nevertheless, it was decided to retain them for two reasons, namely: 1) the difference in score (0.002) is not substantial and the score is still within the 0.8 range and so does not make a difference to the reliability of the

instrument; 2) the deletion of the item would reduce the ITM construct to only one item, whereas each construct should have at least three items for SEM testing (MacCallum, 1995; Byrne, 1998).

### 6.2.2 Bivariate Pearson's correlations Between the Constructs

Bivariate Pearson's is used to determine whether there is some relationship between the variables in a study and the approximate strength of the relationship (Schober, *et al.*, 2018). A pitfall of the method is that the existence of a relationship does not necessarily signify causality. SEM was applied for causal effects. The test of data linearity is an important aspect of preliminary analysis to assess the level of correlation in the data and to determine if there is any departure from linearity that might affect the correlations (Field, 2006).

The results of the Bivariate Pearson's correlations between the latent constructs presented in Table 6-4 indicate that PA, SN, EI, CV and TTM constructs are positively and significantly correlated with one another at  $p = 0.01$  level (2-tailed); however, the innovative teaching methods and traditional teaching methods are only significantly correlated at  $p = 0.05$  level. In contrast, correlations between ITM and all other constructs are insignificant. The results of the 2-tailed significance tests confirm that there is a strong relationship between all the variables ( $p < 0.01$ ) except ITM which is significant with only traditional teaching methods ( $p < 0.05$ ).

Thus, it can be concluded that there is a significant correlation between the exogenous and endogenous variables excluding the ITM. The outcome of the ITM was unexpected given that the literature suggests that entrepreneurship tutors now apply experiential methods for better entrepreneurship education programme outcomes. The non-significant finding could be the consequence of the rare use of the method in the implementation of the programme.

**Table 6-4: Bivariate Pearson's Constructs Correlations - Graduates**

		Personal Attitude Total	Subjective Norm Total	Entrepreneurial Intention total	Cultural Values total	Traditional Teaching Methods total	Innovative Teaching Methods total
Personal Attitude Total	Pearson Correlation	1	.304**	.489**	.194**	.148**	.056
	Sig. (2-tailed)		.000	.000	.000	.003	.259
	N	409	409	409	409	409	409
Subjective Norm Total	Pearson Correlation	.304**	1	.428**	.217**	.170**	.091
	Sig. (2-tailed)	.000		.000	.000	.001	.065
	N	409	409	409	409	409	409
Entrepreneurial Intention total	Pearson Correlation	.489**	.428**	1	.189**	.284**	.094
	Sig. (2-tailed)	.000	.000		.000	.000	.059
	N	409	409	409	409	409	409
Cultural Values total	Pearson Correlation	.194**	.217**	.189**	1	.182**	.057
	Sig. (2-tailed)	.000	.000	.000		.000	.251
	N	409	409	409	409	409	409
Traditional Teaching Methods total	Pearson Correlation	.148**	.170**	.284**	.182**	1	.105*
	Sig. (2-tailed)	.003	.001	.000	.000		.034
	N	409	409	409	409	409	409
Innovative Teaching Methods total	Pearson Correlation	.056	.091	.094	.057	.105*	1
	Sig. (2-tailed)	.259	.065	.059	.251	.034	
	N	409	409	409	409	409	409

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

Source: Author's SPSS Output

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

The correlation matrices between demographic variables and constructs were tested to determine their significance levels and confirm that the probability of obtaining a correlation coefficient by chance is less than 5%, thus showing that relationships do exist between the variables (Table 6-5).

**Table 6-5: Correlation Matrix of Demographic and Study Variables - Group**

	M	SD	1	2	3	4	5	6	7	8	9	10
<b>1. Zone</b>	3.27	2.1	-									
<b>2. Age Group</b>	1.28	.65	-0.08	-								
<b>3. Parents</b>	1.48	.52	-0.09	0.17***	-							
<b>4. Course</b>	2.18	.85	-0.05	-0.16***	-0.06	-						
<b>5. Marital</b>	1.85	.36	0.11*	-0.53***	0.00	0.05	-					
<b>6. Gender</b>	1.45	.50	0.05	0.09	0.06	-0.08	0.02	-				
<b>7. CV</b>	4.87	1.4	0.02	0.00	0.03	0.14*	-0.09	-0.16**	-			
<b>8. EI</b>	5.16	1.2	0.00	0.06	-0.16*	-0.02	-0.05	-0.14*	0.39***	-		
<b>9. SN</b>	5.12	1.4	-0.02	-0.09	-0.11*	-0.05	0.04	-0.07	0.26***	0.54	-	
<b>10. PA</b>	5.60	1.3	-0.11*	0.10	-0.08	-0.02	-0.11*	-0.10	0.29***	0.57***	0.38	-

Note: \*  $p < .5$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

Source: SPSS Output

As shown in Table 6-5, the hypothesised relationship predicted between CV and EI is supported. Similarly, there is a positive correlation between PA and EI, and SN and CV. However, no significant relationship was found between SN and EI.

**Table 6-6: Correlation Matrix of Constructs**

		Personal Attitude	Subjective Norm	Cultural Values	Entrepreneurial Intention
Personal Attitude	Pearson Correlation	1	.434**	.285**	.617**
	Sig. (2-tailed)		.000	.000	.000
	N	811	811	811	811
Subjective Norm	Pearson Correlation	.434**	1	.309**	.492**
	Sig. (2-tailed)	.000		.000	.000
	N	811	811	811	811
Cultural Values	Pearson Correlation	.285**	.309**	1	.314**
	Sig. (2-tailed)	.000	.000		.000
	N	811	811	811	811
Entrepreneurial Intention	Pearson Correlation	.617**	.492**	.314**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	811	811	811	811

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

Source: Author's SPSS Output

As Table 6-6 shows, the constructs are significantly correlated with one another at 0.01 (2-tailed).

### 6.3 Data Analysis

The data analysis covered both the quantitative and qualitative data. In the quantitative data, descriptive and inferential statistical analyses were performed separately after the data screening. Descriptive statistics were used to transform the raw data for easier understanding and interpretation. Means, frequency distribution, percentages, and standard deviations were used to analyse the participants' demography and the constructs of the test instruments. The descriptive analysis was performed using SPSS version 22 while the inferential statistical analysis utilised the structural equation modelling (SEM) performed with AMOS version 22. In the qualitative data, analysis was performed with the Attride-Stirling (2001) Thematic Network Analysis (TNA). The results are presented in Chapter 7.



### 6.3.1 Quantitative Data Analysis: Structural Equation Modelling

The hypotheses were tested using SEM performed with AMOS version 22 (see section 5.6.2), SEM being a causal statistical tool, enabled the testing of causal relationships between the variables. It was important to determine the structural (causal) relationships between the constructs in this research because these were not known. Therefore, in the structural models, plausible models were created and evaluated to test the research propositions. This process permitted the determination of which rival model provided the best fit (i.e. the model that best matched the data). This is essential for the drawing of empirical conclusions in terms of the relationships between the study variables. Moreover, the understanding of the relationships between these variables has a direct effect on the ability to answer the research questions and the attainment of the objectives of this study.

### 6.3.2 Model Evaluation and Goodness-of-Fit Indices

To demonstrate a converged and an appropriate solution for analysis, the overall fit of the models was evaluated by the  $X^2/DF$  (CMIN/DF) < 0.03 the Tucker-Lewis Index (TLI) and Comparative Fit Index (CFI) with values greater than 0.90 each and the Root Mean Square Error Approximation (RMSEA) having values < 0.06 (see 5.6.2). The four indices were used to specify the extent to which data is incompatible with the hypotheses. However, as the Chi square is sensitive to large sample size, the test might produce a significant value that indicates the model does not fit the data even when that is not the case. It is therefore considered characteristically unreliable as a sole indicator for evaluating model fit. Consequently, other parameters, namely, RMSEA, TLI and CFI, were also used to assess the goodness-of-fit of the *priori* model as recommended by Hu and Bentler (1999); Brown (2006); Oregon Department of Education (2010). RMSEA of 0.06 was adopted in this study.

### 6.3.3 Exploratory Factor Analysis (EFA)

EFA was used in this study to identify the underlying factor structure and the number of latent constructs of the teaching method variables to avoid imposing a predetermined structure on the outcome. The EFA helped to identify the delineation of the TM to a smaller set of constructs that underlie it as suggested by Copenhaver *et al.* (2016) and Kim *et al.* (2016). This was important due to the overlapping nature of some teaching methods in terms of their constitution as traditional and innovative methods. Moreover, there seems to be no theoretical basis for specifying a *priori* pattern of common factors regarding the construct (Hurley *et al.*, 1997). Table 6-7 shows the factorisation of the TM into two constructs.

**Table 6-7: Exploratory Factor Analysis**

Rotated Factor Matrix <sup>a</sup>		
	Factor	
	1	2
LM		.201
CP		.309
CS	.369	
IA		.594
GP		.601
OP		.377
RP	.505	
BP		.571
EP		.573
GE	.685	
CV	.697	
IT	.649	

Extraction Method: Maximum Likelihood. Rotation Method: Varimax with Kaiser Normalization.<sup>a</sup>

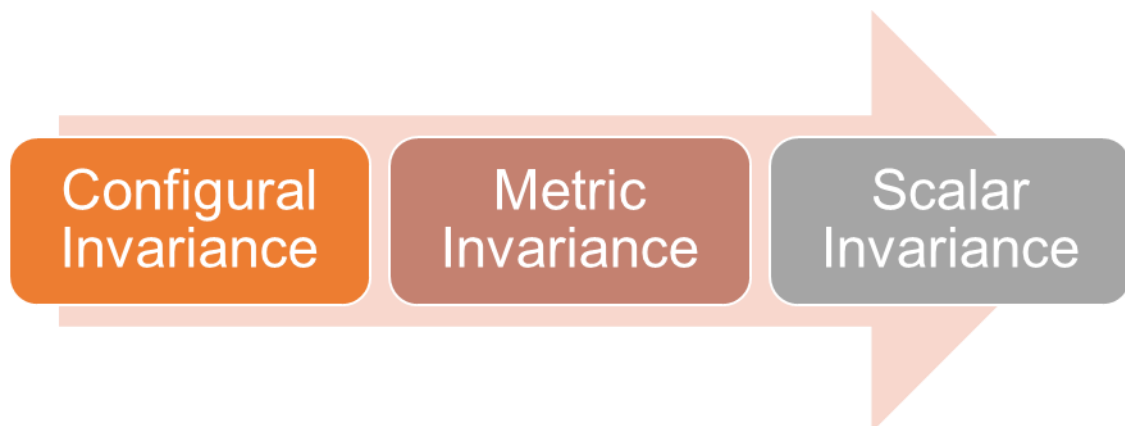
a. Rotation converged in 2 iterations.

Source: SPSS Output

#### 6.3.4 Multi Group Confirmatory Factor Analysis (MGCFA)

This section presents the results of the MGCFA. Multigroup invariance is a test for similarity that begins with a global test of equality of covariance structures across groups (Jöreskog, 1971 in Byrne 2010). The Multigroup Confirmatory Factor Analysis (MGCFA) was used in this study to allow the determination of whether the study inventory elicits similar response patterns across the samples. It involves the combination of the analysis of the two groups in a single model (Timmons, 2010) and comprises three stages of tests, namely configural, metric and scalar invariance tests. When the multigroup invariance test indicates that invariance is not achieved at any stage, further investigation is progressed on single-group analysis as Jöreskog, (1971) suggests. However, Byrne *et al.* (1989) argue that tests for equivalence of measurement and structural invariance can still be performed with the attainment of partial invariance.

**Figure 6-1: Stages of the Measurement Invariance Test**



Source: Designed by author

Figure 6-1 shows the progression of the MGCFA test. The test result upheld the assumption that the two groups associated the measurement variables with the same construct as conceptually hypothesised (see Table 6-10).

*Figure 6-2: Criteria for Model Fit Indices for Measurement Invariance and SEM Tests*

<b>Chi Square</b>	<ul style="list-style-type: none"><li>• The smaller the better</li><li>• Sensitive to sample size</li></ul>
<b>CFI/TLI</b>	<ul style="list-style-type: none"><li>• Acceptable Threshold <math>&gt;.90</math></li><li>• Good Fit <math>&gt;.95</math></li></ul>
<b>RMSEA</b>	<ul style="list-style-type: none"><li>• Good Fit <math>&lt;.06</math></li><li>• Unacceptable <math>&gt;.10</math></li></ul>

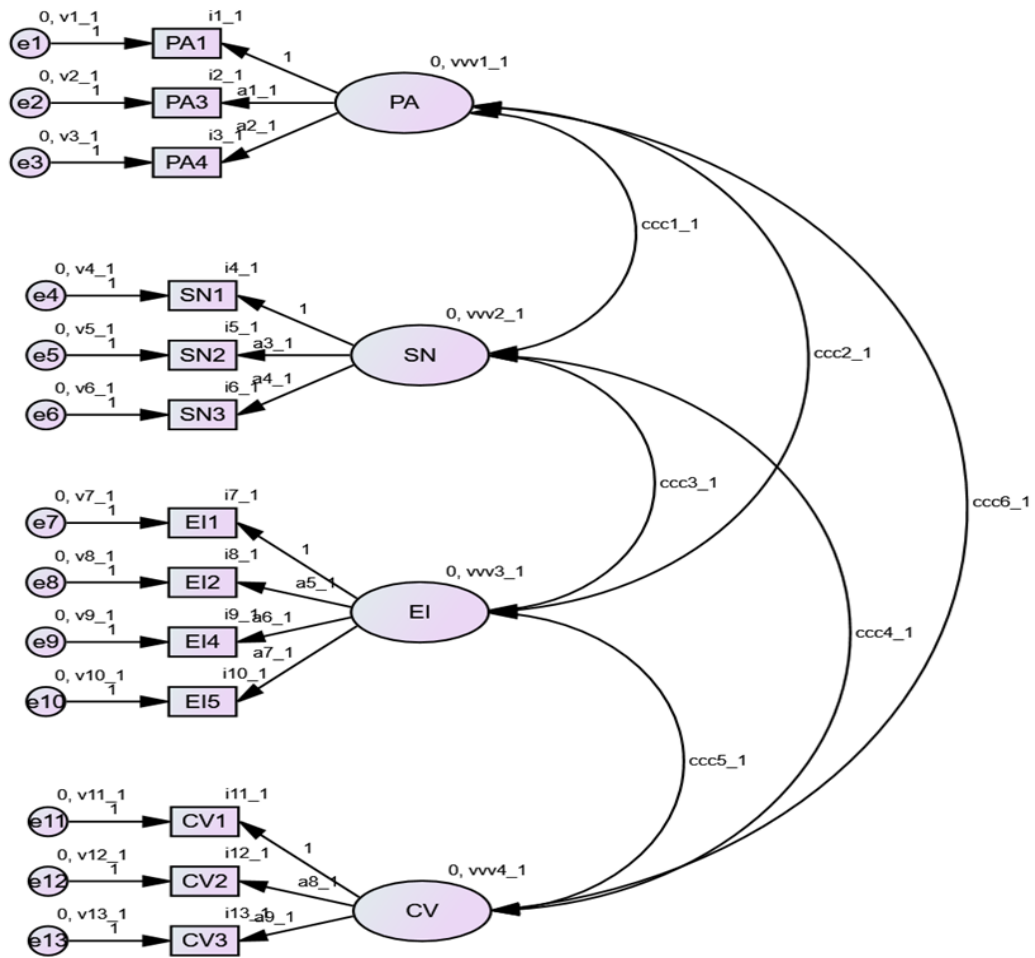
Source: Bentler, (1995); Hu and Bentler, (1999); Byrne, 2012)

The cut-off criteria used for model acceptance is as prescribed by Bentler and Bonnett, (1980) and Byrne (2012), as shown in Figure 6-2.

a. Configural Invariance

The model of the two groups was run freely and unconstrained in the configural invariance test and a good fit of the combined model was obtained using the Timmons (2010) parameters (see Table 6-8). The attainment of a good fit of the combined model indicated configural invariant, indicating that both groups associated the same meaning to the constructs. Hence, the groups were comparable and combined group analysis was continued.

**Figure 6-3: Multi-Group Measurement Invariance Test**



Source: Author's Amos Output

**Table 6-8: Configural Invariance (The Unconstrained Model)**

Model	CMIN/DF	$\chi^2$	df	RMSEA	TLI	CFI
Unconstrained Model	2.2	566.3	258	.038	.909	.923

Source: Author's AMOS Output

The result also proves that comparing the two groups was valid and meaningful, as Milfont and Fischer (2010) assert.

## **b. Metric Invariance Test (Constrained Weights)**

Having obtained configural invariance, the pattern coefficients were constrained to be equal in order to test for metric invariance while the constraints on observed variables placed during the test of configural invariance were removed. Loadings for the same item were constrained to be equal across the groups and the fit indices were examined to determine the fitness of the model. The initial test of metric invariance had good fit indices but its Chi-square test result was significant, indicating the need to remove some constraints so that only some parameters in the model were constrained while the remaining parameters differed across the two groups (Milfont and Fischer, 2010), because obtaining metric invariance is an important pre-requisite for meaningful group comparison (Bollen, 1989). However, metric invariance is usually difficult to achieve (Cheung and Rensvold, 2002). Consequently, Byrne *et al.* (1989) suggested relaxing some items of variables with differences to obtain partial metric invariance to allow for a single model group comparison.

To achieve metric invariance, therefore, the constraints on CV2, CV3, EI1 and EI4 were relaxed, thus partial invariance was achieved, allowing room for the continuation of the multigroup analysis (Byrne *et al.*, 1989). The result means that the two groups answered the questions in the same way, permitting the continuation of the multigroup analysis (Milfont *et al.*, 2010). Therefore, as conceptually hypothesised, the metric invariance assumes that the strength of the relationships between the measurement variables and their underlying constructs are the same across both groups (Cheung and Rensvold, 2002).

**Table 6-9: Test of Measurement Invariance across the two groups (MGCFEA)**

Model	Compared Model	$\chi^2$ (df)	$\Delta\chi^2$ ( $\Delta df$ )	RMSEA	CFI	AIC
A: Unconstrained (Configural) Model 1	N/A	2.345	276.7(118)	.047	.955	456.6
B: Metric (constrained factors loadings, i.e. weights) Model 2	A Vs B	2.279	280.3(123)	.040	.956	450.3
C: Scalar (constraining weights and intercepts) Model 3	B Vs C	2.549	346.6(136)	.044	.941	490.6

Source: Author's AMOS Output

**c. Scalar Invariance**

With the attainment of a partial metric invariance, the test for scalar invariance was performed. The scalar invariance shows that the groups being compared perceive measurement scales to have the same operational meaning. The initial test for scalar invariance indicated non-attainment of scalar invariance, thus requiring the need to relax some non-invariant intercept(s). Therefore, the intercepts with the highest differences (PA4 and EI5) were relaxed and the model was tested again. Notwithstanding the relaxation of the two observed variables, the scalar results still indicated a significant *p* value. An observation of Table 6-9 and the baseline comparison, Table 6-10, however, indicates that the model meets the cut-off criteria. Consequently, in consideration of the suggestion in literature that all factors should be equivalent across group in order to perform further invariance tests, Byrne *et al.* (1989) argued that this strategy is only logical but not a necessary condition for group analysis. The authors further illustrated that measuring instruments are usually group specific and baseline models are not expected to be identical across groups. Both separate and

group analysis were performed, the results were similar consequently, the group analysis was reported.

**Table 6-10: Baseline Comparisons**

Model	NFI Delta1	RFI rho1	IFI Delta2	TLI rho2	CFI
Unconstrained	.925	.901	.956	.941	.955
Measurement weights	.924	.904	.956	.944	.956
Measurement intercepts	.906	.893	.941	.932	.941
Saturated model	1.000		1.000		1.000
Independence model	.000	.000	.000	.000	.000

Source: Author's AMOS Output

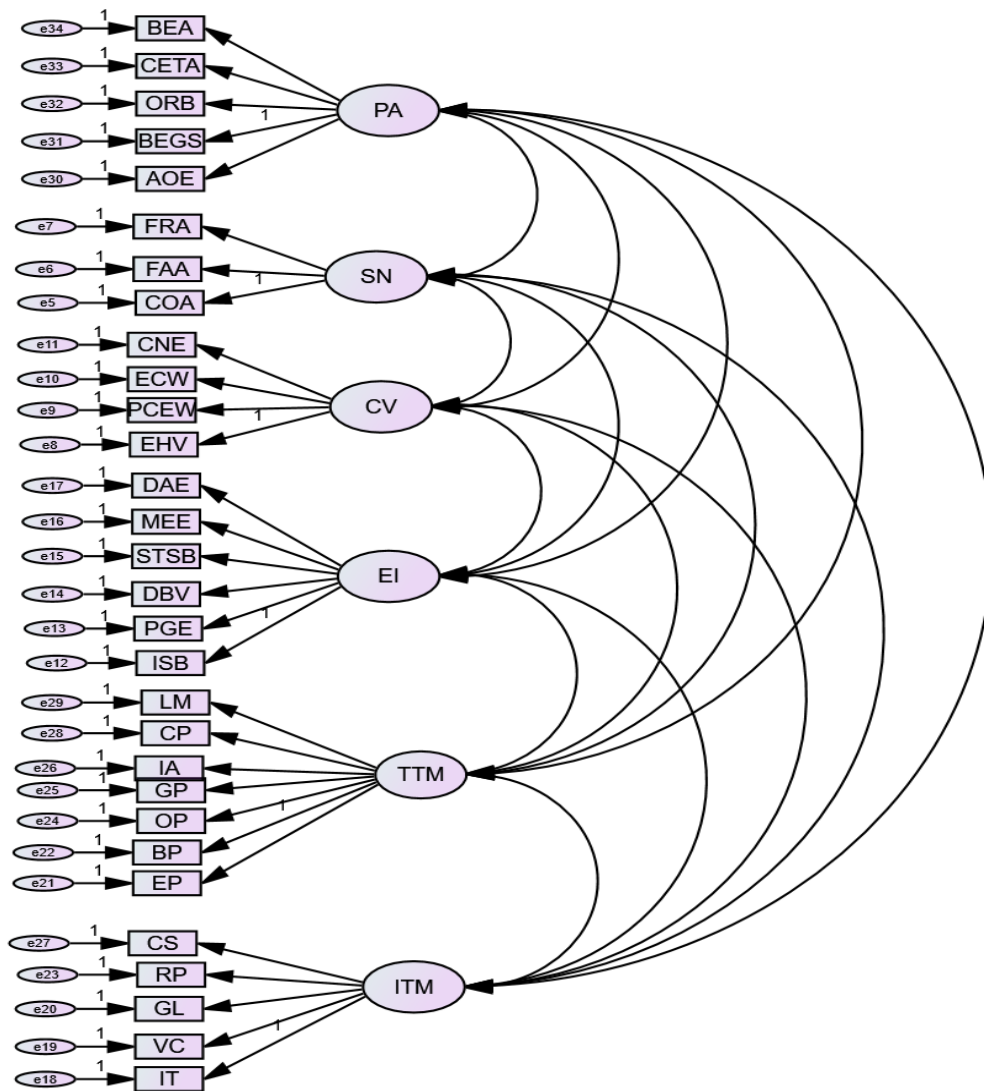
All the three MGCFA tests that show that the two groups were comparable produced values that met the cut-off determined earlier (Table 6-10).

### 6.3.5 Graduates CFA Structural Models

The CFA (see section 5.6.2) was used to test the hypothesised factor structure of the graduates' 30 observed variables. It reflects how the construct is theoretically operationalised (van de Schoot, *et al.*, 2012). The  $\chi^2/DF$  (CMIN/DF) < 0.03, TLI and CFI with values greater 0.90 respectively, and RMSEA having values < 0.06. were applied. Similarly, factor loadings lower than 0.5 were dropped from further analysis to ensure good reliability. Using these rules ensured that the data analysed met all the conditions and that reliable conclusions could be drawn from the findings. The initial hypothesised measurement model measuring all 30 items in the study is depicted in Figure 6-4.



**Figure 6-4: Hypothesised 30-Item Graduate CFA Model**

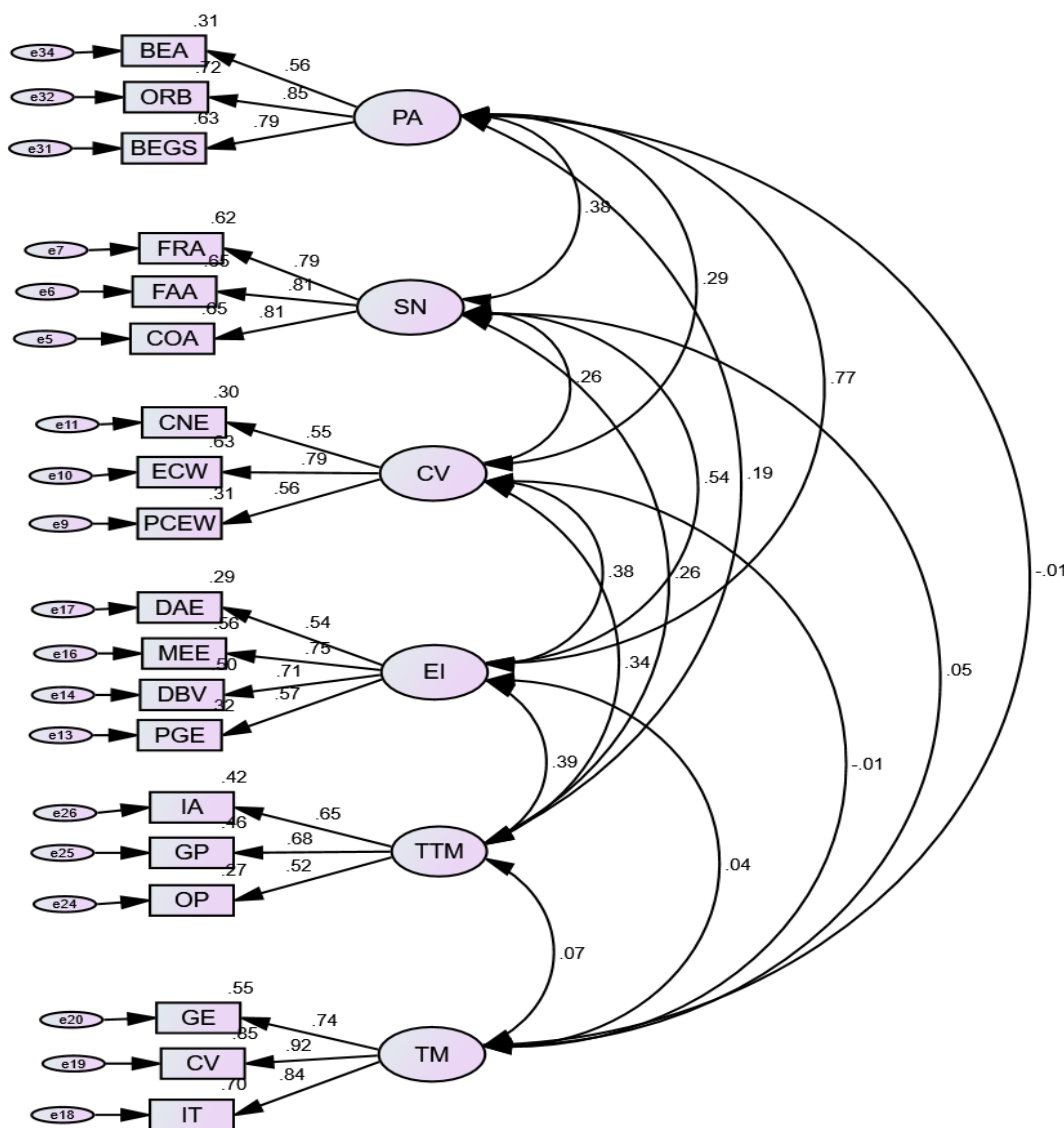


Source: Author's AMOS CFA Model

The measurement model consisted of six constructs, namely: traditional teaching methods (TTM); innovative teaching methods (ITM); cultural values (CV); Personal attitude (PA); subjective norm (SN); and entrepreneurial intentions (EI), as reflected in Figure 6-4. The SEM output was also examined to see if there were modification indices, but none was suggested. Consequently, items with loadings that were less than 0.5 (PA2, PA5, CV4, TTM1, TTM2, TTM3, TTM6, ITM7, ITM8 and EI3) were removed from further analysis. This means that the items were either redundant or only added insignificant explanatory power to the model, as Ahmad and Ahmad (2013) suggest.

The first CFA resulted in a CMIN/DF of 2.231, TLI .848 and CFI .864 and RMSEA .055. Both the CMIN and RMSEA were within the acceptable levels but the TLI and CFI were a little lower than the desired levels. This suggests a model re-specification in order to achieve a better model fit, as Shook *et al.* (2004) propose. The model re-specification involved the removal of the 11 items with factors loadings of less than 0.5 as shown in Table 6-11.

**Figure 6-5: Re-Specified CFA Model - All items loading above 0.05**



Source; Author's AMOS Output

**Table 6-11: Standardized Regression Weights (Graduates)**

	Estimate
SN3 <--- SN	.806
SN2 <--- SN	.809
SN1 <--- SN	.789
CV3 <--- CV	.560
CV2 <--- CV	.793
CV1 <--- CV	.551
EI5 <--- EI	.567
EI4 <--- EI	.708
EI2 <--- EI	.749
EI1 <--- EI	.537
TM12 <--- ITM	.837
TM11 <--- ITM	.920
TM10 <--- ITM	.740
PA4 <--- PA	.794
PA3 <--- PA	.848
PA1 <--- PA	.555
TM4 <--- TTM	.651
TM5 <--- TTM	.675
TM6 <--- TTM	.517

Source: Author's AMOS Output

The results further indicate that conclusions can be logically derived from the structural relationships between the constructs (see Zhang and Cain, 2017). Similarly, no construct had less than three items as required in SEM (MacCallum, 1995; Byrne, 1998). Furthermore, the results of the CFA demonstrate a 'recursive' relationship. As a recursive model, it means that no variable serves as both cause and effect, meaning that causation is unidirectional and is not reciprocal which makes the interpretation of results clearer.

**Table 6-12: Goodness of Fit Indices Final CFA Model - Graduates**

Fit indices	$\chi^2/df < 3$	RMSEA	TLI	CFI
CFA	1.742	0.043	.951	.961

Criteria:  $\chi^2/df < 3$ ; RMSEA  $< 0.5$  very good fit; TLI and CFI  $> 0.90$  good fit,  $> 0.95$  very good fit

Model re-specification is common practice when a *priori* model does not fit the study data appropriately (Chirico and Salvato, 2016). The re-specified CFA model with 19 observable variables depicted in Figure 6-5 was again assessed for model fit with the use of the four indices in Table 6-12. These indices were sufficient to evaluate the measurement model (Brown, 2015) and the results indicate a good measurement fit model (see Table 6-12), which is important to the performance of further analysis of the relationships between the latent constructs.

### 6.3.6 Structural Models

This section presents the testing of the ten hypotheses which were used to investigate the relationships between the latent constructs. The exogenous and endogenous variables were specified as linear combinations of the observed variables, as suggested by Golob (2003). Table 6-13 shows the ten hypotheses and the causal paths that were used to test the relationships between the latent constructs, as described in section 4.6.

**Table 6-13: Hypothesised Paths of Causal Relationships**

Constructs	Codes	Hypotheses	Positive Hypothesised Relationships (Direct and Indirect)
Traditional Teaching Methods	TTM	H1a	TTM → EI
		H1b	TTM → PA → EI
Innovative Teaching Methods	ITM	H1c	ITM → EI
		H1d	ITM → PA → EI
Cultural Values	CV	H2a	CV → EI
		H2b	CV → PA → EI
		H2c	CV → SN → PA
Personal Attitude	PA	H3a	PA → EI
Subjective Norm	SN	H4a	SN → EI
		H4b	SN → PA → EI

TTM = traditional teaching methods; ITM = innovative teaching methods; CV = cultural values; PA = personal attitude; SN = subjective norm

Source: Study Hypotheses

The structural model was evaluated using maximum likelihood (ML) estimation technique in SPSS-AMOS 22. The goodness-of-fit indices and the other global parameter estimates (see Table 6-13) were examined to evaluate the hypothesised structural model. The final variable items that produced a model that fit the global fit indices in the CFA were used to develop a structural model based on the causal relationship hypothesised in Figure 4-2 of section 4.4.

### 6.3.7 Test of the Control Variables

Following Murnieks *et al.* (2012), all the identified confounders in the study, namely: age group; gender; having a parent entrepreneur; and geo-political zone were regressed on the outcome variable (see Figure 7-1). As the investigation was a cause-effect relationship, the control variables could have made the results less accurate if they were omitted.

**Table 6-14: Level of the Significance of the Control variables (Graduates)**

	Estimate	S.E.	C.R.	P	Label
SN <--- CV	.353	.092	3.830	***	par_10
PA <--- CV	.193	.064	2.999	.003	par_11
PA <--- SN	.225	.045	4.978	***	par_13
EI <--- CV	.130	.056	2.322	.020	par_12
EI <--- PA	.655	.093	7.052	***	par_14
EI <--- SN	.191	.042	4.590	***	par_15
EI <--- Zone	.030	.019	1.550	.121	par_16
EI <--- Age_Group	.064	.050	1.283	.200	par_17
EI <--- Parents	-.193	.082	-2.361	.018	par_18
EI <--- Gender	-.112	.082	-1.371	.170	par_19
PA1 <--- PA	1.000				
PA3 <--- PA	1.257	.115	10.888	***	par_1
PA4 <--- PA	1.194	.111	10.714	***	par_2
SN3 <--- SN	1.000				
SN2 <--- SN	.987	.062	15.895	***	par_3
SN1 <--- SN	1.017	.065	15.655	***	par_4
EI1 <--- EI	1.000				
EI2 <--- EI	1.083	.110	9.846	***	par_5
EI4 <--- EI	1.070	.113	9.502	***	par_6
EI5 <--- EI	.943	.113	8.326	***	par_7
CV3 <--- CV	1.000				
CV2 <--- CV	1.382	.185	7.449	***	par_8
CV1 <--- CV	1.224	.159	7.675	***	par_9

Source: Author's AMOS Output

Therefore, they were held constant to clarify the relationship between the IV and the DV. The examination of the regression weights as shown in Tables 6-14 and 6-15 indicate that all the control variables are insignificant at  $p > 0.05$  except for having parent entrepreneur in the case of the graduates and geo-political zones in the undergraduates group.

**Table 6-15: Undergraduates Regression Weights**

	Estimate	S.E.	C.R.	P	Label
SN <--- CV	.572	.078	7.369	***	par_29
PA <--- CV	.140	.065	2.138	.033	par_30
PA <--- SN	.465	.073	6.409	***	par_32
EI <--- CV	.085	.063	1.339	.181	par_31
EI <--- PA	.636	.095	6.663	***	par_33
EI <--- SN	.220	.077	2.872	.004	par_34
EI <--- Zone	-.062	.023	-2.715	.007	par_35
EI <--- Age_Group	-.088	.130	-.677	.499	par_36
EI <--- Parents	-.140	.088	-1.585	.113	par_37
EI <--- Gender	-.042	.093	-.450	.653	par_38
PA1 <--- PA	1.000				
PA3 <--- PA	1.193	.094	12.657	***	par_20
PA4 <--- PA	1.053	.087	12.072	***	par_21
SN3 <--- SN	1.000				
SN2 <--- SN	.963	.075	12.869	***	par_22
SN1 <--- SN	.885	.071	12.432	***	par_23
EI1 <--- EI	1.000				
EI2 <--- EI	1.074	.079	13.644	***	par_24
EI4 <--- EI	.710	.077	9.192	***	par_25
EI5 <--- EI	.883	.080	11.056	***	par_26
CV3 <--- CV	1.000				
CV2 <--- CV	.847	.096	8.808	***	par_27
CV1 <--- CV	.842	.109	7.717	***	par_28

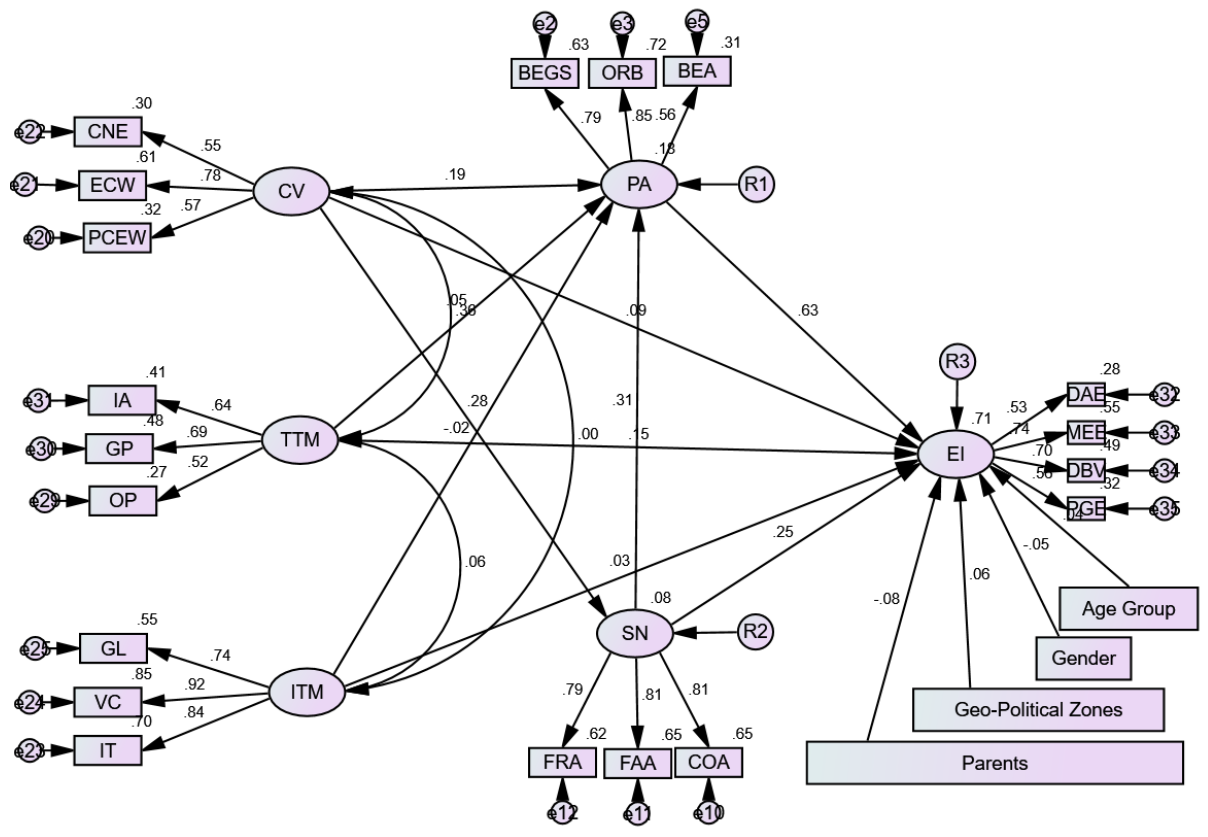
Source: Author's AMOS Output

### 6.3.8 Hypotheses Testing

The first structural model (Figure 6-6) generated from the final CFA exhibited acceptable fit indices which was an indication that the model fitted the data (see Figure 6-6 and Table 6-16). However, SEM indicated three modification indices (MI). The first MI was to correlate e1 to e8 on the EI construct; the second MI was to correlate gender and age group; and the

third suggestion was to correlate parent entrepreneur and age group. The second and third MI were on the control variables that were regressed on the outcome variable.

**Figure 6-6: Generated Structural Model from the Final CFA**



**Source: Author's AMOS Output**

Effecting the modification indices can potentially produce an even better fitting model given that the TLI and CFI at > 0.90 means good fits and at > 0.95 means very good fits (Hair *et al.*, 2014; Byrne, 2010; Lado *et al.*, 2008).

**Table 6-16: Fit Indices of First Order Structural Model - Graduates**

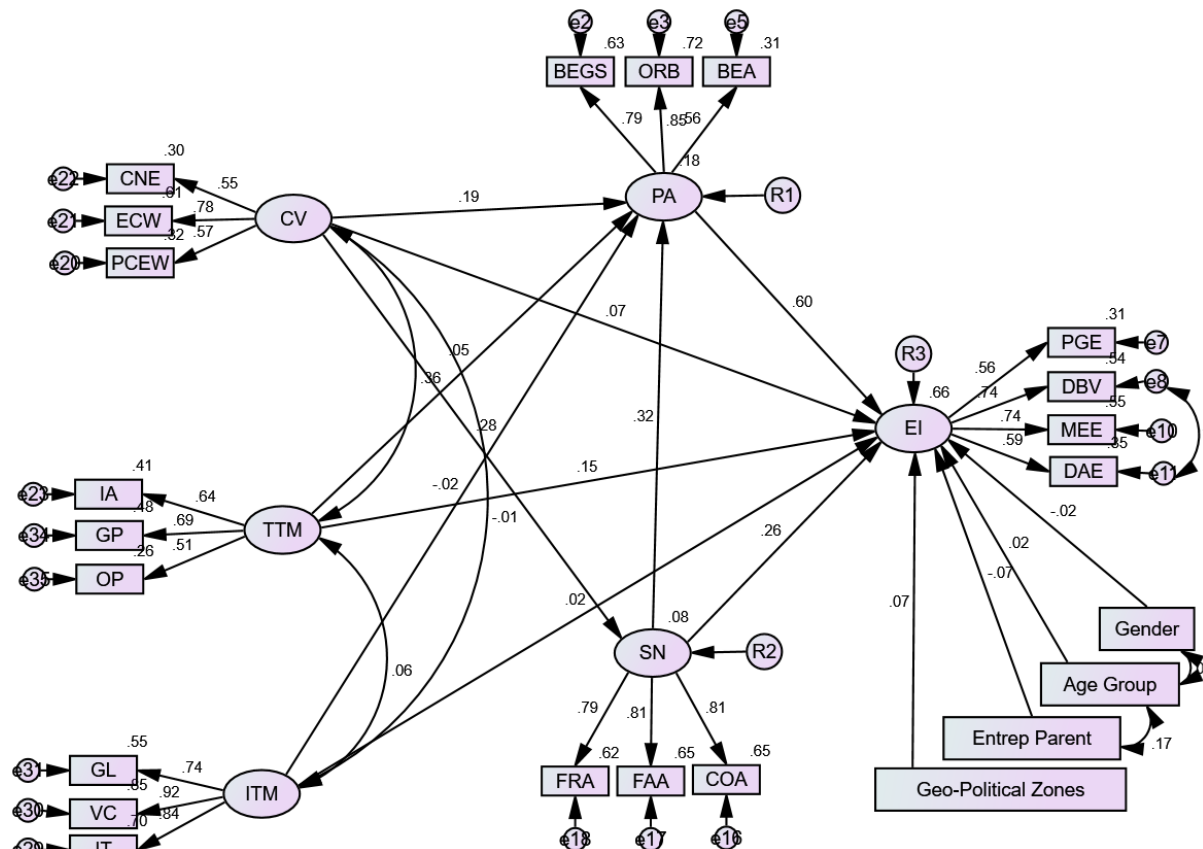
Fit indices	$\chi^2/df < 3$	RMSEA	TLI	CFI
CFA	1.904	0.047	.916	.928

Criteria:  $\chi^2/df < 3$ ; RMSEA < 0.5 very good fit; TLI and CFI > 0.90 good fit, > 0.95 very good fit

**Source: Author's AMOS Output**

Consequently, the model was re-specified based on the indicated modification indices as shown in Figure 6-7. Effecting the suggested modification therefore produced a better fit (see Table 6-17).

**Figure 6-7: Competing Model**



Source: Author's AMOS Output

The test of the competing model produced better fit indices, as Table 6-17 shows, and was thus applied for the testing of the hypotheses in relation to the graduates.

**Table 6-17: Fit Indices of the Re-Specified Structural Model – Graduates**

Fit indices	$\chi^2/df < 3$	RMSEA	TLI	CFI
Re-specified Structural Model	1.748	0.043	.928	.939

Criteria:  $\chi^2/df < 3$ ; RMSEA  $< 0.5$  very good fit; TLI and CFI  $> 0.90$  good fit,  $> 0.95$  very good fit.

Source: AMOS Output



As shown in Tables 6-17 and 6-18, the model produced a  $\chi^2/df$  value of less than 3.0 and the parsimonious fit was achieved. The TLI and CFI achieved values higher than 0.9 and the RMSEA value of less than 0.05, thus Incremental and Absolute fitness were achieved.

**Table 6-18: Fit Indices of the First Order and Competing Models - Graduates**

<b>Fit Indices</b>	<b>Acceptable Thresholds</b>	<b>Generated Model</b>	<b>Competing Model</b>
CMIN/DF	< 3	1.904	1.768
RMSEA	< 0.06	.047	.043
TLI	> 0.90	.916	.928
CFI	> 0.90	.928	.939
<b>Total no. of responses</b>	<b>409</b>	<b>409</b>	<b>409</b>

Note: CMIN/DF = Chi-square/degrees of freedom; RMSEA = Root Mean Square Error of Approximation; TLI = Tucker-Lewis Index; CFI = Comparative Fit Index

Source: Author's AMOS Version 22 Output

Therefore, the competing model achieved all the fit indices required in SEM, suggesting that the model fits the data and the results obtained can be accepted for interpretation and discussion.

### ***Mediation Tests – Bootstrapping Method***

The direct effect of the causal relationships between entrepreneurship education (TTM and ITM) and entrepreneurial intentions were examined through the application of path analysis. The Bootstrapping method was performed by randomly drawing 2000 samples from the parent sample to obtain more reliable estimates in order to assess the direct and indirect effects between the predictor variables (CV, TTM and ITM) and the outcome variable (EI). The results from the 95% bias-corrected confidence intervals (CI) based on 2000 bootstrap permuted samples were examined.

The main use of SEM is to ascertain the fit between the restricted covariance matrix which is implied by the hypothesised model and the sample covariance matrix. Any discrepancy between the two is therefore captured by the residual covariance matrix. As Byrne (2010:342) wrote, the iteration process of the bootstrap shows the summary of two aspects reported: (i) minimization history and (ii) the extent to which the process was successful. Table 6-19 shows that the minimization history indicates that 11 iterations; were required to fit the hypothesised model to the bootstrap samples.

**Table 6-19: Minimization History (Default model)**

Iteration	Negative eigenvalues	Condition #	Smallest eigenvalue	Diameter	F	NTries	Ratio
0	e	17	-.479	9999.000	4891.788	0	9999.000
1	e	5	-.180	2.649	2181.915	21	.500
2	e	3	-.032	.698	1457.030	6	.964
3	e	1	-.010	1.303	810.917	6	.780
4	e	0	235.346	1.113	537.462	5	.855
5	e	0	480.790	1.435	475.648	1	.581
6	e	1	-.003	.801	436.667	2	.000
7	e	0	219.547	.759	412.625	7	.822
8	e	0	238.306	.195	411.448	1	1.005
9	e	0	268.104	.028	411.395	1	1.011
10	e	0	285.384	.002	411.395	1	1.001
11	e	0	285.620	.000	411.395	1	1.000

Source: Author's AMOS Output

In this regard, they represent the estimates of the number of standard deviation of the observed residuals from the zero residuals that would exist with a perfect model fit (Byrne, 2017). The minimization history (see Table 6-19 provides the iterations for minimizing the discrepancy function (F). In this study, the optimal solution (the minimizing residual covariance matrix) was obtained after 11 iterations, which indicates that there are no errors. A summary of the bootstrap iterations also indicates that the specified 2000 bootstrap samples were useable (See Appendix I).

Specifically, the bootstrap bias-corrected confidence intervals (CI) were used to investigate the phenomenon that personal attitude mediates the positive effect of cultural values, traditional teaching methods and innovative teaching methods on entrepreneurial intentions. Similarly, it was applied to subjective norm as mediating a positive effect between cultural values and entrepreneurial intentions.

#### 6.4 Qualitative Data Analysis

This section presents the qualitative data analysis. It provides a description and explanation of the perspectives of the lecturers of the EEP in relation to the research question: What are the implementation strategies used for EEP in Nigerian universities? As the main aim of the interview was to explore the EEP implementation strategies, an interview protocol was developed from items in the benchmark study of EE across 27 universities in the US, Canada and Denmark (National Agency for Enterprise and Construction, 2004) to obtain responses from the EEP lecturers.

A deeper understanding of the phenomenon under study was be gained through the collection and analysis of qualitative data and this can enable further insight into the implementation of the EE programme. Following the transcription of the interviews (see 5.5.3 and 5.6.3), the data analysis was performed using Attride-Stirling (2001) Thematic Network Analysis (TNA). This method permitted the construction of a thematic network from the transcripts in Figure 6-8 shows the relationship between the basic, organising and global themes (see Figure 7-3) extracted from the transcripts. A total of 27 such themes were first identified and then abstracted from the transcripts. To progress the TNA, the basic theme clusters were reviewed, refined and where possible, related themes were merged, and the coding was refined accordingly. The process progressed three times and led to the reduction in the number of themes from 27 to 19. The process was repeated before arriving at a final 11 themes, which were then coded as the basic themes.

**Figure 6-8: The Initial Development of the Implementation Strategies Thematic Network**



Source: Interview Transcripts

The next step was to develop the organising themes through the grouping of the basic themes. The basic themes were explored, and the texts read through several times in order to identify the underlying patterns. The common and significant themes in the highlighted segments were subsequently extracted. Following this process, the selected themes were refined to avoid repetition and to obtain themes that are sufficiently comprehensive to capture all the sets of ideas from the text segments. The identified codes were arranged and grouped according to the similarity of the issues they addressed. Following the process, five themes, which formed the organising themes, emerged. In effect, basic themes with similar underlying issues were identified and clustered to create the organising themes.

To obtain the global theme, another step of grouping and refinement was conducted. The organising themes were examined for the focus of their underlying issues. This process led to the emergence of the global theme which addressed the subjects of the qualitative investigation. The global theme arrived at was, 'EEP Implementation Strategies'.

Subsequently, the themes were compiled, and their relationships are shown in a thematic network presented in the results and discussion in section 7.4.

## 6.5 Summary

The chapter presented the analysis of data beginning with the screening of data for missing values. The validity of the scale was performed with discriminant validity showing that items correlated within their constructs. Bivariate Pearson's correlation was also used to determine the relationship between the variables. The results of the 2-tailed significance tests confirmed a strong correlation between the exogenous and endogenous except ITM, which was significant only with traditional teaching methods.

The quantitative data analysis utilising SEM on SPSS-AMOS Version 22 was used to test the hypotheses and build the EI model. The test showed that six out of ten hypotheses were supported. In testing the hypotheses, the identified confounding variables were controlled. The final model, having met all the cut-off criteria, showed a good fit. The Attride-Stirling (2001) Thematic Network Analysis (TNA) was applied in the qualitative data analysis. The analysis resulted in 11 basic themes, five organising themes and one global theme. The next chapter will present the results and the discussion.

## Chapter 7 - Results and Discussion

This research set out to examine the effect of the EEP in Nigerian universities in shaping graduates' EI. It is a mixed method study with a quantitative phase supported by a qualitative phase. The study is backed by a variation of the TPB. Teaching methods classified into TTM and ITM, were used as proxy for EE, and PA and subjective norm (SN) were used as mediators. The quantitative data collected from two samples, namely, university graduates who constituted the experimental group and undergraduates who formed the control group, were subjected to structural equation modelling (SEM). The qualitative data collected from a sample of EE lecturers were analysed with thematic network analysis (TNA) The results and discussion of the results are presented in this chapter.

### 7.1 Demographic Characteristics

The demographic variables measured for the quantitative study samples consisted of 7 items, namely: gender; marital status; age; faculty or school; location of university; state of origin and parent entrepreneur. For further analysis, age was transformed into age group, and state of origin into geo-political zones.

Table 7-1 reveals that for both the graduates and the undergraduates, females are in the majority constituting 58.7% and 51% respectively. An overwhelming majority of 91.8% of the undergraduates are aged 25 years and below. Equally, a majority of 67.7% of the graduates are in that same age group. Graduates and undergraduates between 26 and 30 years are 24.4% and 7.2% respectively. Graduates between 31 - 35 years and 36 - 40 years constitute 3.7% and 2.9% respectively, while undergraduates in the same age groups equate to 0.5% each. The table further shows that graduates of 41 years and above are 1.2% but there are no undergraduates of more than 41 years of age.

**Table 7-1: Respondents Demographic Characteristics (n=409; 402)**

Variable	Category	Graduates		Undergraduates	
		Frequency	Percentage	Frequency	Percentage
Gender	Female	240	58.7	205	51.0
	Male	169	41.3	197	49.0
Total	-----	409	100	402	100
Age Group	25 and below	277	67.7	369	91.8
	26-30	100	24.4	29	7.2
	31-35	15	3.7	2	0.5
	36-40	12	2.9	2	0.5
	41 and above	5	1.2	0	0.0
Marital Status	Married	87	21.3	34	8.5
	Single	322	78.7	368	91.5
Course of Study	ASS	123	30.1	108	26.9
	BEM. Sc.	100	24.4	106	26.4
	SITE	186	45.5	188	46.8
University	01	61	14.9	78	19.4
	02	86	21.0	85	21.1
	03	85	20.8	76	18.9
	04	87	21.3	87	21.6
	05	44	10.8	39	9.7
	06	46	11.2	37	9.2
Parent entrepreneur	Yes	226	55.3	195	48.5
	No	183	44.7	207	51.5
Geo-Political Zone	North Central	164	40.1	155	38.6
	North East	10	2.4	16	4.0
	North West	24	5.9	34	8.5
	South East	66	16.1	60	14.9
	South-South	39	9.5	47	11.7
	South West	106	25.9	90	22.4

Key: ASS = Arts and Social Sciences; BEM = Business, Education and Management Sciences, SITE. = Sciences, Information Technology and Engineering.

Source: Author's SPSS output

The graduate respondents from Faculty of Arts and Social Sciences constitute 30.1%; Business, Education and Management Sciences, 24.4%, and Sciences, IT and Engineering, 45.5%. For the undergraduates, the composition is 26.9%, 26.4% and 46.8% respectively. Participants with at least one parent entrepreneur are 55.3% for the graduates and 48.5% for the undergraduates. The number of respondents from each university and each of the six geo-political zones are also presented in Table 7-1.

## 7.2 Descriptive Statistics of Questionnaire Construct Items

The instruments were designed using a 7-point Likert scale ranging from Totally disagree (scaled 1) and Totally agree (scaled 7), as shown below:

- 1      Totally disagree
- 2      Disagree
- 3      Somewhat disagree
- 4      Neutral
- 5      Somewhat agree
- 6      Agree
- 7      Totally agree

Respondents were required to indicate their levels of agreement with the statements provided. To ascertain the comparability of results between the two groups of respondents, the same questionnaires were used with the exception that the variables TTM and ITM were only included in the graduates' questionnaire.

### *Personal attitude*

Five (5) items were used to measure attitude towards entrepreneurship.

**Table 7-2: Mean Ratings for Personal Attitude**

<b>Personal Attitude</b>			
<b>Questionnaire Item</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
PA1: Being an entrepreneur implies more advantages than disadvantages to me (BEA)	5.74	1.635	3
PA2: A career as an entrepreneur is totally attractive to me (CETA)	5.54	1.670	4
PA3: If I had the opportunity and resources, I would love to start a business (ORB)	6.04	1.348	1
PA4: Being an entrepreneur would give me great satisfaction (BEGS)	5.82	1.373	2
PA5: Among various career options, I would rather be an entrepreneur (AOE)	3.95	2.048	5
<b>Group Mean</b>	<b>5.42</b>		

Source: SPSS output



The item, 'If I had the opportunity and resources, I would love to start a business', ranked first with the highest mean score of 6.04. Conversely, 'Among various career options, I would rather be an entrepreneur' has the lowest mean score of 3.95 and ranks last. The result in Table 7-2 shows that all items except the bottom-ranked item, were rated above 5 (somewhat agree) with a group mean of 5.42 for the construct. The results suggest that, overall, the respondents have a slightly positive attitude towards entrepreneurship. However, the rating for item PA5 suggests that the respondents are indifferent between being an entrepreneur and taking other career options. This implies that they do not have preference for being an entrepreneur against other career options and vice versa.

Judging from the response to PA3 which the respondents rated highest, it would be expected that they would prefer being an entrepreneur to other career options. The positive attitude towards engaging in entrepreneurship could therefore be a result of scarcity of paid-employment alternatives, a situation which authors like Kirkwood (2009) have termed the 'push factor'. The result therefore suggests that the rising unemployment reflected in the scarcity of paid jobs might be a factor in the intention towards self-employment, as Dawson and Henley (2012) observe. Conversely, it can also be argued that the lack of opportunities and resources for self-employment hinders graduates from starting businesses, a condition that also fuels unemployment. The implication is that one way to reduce graduate unemployment is for the government to implement programmes that create opportunities and facilitate access to resources for graduates to set up businesses.

### ***Subjective Norm (SN)***

The perception of the respondents in terms of whether the significant others in their lives would want them to engage in entrepreneurial activities was measured using the three items in Table 7-3.

**Table 7-3: Mean Ratings of Subjective Norm**

<b>Subjective Norm</b>			
<b>Questionnaire Item</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
SN1: My friends would approve of my decision to start a business (FRA)	5.14	1.693	3
SN2: My immediate family would approve of my decision to start a business (FAA)	5.50	1.604	1
SN3: My colleagues would approve of my decision to start a business (COA)	5.26	1.631	2
<b>Group Mean</b>	<b>5.30</b>		

Source: SPSS output

The mean rating ranged between 5.14 and 5.50 and a group mean of 5.30. The result indicates that the respondents rated the items in this construct slightly high. It further suggests that the perception of respondents' significant others is impactful on their entrepreneurial decisions. In the Nigerian context, this is noteworthy as prospective entrepreneurs usually rely almost solely on their significant others to obtain resources for starting business which makes the role of subjective norm important to new venture creation.

### ***Cultural Values (CV)***

The respondents' perceptions of the value that the Nigerian culture places on entrepreneurship was measured using 4 items.

**Table 7-4: Mean Ratings of Cultural Values**

<b>Cultural Values</b>			
<b>Questionnaire Item</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
CV1: The culture in my country is highly favourable to entrepreneurship (CNE)	4.53	2.097	3
CV2: Entrepreneurship is considered worthwhile in my country despite its risks (ECW)	5.28	1.658	1
CV3: Most people consider it acceptable to be an entrepreneur in my country (PCEW)	5.18	1.732	2
CV4: The role of the entrepreneur is undervalued in my country (EHV)	3.81	2.146	4
<b>Group Mean</b>	<b>4.70</b>		

Source: SPSS output

The results presented in Table 7-4 indicate that the respondents somewhat agree that entrepreneurship is considered worthwhile (Mean = 5.28) and that most people consider it acceptable to be an entrepreneur in the country (Mean = 5.18). The respondents are indifferent as to whether the role of the entrepreneur is undervalued (Mean = 3.81). Overall, however, the results suggest that the respondents have a weak perception as to the role of culture in entrepreneurship development.

***Entrepreneurial Intentions (EI)***

Six items were used to measure the EI construct.

***Table 7-5: Mean Ratings of Entrepreneurial Intentions***

<b>Entrepreneurial Intentions</b>			
<b>Questionnaire Item</b>	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
EI1: I am ready to do anything legal and morally acceptable to be an entrepreneur (DAE)	5.20	1.775	5
EI2: I will make every effort to start and run my own business (MEE)	5.77	1.374	2
EI3: I have seriously thought about starting my own business (STSB)	4.85	1.948	6
EI4: I am determined to create a business venture in the future (DBV)	5.83	1.464	1
EI5: My professional goal is to be an entrepreneur (PGE)	5.35	1.612	4
EI6: I have got the firm intention of starting a business someday (ISB)	5.37	1.794	3
<b>Group Mean</b>	<b>5.40</b>		

Source: SPSS output

In this construct, EI4 (shaded blue) was rated highest with a mean of 5.83 and EI3 was rated lowest (4.85) (see Table 7-5). This result could suggest that although the graduates are somewhat agreeable to creating business ventures in the future, they have not given it serious thought. In general, the result signifies that the graduates are only slightly inclined to become entrepreneurs. With this result, it is doubtful whether the EEP is producing the desired effect.

The implication is that reforms may be necessary in the programme to facilitate the achievement of its objective.

**Teaching Methods (TM)**

The Teaching Methods construct was measured with 12 items, 7 of which are traditional teaching methods (TTM) and five are innovative teaching methods (ITM).

**Table 7-6: Teaching Methods Questionnaire Items and Mean Ratings**

<b>Pedagogies in GST Entrepreneurship</b>										
To what extent did your lecturers use the following teaching methods in your entrepreneurship courses? Rate from 1 to 7 where <b>1 means not used at all</b> and <b>7 means mostly used</b>										
	1	2	3	4	5	6	7	<b>Mean</b>	<b>SD</b>	<b>Rank</b>
<b>Traditional Teaching Methods (TTM)</b>										
Lecture Method (LM)								6.24	1.183	1
Class Participation (CP)								5.89	1.212	2
Case Study (CS)								2.86	1.695	9
Individual Assignment (IA)								5.42	1.487	3
Group Project (GP)								5.41	1.504	4
Oral Presentations (OP)								4.99	1.770	5
Entrepreneurial Projects (EP)								4.61	1.951	6
<b>TTM Group Mean</b>								<b>5.06</b>		
<b>Innovative Teaching Methods (ITM)</b>										
Role Play (RP)								2.93	1.671	2
Business Plans (BP)								4.98	1.721	1
Guest Lecturers (GL)								2.46	1.562	3
Company Visits (VC)								2.29	1.562	4
Internships (IT)								2.14	1.490	5
<b>ITM Group Mean</b>								<b>2.96</b>		
<b>Combined Mean of TM</b>								<b>4.19</b>		

Source: SPSS output

Lecture method (LM), a traditional teaching method, has the highest mean score of 6.24 (shaded yellow in Table 7-6). In contrast, internships in relevant companies, an innovative teaching method, has the lowest mean of 2.14. This result indicates that the traditional methods are mostly used in the teaching of entrepreneurship education while the innovative methods are rarely used. With the application of mainly lecture method, it is doubtful whether

the EEP will deliver the expected outcome given that an efficient mix of this method with experiential methods are necessary for teaching the programme to have impact on the entrepreneurial mindset of the EEP participants.

### 7.3 Quantitative Results and Discussion by Research Questions

The results of the inferential statistical analysis carried out with SEM and the discussions are presented in this section. Overall, ten hypotheses were tested to determine the effect of EEP on the EI of university graduates. Table 7-7 contains a summary of the results of the test.

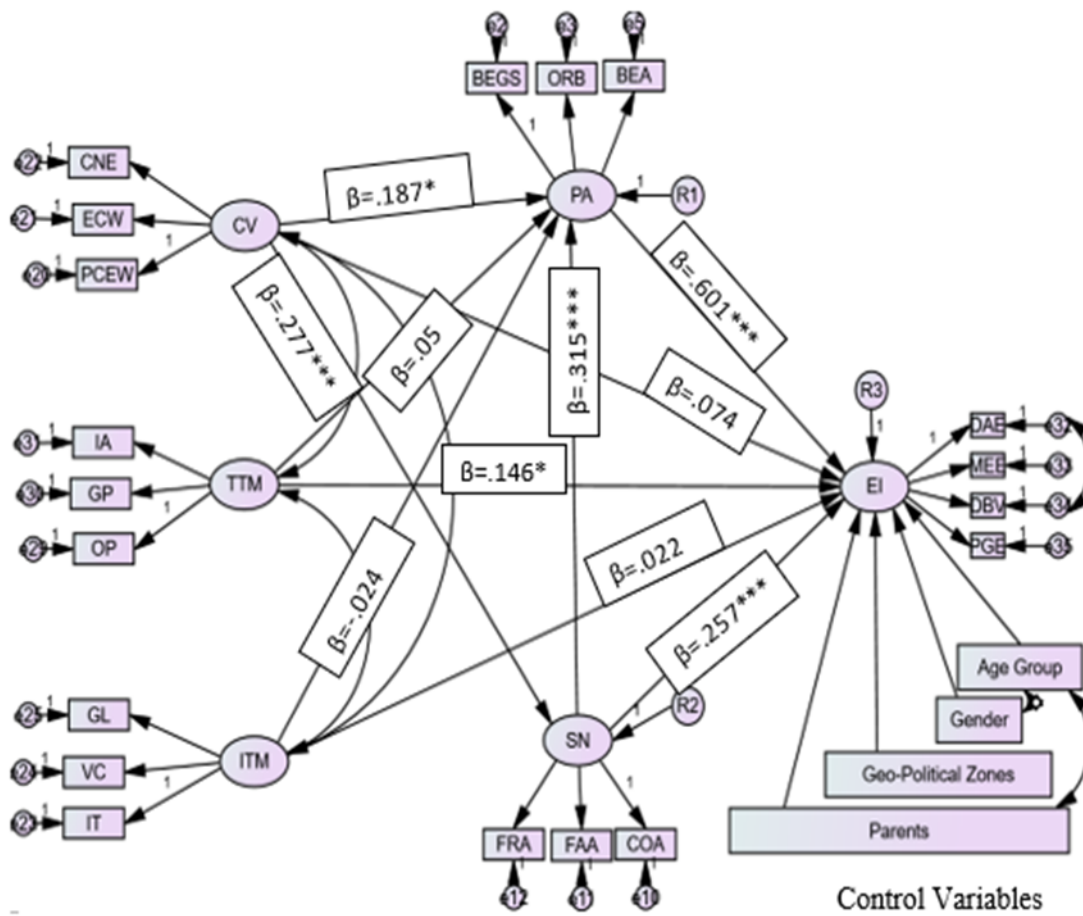
**Table 7-7: Hypothesised Causal Paths: Summary of test results**

Constructs	Acronyms	Hypothesised Relationships	Hypotheses	Paths	Remarks
Traditional Teaching Methods	TTM	TTM → EI	H1a	Direct	Supported
		TTM → PA → EI	H1b	Indirect	Not Supported
Innovative Teaching Methods	ITM	ITM → EI	H1c	Direct	Not Supported
		ITM → PA → EI	H1d	Indirect	Not Supported
Cultural Values	CV	CV → EI	H2a	Direct	Not Supported
		CV → PA → EI	H2b	Indirect	Supported
		CV → SN → EI	H2c	Indirect	Supported
Personal Attitude	PA	PA → EI	H3	Direct	Supported
Subjective Norm	SN	SN → EI	H4a	Direct	Supported
		SN → PA → EI	H4b	Indirect	Supported

Source: Data analysis

The analysis of the structural path of the competing model (see Figure 7-1), shows that the results meet all the thresholds adopted in the analysis. The model consequently has a good fit (see Table 7-8). Hence, the structural model indicators confirm the hypothesised factor structure.

**Figure 7-1: Graduates Competing Model**



Note: \*  $p < .05$ ; \*\*\*  $p = 0.001$   
 Number in the boxes as standardised regression weights and the covariances among the latent variables. The number in the arrowed box signify the variance of intention explained by the 5 other latent variables.

Source: Author's AMOS Output.

**Table 7-8: Fit Indices of the Graduates' Competing Structural Model**

Fit indices	$\chi^2/df < 3$	RMSEA	TLI	CFI
Competing Structural Model	1.748	0.043	.928	.939

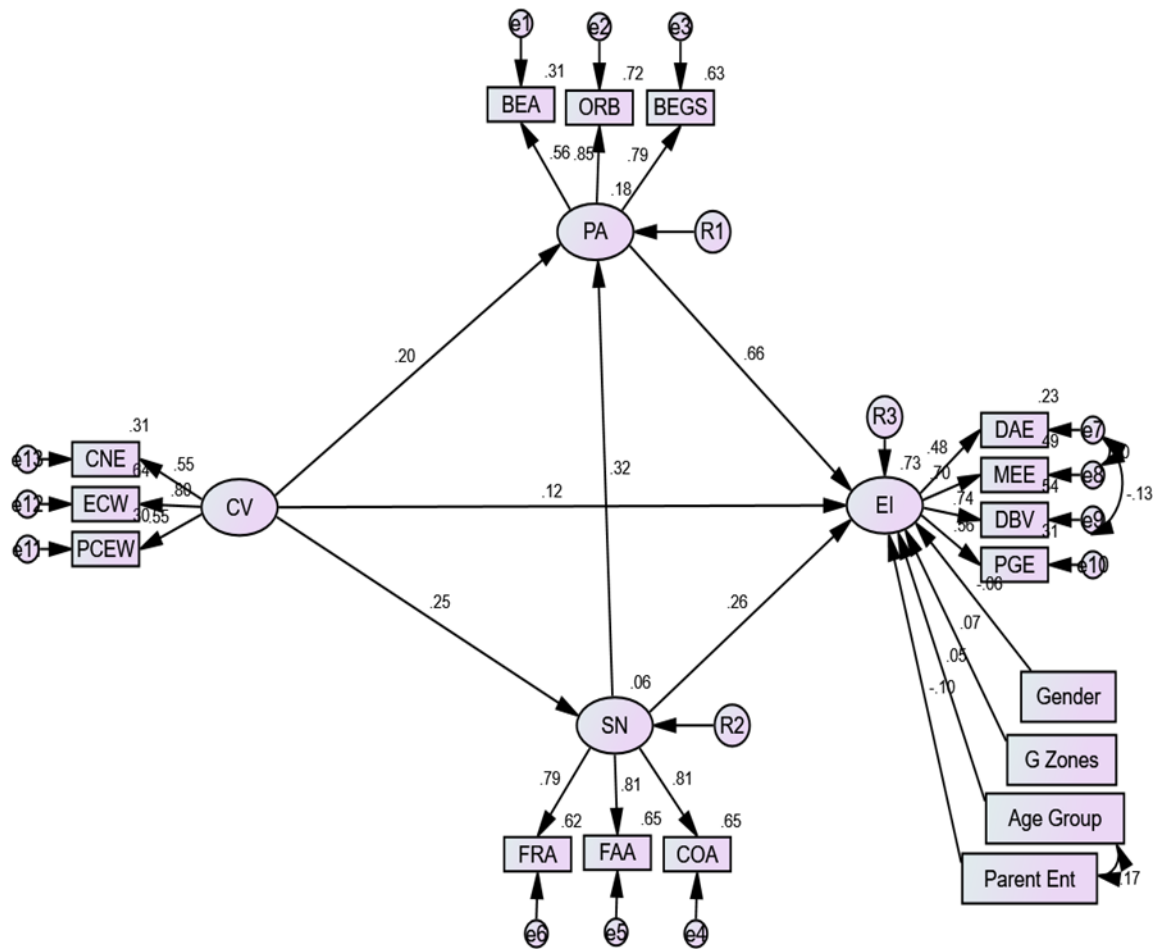
Criteria:  $\chi^2/df < 3$ ; RMSEA  $< 0.5$  very good fit; TLI and CFI  $> 0.90$  good fit,  $> 0.95$  very good fit

Source: Author's AMOS Output

As shown in Table 7-8, the model produced a  $\chi^2/df$  value of less than 3.0 and the parsimonious fit was achieved. The TLI and CFI achieved values higher than 0.9 and the

RMSEA value of less than 0.05, thus Incremental and Absolute fitness were achieved. Therefore, the competing model achieved all the fit indices required in SEM, indicating that the model fits the data and the results obtained can be accepted as valid for interpretation and discussion.

**Figure 7-2: Group Comparison Competing Model**



**Note:** **BEA** = Being an entrepreneur implies more advantages than disadvantages to me; **ORB** = If I had the opportunity and resources, I would love to start a business; **BEGS** = Being an entrepreneur would give me great satisfaction; **CNE** = The culture in Nigeria is highly favourable to entrepreneurship; **ECW** = Entrepreneurship is considered to be worthwhile in Nigeria in spite of the risks; **PCEW** = Most people consider it acceptable to be an entrepreneur in Nigeria; **FRA** = My friends would approve of my decision to start a business; **FAA** = My immediate family would approve of my decision to start a business; **COA** = My colleagues would approve of my decision to start a business; **DAE** = I am ready to do anything legal to be an entrepreneur; **MEE** = I will make every effort to start and run my own business; **DBV** = I am determined to create a business venture in the future; **PGE** = My professional goal is to be an entrepreneur.

Source: Author's AMOS Output

**Table 7-9: SEM Results - Group Comparison Model Fit Summary**

Total Sample	$\chi^2$	df	P	RMSEA	CFI	AIC	TLI	IFI
811	411.395	220	.000	.033	.948	583	.935	.948

Acceptable threshold of indices:  $p > .05$ ; RMSEA =  $< .08$ ; CFI  $> .90$ ; AIC of default model to be less than those of saturated and independence model; TLI  $> .90$ . Note that sample size is 811 and p is sensitivity to sample size resulting in  $p < .05$

Source: Author's AMOS output

All the fit indices in the group comparison met the acceptable threshold (Table 7-9). The CFI value is greater than 0.9 or close to 0.95, demonstrating a well-fitting model (Bentler, 1992; Hu and Bentler, 1999; Byrne, 2010). Similarly, the AIC criterion is met because the value of the default model is lower than that of both the saturated and independent models (See Appendix L). Therefore, the values of the indices obtained from the default model are accepted and the results are, accordingly, interpreted and discussed. The results are presented in detail and discussed according to the research questions in the next section.

### 7.3.1 Hypotheses Testing Results and Discussions

The model fit analyses are hereby presented according to the research questions set out to investigate by the study.

### 7.3.2 Research Question 1

What is the effect of entrepreneurship education programme on graduates' entrepreneurial intentions?

To reiterate, teaching methods were used as proxy for EEP. To answer this question, the following four hypotheses were tested with respect to the graduates.

*H1a: Traditional teaching methods have a direct positive effect on entrepreneurial intentions.*

The result of H1a shows a standardised regression weight (SRW) of  $\beta$  0.146 (see Figure 6-6) and a critical ratio of 2.477 (see Table 7-10). The result indicates that this path is statistically significant ( $p < 0.05$ ) and, accordingly, provides support for the hypothesis.



*Table 7-10: Results of Hypothesis Test*

Constructs	Hypothesised Relationship (Direct)	SRW	C.R	P	Remark
Traditional Teaching methods (TTM) - H1a	TTM → EI	0.146*	2.477	.023	H1a is supported

Source: Hypothesis Result

It signifies that traditional teaching methods directly influence the EI of the graduates. The result suggests that EEP implemented through TTM will influence entrepreneurial intentions.

*H1b. The effect of traditional teaching methods on entrepreneurial intention is positively mediated by personal attitude*

The SRW is 0.030 and the *p* value is 0.521 (Table 7-11) indicating a statistically non-significant path. These results demonstrate that the hypothesis is not supported.

*Table 7-11: Results of Hypothesis Test*

Construct	Hypothesised Relationships	Indirect Effect (SRW)	P-Value (Indirect Effect)	Mediation Effect	Remark
Traditional Teaching Methods (TTM)	TTM → PA → EI	0.030	0.521	No mediation effect	Not supported

Source: Hypothesis Result

This indicates that personal attitude does not mediate the relationship between traditional teaching methods and the entrepreneurial intentions of the graduate respondents. In this sense, traditional teaching methods do not have the potential to influence the participants' entrepreneurial intentions through influencing their attitude towards becoming entrepreneurs. The inference here is that traditional teaching methods are unlikely to have an effect on the attitude of the graduates towards being entrepreneurial. Thus, the result suggests that the traditional teaching methods are not potent enough to engender positive effect on attitude.

This result is not consistent with Byabashaija and Katono (2011), who found a significant mediating role of attitude between EE and EI (see section 4.6.3).

As attitude is a motivational antecedent that influences intention and is generally thought to be important to entrepreneurial intentions as discussed in section 2.4.3; the result has implications for practice. Education in general tends to impact on attitude. EEP is a special education programme developed to foster positive attitude towards entrepreneurial behaviour, the failure of this programme to mediate the relationship between EE and EI thus calls for action on the part of the programme implementers, particularly the lecturers and university authorities. Modifications in the implementation strategy seem necessary because as highlighted in section 3.3.2 the explanation of the outcomes of the EEPs in universities could be challenging without the adoption of a holistic implementation strategy (Jones and Matlay, 2011).

Viewed from the perspective of the role of attitude, it can be argued that traditional teaching methods do not seem to be sufficient to produce the desired EE outcome. The implication is that, in implementing EEP, lecturers need to go beyond the traditional teaching methods and incorporate methods that will engender positive influence on attitude since attitude is a main factor that explains entrepreneurial intentions. University authorities should provide support for such steps.

*H1c. Innovative teaching methods have direct positive effect on entrepreneurial intentions.*

**Table 7-12: Result of Hypothesis Test**

<b>Constructs</b>	<b>Hypothesised Relationship</b>	<b>SRW (<math>\beta</math>)</b>	<b>C.R.</b>	<b>P</b>	<b>Remark</b>
Innovative Teaching methods (ITM) - H1c	ITM $\rightarrow$ EI	0.022	0.506	.589	H1c not supported

Source: Hypothesis Result

The outcome of the test indicates that, contrary to expectation, the hypothesis is not supported. The SRW of this path is 0.022 with a critical ratio of 0.506 and p value = 0.589 (see Table 7-12), signifying that the hypothesis is not significant. The result consequently demonstrates that innovative teaching methods do not conceivably play any role in the prediction of EI among the graduate sample in this study. The result can be explained by the fact that the lecturers rarely use innovative methods in teaching EE modules. The descriptive statistics construct indicates that these methods are rarely used. It is therefore unlikely that they will contribute to intention formation or to engendering attitude towards entrepreneurship.

*H1d. The effect of innovative teaching methods on entrepreneurial intentions is positively mediated by personal attitude*

**Table 7-13: Result of Hypothesis Test**

Construct	Hypothesised Relationships	Indirect Effect (SRW)	P-Value	Mediation Effect	Remark
Innovative Teaching methods (ITM)	ITM → PA → EI	0.-014	0.643	No mediation	Not supported

Source: Hypothesis Result

Again, the result is contrary to expectation. As shown in Table 7-13, the SRW is 0.-014 and the p value is .643 indicating a statistically non-significant path. The result demonstrates that the hypothesis is not supported.

From the results, only one of the four hypotheses tested to determine the effect of the EEP on EI was supported. This suggests that the influence of EEP on EI is only partial. As reviewed in section 4.6.3, the mediation results disagree with Byabashaija and Katono (2011), Sihombing (2012) Yang (2013) and Fayolle and Gailly (2015) who found that EEP is a main factor that influences entrepreneurial intention through attitude. The results imply that EEP does not affect the attitude of participants to, in turn, impact on their EI. Again, the results are

an indication of the rare application of the innovative methods in the programme being investigated. From the descriptive statistics, the EE lecturers scarcely use innovative teaching methods. This fails to follow the suggestion of Jones and Iredale (2010) that pedagogies in EEPs should comprise learner-based, experiential and action learning techniques. The rare use of the innovative methods that researchers believe are important to nurturing increased attitude towards entrepreneurial activities may have contributed to the result obtained. If the innovative methods that nurture EI do not influence the EI of the participants, as the literature indicates, then there may be something wrong with the teaching. A further investigation into the teaching of the EE and how more innovative methods can be adopted in the EE classroom by the lecturers in the research context seems necessary. The situation may warrant a more in-depth investigation through a qualitative study.

The outcome may also have been due to the fact that, in the traditional teaching approaches mostly used by the lecturers, learners are merely passive recipients and consequently the methods are not capable of impacting on participants' attitude towards entrepreneurship, as several authors (Bennet, 2006; Solomon, 2007; Mwasalwiba, 2010; European Commission 2011; Neck and Greene, 2011) state (see section 4.6.2). It could also have resulted because the TTM, which are frequently applied could not adequately cater for knowledge acquisition in areas such as practical idea generation, opportunity recognition or resource gathering that can help to shape learners' attitude towards entrepreneurship, as Souitaris, *et al.* (2007) found. Additionally, as Fayolle and Toutain, (2013) observe, it means that learners miss out on experience-based knowledge that influences entrepreneurial action.

The inability of the teachers to employ the innovative methods that are thought to be active and effective may be because most of them do not have qualifications or training in EE. The implication of this result is that the EEP may not produce the desired effect. This is

particularly so as it did not affect attitude which is believed to be a main factor that influences EI. It is therefore necessary for lecturers of the programme to adopt a combination of the methods that will impact on learners' attitude towards entrepreneurship and consequently the development of EI. This may require training the lecturers on the best practices for teaching EEP modules because as the prior literature has shown, to implement entrepreneurship education using only theory or practical applications provides two ways to ruin the programme (Bygrave, 1993). This seems to be the current situation in Nigerian universities. Consequently, the lecturers without the requisite knowledge should either be sent for further studies in the field because, at present, they are not specialists in this area, or be provided relevant training in appropriate EE methods as it appears that they have not acquired the requisite training that can equip them for successful EEP implementation. Consequently, reforms in the programme implementation strategies are necessary. These reforms should be led by the universities, the NUC and the government.

### 7.3.3 Research Question 2

#### How do cultural values influence graduates' entrepreneurial intentions?

To answer this research question, three hypotheses were developed and tested.

*H2a: Cultural values have direct positive effect on entrepreneurial intentions.*

**Table 7-14: Result of Hypothesis Test**

Constructs	Hypothesised Relationship (Direct)	SRW ( $\beta$ )	C.R.	P	Remark
Cultural Values (CV) - H2a	CV $\rightarrow$ EI	.074	1.258	0.254	Not Supported

Source: Hypothesis Result

The results shown in Table 7-14 specify that the SRW is 0.074 with a critical ratio of 1.258 and  $p$  value = 0.254. Thus, the hypothesis is not supported ( $p > 0.05$ ). This indicates that the direct path between CV and EI is not statistically significant. Thus, from the result, cultural

values do not directly influence the entrepreneurial intentions of university graduates. The result appears to reflect the weak perception of the respondents on the role of culture in entrepreneurship found in the descriptive statistics.

*H2b: The effect of cultural values on entrepreneurial intention is positively mediated by personal attitude.*

**Table 7-15: Result of Hypothesis Test**

Construct	Hypothesised Relationships	Direct Effect (SRW)	P-Value	Indirect Effect (SRW)	P-Value	Mediation Effect	Remark
Cultural Values (CV)	CV→PA→EI	0.074	0.254	0.236***	0.001	Full	Supported

Source: Hypothesis Result

The indirect path from CV to EI through PA is  $\beta$  0.236 (see Table 7-15). This hypothesised path is significant ( $p = 0.001$ ). Thus, the indirect path between CV and EI is mediated by personal attitude. The result provides a strong support for the hypothesis. It shows that part of the effect that CV have on graduates' EI is through PA. In other words, culture exerts indirect influence on EI. This result further indicates that the relationship between CV and EI is fully mediated by PA because the hypothesised direct path is insignificant. The result supports the important role of personal attitude in predicting EI among the participants' EI. It has implications for practice to ensure that the right attitude towards entrepreneurship is developed.

*H2c: The influence of cultural values on entrepreneurial intention is positively mediated by subjective norm.*

**Table 7-16: Result of Hypothesis Test**

Construct	Hypothesised Relationships	Direct (SRW)	P-Value (Direct)	Indirect Effect (SRW)	P-Value	Mediation Effect	Remark
Cultural Values (CV)	CV→SN→ EI	.074	0.254	0.087***	0.001	Full	H2c is supported

Source: Hypothesis Result

Again, the result provides strong support for the hypothesis. As presented in Table 7-16, this hypothesised path (indirect path) has  $\beta$  0.087 and  $p=0.001$ , signifying a statistically significant path. The result demonstrates that cultural values influences the EI of university graduates through subjective norm. Thus, subjective norm is important in predicting the EI of university graduates. Given that only the indirect path is significant, the mediation of this path is full. It suggests that the perception of the significant others in the lives of the graduates plays an important role in their intentions towards entrepreneurship. As reviewed in section 3.3.3, the neglect of intermediation and the apathy of the Commercial banks to small and micro savers affect access to cheap and steady funds resulting in high banking lending rates in Nigeria (Babajide *et al.*, 2015). This could have a played a part in this result. Thus, this finding has implication for policy, especially in relation to institutional voids. There is a need for policy on the restructuring of institutions that support entrepreneurship. In the context of the study, the important role of the significant others in financing entrepreneurial ventures could be a reason for the significant path.

Overall, the results demonstrate that culture influences entrepreneurial intentions indirectly through PA and SN rather than directly. As reviewed in section 2.4, the result supports Packham *et al.* (2010) who observed that culture can regulate the effect of EE. This suggests

that in societies and cultures where entrepreneurship is commonly practised, it is the attitude of the people that cultural values affect and, in turn, their attitude leads them to developing intentions towards entrepreneurship. It also suggests that the perception of the significant others towards entrepreneurship is a significant factor in explaining EI.

The implication of the results is that, in order to help reduce graduate unemployment through entrepreneurship education, Nigerian society needs to imbue values that foster positive attitude towards entrepreneurship. The government, the media, industry and the local community all have important roles to play in this regard. A government policy to provide a favourable environment to make entrepreneurial activities attractive and flourish is recommended. This should include activities that encourage societal and parental support for entrepreneurship to facilitate increased EI. Similarly, the media has the role of projecting entrepreneurial activities in society. Furthermore, the society and parents need a reorientation from their expectations of their wards and children getting jobs in large corporate organisations and government establishments after graduation to thinking of them becoming entrepreneurs. This could be achieved through projecting the gains of entrepreneurship and perhaps enforcing the consequences of corruption in relation to business registration and application for seed capital. The change of attitude is likely to lead to them taking steps that will facilitate establishing businesses, including helping them to arrange for mentoring rather than assisting them to search for scarcely available jobs, which is currently commonplace.

The role of the local entrepreneurs is particularly important given the strong influence of the significant others in the path to EI, and mentoring is an aspect which should be given due attention. Mentoring has the tendency not only to train a person towards an entrepreneurial line but also to strengthen and advance attitudes and intentions towards entrepreneurship. Among the Igbo of Southeast Nigeria, reputed to be the most enterprising group in Africa



(Olutayo, 1999; MG Modern Ghana, 2013; Orugun and Nafiu, 2014), mentoring in business is a way of life. This process has contributed to these people dominating entrepreneurial activities across major towns and cities in Nigeria and engaging in such activities beyond Nigeria which has implication for policy.

### 7.3.4 Research Question 3

What is the effect of personal attitude relevant on entrepreneurial intentions?

H3: *Personal attitude has direct positive effect on entrepreneurial intentions of university graduates*

**Table 7-17: Result of Hypothesis Test**

Constructs	Hypothesised Relationship (Direct)	SRW	C. R.	P Values	Remark
Personal Attitude (PA) - H3	PA → EI	0.601***	8.150	0.001	H3 is supported

Source: Hypothesis Result

The result shows SRW is 0.601, critical ratio of 8.150, and  $p = 0.001$  (see Table 7-17). The result illustrates that the path is statistically significant at the 0.05 level of significance and indicates a strong support for the hypothesis. It can be inferred from the result that PA is relevant in predicting EI. Thus, the result underscores the importance of personal attitude to entrepreneurship.

In the finding of the effect of PA on EI, this study supports the earlier findings of Ajzen (1991); Tkachev and Kolvereid (1996); Lüthje and Franke (2003); Gird and Bagraim (2008); Van Gelderen *et al.* (2008); Ferreira *et al.* (2012); Sihombing (2012); Law and Breznik, (2017), showing that PA directly affects EI. Similarly, as emphasised in section 2.4.3, the result further confirms that entrepreneurial attitudes could explain how entrepreneurial intentions are formed. It also supports Peterman and Kennedy (2003) Liñán *et al.* (2011) who determined that educational interventions change attitudes towards entrepreneurship (see

section 4.6). In contrast however, the finding contradicts Zhang *et al.* (2015), who found that personal attitude had no significant impact as the review in section 2.4.3 indicates.

Furthermore, the result suggests that increasing the attitude of the learners towards entrepreneurship might significantly increase their entrepreneurial intentions. Therefore, efforts should be directed towards measures that have the tendency to enhance the attitude of EEP learners towards entrepreneurship. Such measures should be given considerable attention in the implementation of the programme. They include engaging guest lecturers and internship in relevant organisations. Additionally, undertaking some entrepreneurial ventures in groups or at entrepreneurship club levels could serve as important measures that may reinforce positive entrepreneurial attitudes.

In view of the important role of attitude in predicting EI, it can be argued that unless the various aspects of EE programmes culminate in the programme participants developing increased attitude towards entrepreneurship, it is unlikely that the programme will achieve the goal of producing graduates with sustainable entrepreneurial mind-sets.

This finding is significant for this research considering that the literature as indicated by several authors has shown that personal attitude is a critical factor in the prediction of the EI of the participants. Hence, the result has implication for practice. This suggest that adopting teaching methods that will stimulate positive attitude towards entrepreneurship in the implementation of EE programmes is important. Such methods include the promotion of hypothetical entrepreneurial activities in the EE programme and the use of other experiential methods that can influence positive attitude towards entrepreneurship to achieve the level of attitude that can nurture EI, which is desirable for entrepreneurship.

### 7.3.5 Research Question 4

#### What is the effect of subjective norm on entrepreneurial intentions?

**H4a:** *Subjective norm has significant direct effect on the entrepreneurial intentions of university graduates*

**Table 7-18: Result of Hypothesis Test**

Constructs	Hypotheses	Hypothesised Relationship (Direct)	SRW ( $\beta$ )	P Values	Remark
Subjective Norm (SN)	H4a	SN $\rightarrow$ EI	257***	0.001	Supported

Source: Hypothesis Result

This direct path has an SRW of 0.257 and a critical ratio of 4.639 and a  $p$  value of 0.001. As hypothesised, the result shows that subjective norm has direct effect on participants' EI. The finding contradicts Krueger *et al.* (2000) and Autio *et al.* (2001) as highlighted in section 4.4. The result demonstrates strong support for H4a. It implies that the significant others of the respondents have strong influence on the respondents' intentions towards entrepreneurship. This research argues that subjective norm exerts an important effect on participants' EI and consequently could be regarded as a key factor that influences EI in the context of the study. The research therefore makes an original contribution to theory considering that subjective norm has been found to be traditionally weak in predicting intentions (Ajzen, 1991; Liñán *et al.* 2013).

However, some studies have found significant relationships between SN and EI. Consequently, this result is consistent with Kolvereid and Isaksen (2006) and Souitaris *et al.* (2007). It also provides support for Hofstede's (1980) cultural dimension which presents Nigeria as a collectivist society where close and long-term commitment to family, extended families and all relationships are valued.

**H4b:** Subjective norm will influence EI of university graduates indirectly through PA.

**Table 7-19: Result of Hypothesis Test**

Construct	Hypothesised Relationships	Direct (SRW)	P-Value (Direct)	Indirect Effect (SRW)	P-Value	Mediation Effect	Remark
Subjective Norm (SN)	SN → PA → EI	0.257***	0.001	0.190***	0.001	Partial	Supported

Source: Hypothesis Result

The SN refers to how the graduates perceive whether their significant other will support or not support them if they want to engage in entrepreneurial activities. This path, as shown in Table 7-19, reveals an SRW of 0.190 and  $p = 0.001$  signifying a dedicated support for the hypothesis. It further demonstrates that subjective norm strongly influences entrepreneurial intentions through personal attitude. It implies that the greater the support from the significant others in the respondents' lives, the more positive will be their personal attitude towards entrepreneurial intention and invariably the greater will be their entrepreneurial intention.

It is noteworthy that this construct (SN) has been excluded in some entrepreneurship studies due to its weak predictive ability (Ajzen, 1991; Chen, *et al.* 1998; Peterman and Kennedy, 2003; Veciana, *et al.* 2005; Kolvereid and Isasken, 2006; Liñán and Chen, 2009) although the results have been significant in some studies. Consequently, Liñán and Chen (2009) suggest its inclusion as a mediating variable due to the conflicting results as a direct variable to enable a clearer understanding of the interaction between SN and EI. Furthermore, the result is consistent with Brownson (2014) who suggests that the impact of significant others on entrepreneurial intentions may vary from culture to culture and might depend on context. The implication is that research on entrepreneurial intentions is necessary in different cultures.

Thus, it can be inferred that subjective norm is directly and indirectly relevant in determining entrepreneurial intentions. Overall, the results are indicative of the important place the

significant others in the lives of the graduates occupy in dealing with graduate unemployment in Nigeria. This has implication for policy. Programmes to promote graduate entrepreneurship should include measures that will target the significant others. The measures could involve enlightening them on the benefits derivable from entrepreneurship and the need for them to support and promote entrepreneurship among their children and wards rather than emphasising the search for paid employment.

### 7.3.6 Research Question 5

What are the levels of entrepreneurial intentions and personal attitude of the respondents and how does the entrepreneurship education programme affect the entrepreneurial intentions and personal attitude of the graduates?

To address RQ5, the EI of the experimental (graduates) and control (undergraduates) groups were predicted and compared. In consideration of the role of PA in explaining EI, the PA of the two groups were also predicted and compared. In particular, the squared multiple correlations (SMC) were examined to assess the level of variance in entrepreneurial intentions that the model of each group explained (see Table 7-20).

**Table 7-20: Results Entrepreneurial Intention Prediction**

Variable	Model 1 Undergraduates			Model 2 Graduates			Model 3 Graduates with TM		
	SMC ( $\beta$ )	%	Sig	SMC $\beta$	%	Sig	SMC - $\beta$	%	Sig
PA	.461	46.1	0.001	.179	17.9	0.002	.180	18	0.006
EI	.679	67.9	0.006	.730	73.0	0.004	.657	65.7	0.007

Note: PA = Personal attitude; SN = Subjective norm; EI = Entrepreneurial intentions; TM = Traditional and Innovative teaching methods.

Source: Hypothesis Result

The predictions of the variables from the structural models are presented in Table 7-20. Model 1 represents the results of the control group, Model 2 indicates the results of the

experimental group without the EEP and Model 3 signifies the results of the experimental group after the addition of EE to the analysis. The models were compared to ascertain how EE affected the EI and PA of the experimental group. From the literature, if the EEP is effective, the EI and the PA of the graduates should be higher than those of the undergraduates.

Model 1 explained 67.9% in variance of the EI of the control group. Model 2, as Table 7-20 shows, explained 73.0% in variance of the EI of the graduates when the EE was not included in the model, while Model 3 explained 65.7% in variance of the EI of the experimental group when the EE was added to the analysis. Following Liñán *et al.* (2013), the range of the variance in EI (65.7% to 73%) which the models explain are considered high.

To ascertain the effect of EE, Models 2 and 3 are compared to Model 1 and Models 2 and 3 are compared with each other. Models 1 and 2 compare the experimental and control group at the same level, that is, before the EEP is introduced into the experimental group's model. The result of Model 2 shows that the EI of the experimental group is  $\beta = 0.730$  (73.0%) as against  $\beta = 0.679$  (67.9%) for the control group. In effect, the experimental group had higher EI than the control group. Contrary to expectation, with the introduction of the EEP into the analysis of the experimental group in Model 3, their EI dropped from the previous 73.0% to  $\beta 0.657$  (65.7%) which is below that of the control group at 0.679 (67.9%). Thus, the EEP appears to have adversely affected the EI of the experimental group, causing it to fall below the previous level (Model 2) and that of the control group (Model 1).

The decrease in the EI of the experimental group is congruent with von Graevenitz *et al.* (2010) who investigated a compulsory entrepreneurship module and found that the EI of the participants declined from 71.4% to 63.8% following the programme (see section 2.4.1). It is also consistent with Fayolle *et al.* (2006) who found a decrease in the entrepreneurial

intentions following an EE programme. In addition, the result appears to support Oosterbeek *et al.* (2010), who found a decrease in the participants' EI. As reviewed in section 2.4.1, the result contradicts Rengiah and Sentosa (2015) who investigated the EI of Malaysian university students and found an increase in their entrepreneurial intentions after the programme.

Moreover, as shown in Table 7-20, the PA of the control group in Model 1 is  $\beta = 0.461$ . This means that the model explains 46.1% of variance in the control group's PA. In contrast, the PA of the experimental group is  $\beta = 0.179$  (17.9%) in Model 2. This result indicates that the PA of the control group is higher than that of the experimental group. Comparing the PA in Models 1 and 3, the results show that the PA of the control group,  $\beta = 0.461$  (46.1%) is also higher than that of the experimental group  $\beta = 0.180$  (18%) with the introduction of the EEP. Again, contrary to expectation, the PA of the experimental group remained virtually the same (17.9% in Model 2 and 18.0% in Model 3) with the addition of EEP to the analysis, an indication that the EEP did not have an effect on the attitude of the programme participants.

This result is congruent with von Graevenitz *et al.* (2010) who found that attitude did not change significantly. In contrast, it disagrees with Alberti *et al.* (2004) and Fayolle (2009) who argue that EEPs nurture change in attitudes towards entrepreneurship. These differences in the effects of EEPs suggest that the outcomes vary with context, thus underscoring the need for EEP research in various contexts as Moriano *et al.* (2012) have previously suggested. Further, the result complements the outcomes of the test of hypotheses H1b and H1d which showed that attitude did not mediate the effect of traditional and innovative teaching methods respectively on EI. The inference from the result is that EEP has an adverse effect on the EI of the participants.

With the general goal of EEPs being to influence the attitude of participants (Mwasalwiba, 2010), it is surprising that the attitude of the participants in this experiment was not affected by the programme. Whatever the level of attitude the participants had before attending EE classes, the expectation was that it should increase after passing through the programme. However, this was not the case as attitude remained the same. The result might be because the programme is compulsory. Compelling the students to take the programme in which they may not have an interest could make them unable to see the reason for participating in it. Consequently, they may attend the programme without interest and just for the purpose of passing their exams since undergraduates are required to pass the EEP exams before they can graduate.

The result might also be related to parents' expectation of their children to complete their studies with good grades and work in well-paying organisations after graduation, such as multinational organisations, telecoms companies, banks, and oil and gas industries, as Wale-Adegbite (2011) found. This expectation implies that parents do not seem to be interested in their children becoming entrepreneurs and this is likely to affect the attitudes of the participants towards entrepreneurship. It may also be that the manner in which the instruction is delivered in EEP classes is not capable of influencing the attitude of the participants. The implication is that the methods of teaching need reform.

It is noteworthy that, whereas the EI decreased, PA remained the same when EEP was added to the analysis. As attitude explains intention, it would be expected that a drop in EI should be a result of a decrease in attitude; however, this is not the case. The reduction in EI and the lack of significant change in the PA require further investigation through qualitative probing to gain deeper insight. Considering that theory of planned behaviour explained 65.7 per cent and 67.9 per cent of the variance in the entrepreneurial intentions of the graduates and



undergraduates respectively, indicates that the theory has predictive power in the context of this study even though the findings are based on cross-sectional data.

The ineffectiveness of the EE programme in nurturing EI in the graduates calls for concern. The programme was introduced for this purpose and resources have been and are being expended on it. It should be disturbing that rather than enhance the mindset of the graduates towards entrepreneurship, the programme is depressing it. The results are indication of deficiencies in the implementation of the programme. It can be inferred that the EE programme in its current state is not an effective tool for addressing graduate entrepreneurship in Nigeria as it is incapable of nurturing entrepreneurial intentions in participants. Thus, the programme appears not be achieving its objectives. Comprehensive reforms in the implementation of the programme is necessary. A qualitative study should give further insight on the subject.

#### **7.4 Qualitative Results and Integration**

The results of the qualitative study are presented and discussed in the following sections.

##### **7.4.1 Participants' Characteristics**

Six lecturers of the EE programme were interviewed, one from each university from which student and graduate samples were obtained. Codes were used to identify the respondents in order to maintain anonymity as promised during sampling. Four of the lecturers were male and two were female. Table 7-21 presents their demographic characteristics.

The table shows that two of the respondents have Doctoral degrees while the remaining four have Master's degrees. Three of these degrees are in agricultural economics alone but none are in entrepreneurship education. However, two respondents have entrepreneurial experience; the remaining four do not.

**Table 7-21: Demographic Characteristics of EEP Lecturers**

Respondents' University	Gender	Resp. ID	Highest Educational Qualification	Educational Background	No. of Years of Teaching EE	Have Entrepreneurial Experience
001	M	M001	PhD	Agric Economics	9	No
002	F	F002	MSc.	Agric Economics	12	Yes
003	M	M003	PhD	Management	11	Yes
004	F	F004	MSc	Agric Engineering	5	No
005	M	M005	MSc.	Agric Economics	3	No
006	M	M006	MSc.	Accounting	3	No

Source: Author's Field Interview

#### 7.4.2 The Thematic Network

Following the creation of the global theme, the themes were summarised and presented in a table (See Table 7-22) and the thematic network was constructed. The thematic network shows the relationship between the three levels of themes, from the lowest (basic) to the highest (global). The network is constructed on the basis of the global theme. The network links the basic themes to the global theme through the organising themes. However, the results are interpreted and discussed at the level of the basic themes as these themes derive directly from the interview transcripts. In doing so, the study describes and explores the thematic network using the original text and interpreting it with the help of the network. It gives a detailed description of the thematic network by referring to specific extracts that contain the basic themes as evidence from the interview transcripts.

**Table 7-22: Basic, Organising and Global Themes**

S/N	Basic Themes	Organising Themes	Global Theme
1	Entrepreneurial Mindset (Soft Outcome)	Knowledge of EEP Objectives	Implementation Strategies
2	Venture Creation (Hard outcome)		
3	Training in EE	Professional Development and Entrepreneurial Experience	
4	Business experience		
5	Traditional Methods	EE Pedagogies	
6	Innovative methods		
7	End of semester examination	Participants' Evaluation (Assessment)	
8	Mid-semester examinations		
9	Training	Implementation Challenges	
10	Facilities		
11	Conceptual and design conflicts		

Source: Author's Interview Scripts

The results presented in Table 7-22 show the themes at the three levels, namely, the global, organising, and basic themes. The global theme, which is the highest level, is EEP implementation strategies. There are five organising themes, namely: Knowledge of EEP objectives; Professional development and entrepreneurial experience; EE pedagogies; Participants' evaluation; and Implementation challenges. These are the intermediate level themes. At the lowest level are the basic themes, of which there are eleven as indicated in Table 7-22.

***Figure 7-3: Thematic Network of EEP Implementation Strategies***



Source: Constructed by author

The relationships between the themes at the various levels are represented in the thematic network in Figure 7-3. The figure illustrates a web-like representation of the succinct main themes that are abstractions from across the participants' responses to the direct questions which required the lecturers to give an account of their role in the implementation of the programme. The network links each basic theme to its organising theme and then the organising themes to the global theme. From the network, the relationships of the themes can be viewed from the centre, thus making a clear representation of the outcomes of the qualitative data analysis.

#### 7.4.4 Entrepreneurship Education Programme Pedagogies

As with the survey, the interview ascertained the methods that the lecturers use in the teaching of the programme. In analysing them, they were grouped into traditional and innovative pedagogies. The results show that the traditional methods are dominant, which supports the quantitative findings.

**Table 7-23: Teaching Methods Used by EEP Lecturers**

Teaching Methods	M001	F002	M003	F004	M005	M006	Total Per Method
Lecturing (TTM)	X	X	X	X	X	X	6/6
Class participation (TTM)			X				1/6
Case studies (IT)		X	X				2/6
Individual assignments and projects (TTM)							0/6
Group projects and assignments (TTM)	X						1/6
Oral presentations (TTM)							0/6
Role Play (IT)							0/6
Business plans (TTM)	X	X					2/6
Entrepreneurial projects (TTM)							0/6
Guest entrepreneurs (IT)							0/6
Excursions - field Trips (IT)							0/6
Internships (IT)							0/6
Total by Lecturers	3/12	3/12	3/12	1/12	1/12	1/12	

Source: Interview Transcripts

Table 7- 24 indicates that the lecture method, which is used by all six respondents is the most common type of teaching method employed by the lecturers. The other methods mentioned by the lecturers are case studies and business planning, which are used by only two respondents. Class participation and group assignment are each used by just one respondent. Case studies happens to be the only innovative method employed. Overall, Table 7-24 indicates that only four (three traditional methods and one innovative) out of the 12 methods, are used by the lecturers. The cross-tabulation shows that three lecturers apply only three of the 12 methods while the remaining three use just one method (the lecture method). This

indicates that most of the lecturers do not use many of the methods; for the most part, these unused methods are innovative methods, which also agrees with the quantitative findings.

The finding that lecturing is the most common method employed by the lecturers resonates with the quantitative results and is consistent with Bennet (2006) and Mwasalwiba, (2010). In contrast, the finding is inconsistent with Mousa (2014) who noted that HEIs have realised that the traditional methods are ineffective and are consequently adopting the innovative methods. Table 7-25 shows direct quotations of the lecturers' responses to the question:

*What methods do you employ in teaching GST Entrepreneurship?*

**Table 7-24: Text Evidences of the Methods used in GST Entrepreneurship**

Respondent	Text Evidences from Interviews
M003	Mostly lecture methods with a mixture of case studies.
M001	I use lecture methods, but I also teach them how to write business plans. <b><i>Follow-up Question: Do they write plans on businesses of their choice?</i></b> No, I give them the business type and they work in groups.
M005	Lecture method. But we have a farm. University farm. So, we do some practice there. You know our school is in a village with plenty land <b><i>Follow-up Q: Are all the students interested in becoming farmers?</i></b> We only use it as our practical session. [pauses] Because we have student from all over the country, some of the skills in the programme like carpentry, auto mechanic will require us bringing the artisans to teach the students. But the artisans do not speak English, so I cannot use them for skills acquisition training. Hence, I resorted to farming. At least they will gain something. Obviously not all of them will be interested in becoming farmers <b><i>Follow-up Q: I am aware that the programme is for one semester of about 16 weeks. Can seeds be planted and harvested within this period to enable them to have full knowledge of planting to harvesting?</i></b>  [Pauses] [Erm] [laughs] Well, we do as much as we can. Sometimes, some classes plant and the semesters end before harvest time. Actually, we have not

	had planting because it's a second semester course and the planting starts at about the middle of the semester. So, we only plant really.
M006	[Sighs] Just lecture methods. We don't have facilities being one of the youngest federal universities in the country. There is no entrepreneurship centre and we are in a tight location. You know we are still at our temporary site. We hope that things will improve when we move to the permanent site
F002	We use lecture method mainly, and occasionally we use business plans, and case studies. Because it's only a semester programme, it's hard to achieve much really, not to talk of the content that is [hesitates] 'dry' <b><i>Follow-up Q: Can you explain what you mean by dry?</i></b> Its theoretical and more or less conceptual. There is not much in term of practice that can be achieved. I lecture and explain or discuss the various concepts, you know, the topics.
F004	Lecture, madam. Are you expecting any other method? The class is like railway market. Some students receive lectures through the window. [Looks down] Wow! Never really thought of it this deeply.

Source: Interview Transcripts

The respondents advanced some reasons why they mostly use lecture methods. For example, respondent F004 stated that 'the classes are like railway market'. Railway market is a large, open and crowded market in the town where the university is located. The respondent further specified that 'some students even receive lectures through the windows', suggesting that the students are too many for the classroom spaces. Students who receive lectures through the windows cannot be comfortable enough to take notes during such classes and this can cause loss of interest that can impact on attitude towards the subject. Under such a condition, teaching is unlikely to be effective enough to motivate entrepreneurial attitudes and intentions. This situation coupled with infrequent use of innovative methods can dampen the interest of the learners and adversely affect their attitudes and intentions towards entrepreneurship. This may help to explain the decline in the graduates' EI following participation in EEP found in the quantitative studies.

Furthermore, the response of the lecturers themselves that they rarely use innovative methods reinforces the argument in the quantitative results that the scarce use of the methods could be partly responsible for why they do not play a role in predicting EI among the respondents. The rare application of innovative methods in implementing the EEP in Nigeria does not comply with the recommendation of researchers (Saravasthy, 2008; Neck and Greene, 2011; Esmi *et al.*, 2015) that more action-oriented approaches and reflective practices should be applied to stimulate entrepreneurial thinking. The heterogeneity in EE pedagogies necessitates the application of best-practice concepts in order to develop effective and impactful EEP, as Cunningham and Lischeron (1991) and Haase and Lautenschläger (2011) have suggested.

The teaching methods employed by the EEP lecturers demonstrate that the best practices which are capable of nurturing entrepreneurial mindset are not adopted in the delivery. With these methods therefore, it is unlikely that the teaching will engender entrepreneurial mindset on the programme participants. Under such practices, it is unlikely that the EEP will achieve its objectives. Indeed, some authors including Ifedili and Ofoegbu (2011) have also expressed some doubts that the compulsory programme could achieve its set goals and objectives considering its delivery technique that shows the absence of adequate preparation for the programme. The teaching methods adopted by the lecturers may be important in explaining the adverse effect of the EEP indicated in the quantitative study. The implication of the result is that there is need for reforms in the implementation of the EEP with respect to pedagogies. Such reforms should involve relevant training for the lecturers and provision of the necessary infrastructure for the application of the experiential methods. The stakeholders in the programme, especially the government, the NUC, the universities and the local entrepreneurs, have important roles to play in this matter.



Research evidence suggests the need to increase the coherence between the objective of EE programme and the methods used in the classroom for an effective and enduring outcome (Mwasalwiba, 2010). This finding contrasts this assertion. Although the lecturers know the objective it does not appear that they have taken steps to do what the literature suggests. For example, the perceptions displayed by the lecturers during the interview as emphasised in Ofemile and Chukwuma-Nwuba (2018) showed that the lecturers view the local entrepreneurs as uneducated partners. Consequently, achieving the objective appears far-fetched, as shown in the quantitative phase.

In general, the methods applied in the teaching of EEP in Nigerian universities are not focused on reinforcing the attributes that are associated with becoming entrepreneurially minded. This means that the active pedagogies which are the best-suited to entrepreneurial learning are not used. This, again, is reflected in the result obtained in the quantitative study which demonstrated a fall in intention and no change in attitude (the two main attributes that are essential for the attainment of the hard outcome of the programme) which is important for graduate unemployment reduction. The implication of this result is that learners' potential for entrepreneurial insights and attributes are not being maximised.

#### 7.4.5 Professional Development and Entrepreneurial Experience

Professional Development and Entrepreneurial Experience was another theme that emerged for the TNA. Under this organising theme are two basic themes, namely, EE training and business experience. From the interview responses, only two of the lecturers have business experience. One has a poultry business with his wife while the other has a business consulting firm. Experience in business on the part of the EEP lecturers can facilitate better teaching. It is therefore considered important in the EEP implementation. The training and development of the lecturers does not seem to have been given adequate attention. Apart from the fact that the majority of the lecturers do not have qualifications in EE or have no entrepreneurial

experience, most of them have not participated in relevant continuous professional development. When M001 was asked about the training he had received since he started teaching the module, he responded as indicated below.

[Laughs] Personally, I have not received any training. But our director of entrepreneurship centre went to the US with some NUC staff to see how the course should be... [Sighs] So, Prof in the directorate was selected by NUC because that is where they recognise but the directorate does not handle the course... The confusion is actually that when NUC wanted to provide training, they selected from the entrepreneurship centre. People are selected from the centre and taken overseas for training, I guess. But they are not the people that teach the course.

Likewise, respondent M006 stated 'Training? [Pauses] Are you asking about training specific to me as a lecturer of entrepreneurship? None. Am actually not expecting one'. Three of the six lecturers interviewed have not had any form of training since they started on the programme. Moreover, the training that the remaining three have attended ranged from two days to one-week workshop that took place only once since they started teaching the programme. Some of them have taught the module for up to 10 years. Consequently, it does not seem to be sufficient to equip them for the effective delivery of the EEP.

Speaking on the same subject, respondent F004 said,

We attended a training where we had resource persons from an institute in Lagos. Madam, the training was not bad, but it was certainly not what I expected. They focussed primarily on what I already know from the books. Nothing new really. It was theoretical and not practical like I had in mind before attending. I was looking forward to them teaching us how to get students interested in becoming entrepreneurs;

how to arouse their interest. But it was more like giving us definitions and stuffs like that. It was a one-week workshop, but I stopped after the second day.

Furthermore, M002 stated:

I attended a training organised by the Institute of Entrepreneur, Lagos. We had a one-week workshop in Lagos and I still do not know the relevance of the training to what we teach. They called it capacity building but had nothing in it that is related to the course outline of the programme. Laughs... anyway I enjoyed my time in Lagos. [Laughs]... hmmm...our people...

The finding on training is significant given the role of training in the implementation of educational intervention programmes, such as the EEP, in Nigeria. The implication again points to reforms in the programme implementation strategies given the quantitative results to which the qualitative phase has provided a deeper insight. For the expected learning outcomes to occur, the government, the NUC and the universities will have to work in harmony to ensure that the training of the lecturers is given the attention it deserves. Without adequate training and development, it is unlikely that the lecturers will be able to deliver teachings that can impact on the EI of the EEP participants and their attitude towards entrepreneurship. This void in training may therefore help to explain the quantitative finding of lack of change in the attitude of the graduates towards entrepreneurship and the decline in their EI following the EE programme.

It is instructive that the NUC-sponsored foreign training covered only the administrative personnel, leaving out the lecturers. Similarly, the training around pedagogies which was provided by the Centre of Entrepreneurship and Leadership (CAEL) of the University of Wolverhampton, UK, excluded the lecturers. This suggests that the NUC, who are the supervisors of the programme, and the government have not recognised the place of teachers

and teaching in ensuring that the programme delivers the expected outcomes. Ignoring the teachers who have direct contact with the learners and training university administrators could even dampen the enthusiasm of the teachers which can also adversely affect the programme. All these factors may offer an explanation for the counter-productive results in the quantitative study. The failure to implement CPD contributes to limiting factor to the programme. To achieve the objective of EEP in Nigeria, trainings should be centred on the key implementers of the programme. Training the lecturers in the implementation strategies is vital to the success of the programme.

#### 7.4.3 Knowledge of the Objectives

A knowledge of the objective of the programme should inform how the programme will be taught in order to achieve its objective. Accordingly, as a first step in the interview, it was necessary to ascertain if the lecturers have knowledge of the objectives of the EEP. They were asked what the objective (s) were. Their responses, which have been grouped into the two basic themes (entrepreneurial mindsets and venture creation), show that they have this knowledge. Most of the lecturers mentioned the two principal aspects of the objective as stated in the benchmark minimum academic standard (BMAS), the document guiding the implementation of the programme. For instance, respondent M003 stated:

The objective is to inculcate in students about value creation and creation of job opportunities via creative mindset. The truth is that being a graduate in Nigeria no longer guarantees employment. Therefore, the programme is expected to help them to acquire skills that they can convert into businesses when they graduate.

Similarly, respondent M001 stated:

The objective is to prepare them for business life. You know, so that they can start one business or the other when they graduate. To encourage them to start business venture is the objective.

These two responses cover the two core aspects of the objective of the programme. However, although they know the objective, some do not believe that the objective can be achieved in the programme's current design. For example, in response to question regarding the objective, F002 stated thus:

Madam, the objective in the minimum standard is to motivate them to have entrepreneurial mindset. But I doubt if this programme can do that. The objective also includes the creation of value through the knowledge that the students will gain on the course...

The respondent was asked the follow question: *Why do you doubt the ability of the programme to encourage entrepreneurial mindset?*

The response is quoted below.

Madam, [pauses] [giggles] have you seen the course outline for programme? The semester at best is 14 weeks because we usually have two weeks of exam. Besides, we hardly start lectures in the first week. [Laughs] The course outline is ridiculous. It's like a year course. There is no way anyone can do justice to it. I mean in terms of covering everything in it. Sometimes, I wonder what was going on in the heads of the designers of the programme. [pauses] In all sincerity it is just extremely optimistic to think that those topics can be taught in-depth within the time allotted. At best and in order to touch every topic, all you can do is to explain the concepts. That's all. But we

try our best to cover as much as possible. Other direct responses are contained in Table 7-23.

**Table 7-25: Texts Evidences Supporting Knowledge of the Objectives of the EEP**

Basic Themes	Organising Themes	Participants Quoted	Actual Extracts
Venture Creation	Knowledge of Objectives	M001	.... It is basically to make them have interest, the interest to start a business. As a matter of fact, there are no options out there. No work so if they can start something, it will be better for them. To encourage them to start business venture is the objective.
		F002	The objective also includes the creation of value through the knowledge that the students will gain on the course.
		M003	Giggles – The objective is to inculcate in students about value creation and creation of job opportunities via creative mindset. You can say to build in the students the mind set to start their own businesses. The truth is that being a graduate in Nigeria no longer guarantees employment. Therefore, the programme is expected to help them to acquire skills that they can convert into businesses when they graduate.
		F004	The main aim I think is for the student to be able to start something when they graduate...
		M006	The objective is to get them to start their own business. No white collar jobs. So instead of looking for job endlessly, they can start a business. 'No bi so' (Is that not it?) Hopefully, it will help them
Entrepreneurial Mind-set		F002	Madam, the objective in the minimum standard is to motivate them to have entrepreneurial mindset... But I doubt if this programme can do that.
		M005	I believe it's to prepare them for life after school. Primarily it is to help the graduates to develop entrepreneurial mindsets

Source: Interview Transcripts

With the knowledge of the objectives, it is expected that the lecturers will take the necessary steps to achieve the objectives, for the programme to be effective. This will include utilising the appropriate teaching methods. However, this is not the case. The pedagogies used are at variance with the methods that can foster the attainment of the objectives of the programme. Similarly, their doubts about the ability of the programme to attain its objective, may hinder the programme's success. With doubts in their minds, they may not deliver effective teaching which will contribute to the lack of success of the programme and have negative ripple effects on the participants' attitudes and intentions. These findings have implications for practice and policy.

#### 7.4.6 Participants' Assessment

Two basic themes related to evaluation of participants emerged from the analysis of the interview transcripts. These basic themes, comprising mid-semester and end-of-semester examinations, were grouped to form the organising theme, participants' evaluation. From the extracts, it is evident that most of the respondents evaluate the participants through traditional techniques comprising mid-semester tests and assignments and end-of-semester examinations. As M003 stated, 'We examine students through continuous assessment (CA) and end-of-semester examination. Both are exams'. Likewise, M005 responded, 'We assess with two continuous assessments and one examination'. These are the usual methods of assessment in the higher institutions in the country. In other words, the assessment procedures for the EEP are no different to other courses. These assessment methods are not consistent with the experiential procedures that Somervell (1993), Co and Mitchell (2006) and Mwasalwiba (2010) suggested are required in EEPs for successful outcomes. This research also fails to support Pittaway and Edwards (2012) who found that traditional didactic assessment methods like tests and examinations were sparsely used in EEP assessment.

Moreover, the assessment methods do not comply with the requirement in the NUC benchmark minimum academic standard (BMAS) which provides that the assessments should be based on the critique of a business plan (40%) and a group-based oral presentation on a business opportunity (60%). These recommended assessment methods seem better suited for the education 'for entrepreneurship' which the EEP in Nigeria practises than those employed by the lecturers. For example, when asked about the methods used in assessing students, M005 responded:

We assess with two continuous assessments (usually tests) and one examination

In response to the same question, respondent M003 said;

We examine students through continuous assessment (CA), group work (this is either case study or business plans, and end of semester Examination.

Speaking on the same subject, respondent, respondent F006 said:

We use the usual continuous assessment, that is, we give them case study assignments to execute in groups and then exam at the end of the semester

The result suggests that assessments are mainly focussed on passing examinations which do not seem to suffice for a programme whose objective is to nurture an entrepreneurial mind-set. The result has implications for policy regarding monitoring to ensure that the lecturers follow the laid down criteria for the assessment of the programme.

#### 7.4.7 Implementation Challenges

From the interview transcripts, the implementation of the EEP faces challenges. These challenges were grouped into three basic themes, namely, training, facilities, and conceptual and design conflicts. All three seem to point to the lack of appropriate preparation needed in the programme that Ifedili and Ofoegbu (2011) observed. The three basic themes were subsequently grouped to form implementation challenges as an organising theme.



Training has been previously discussed in Section 7.4.5. Suffice it to say, however, that the lack of adequate and relevant training of the lecturers found from the interview poses challenges to the implementation of the programme. Some of the respondents said that they had not received any training. For instance, in response to a question on training, M005 laughed and said, ‘God is helping us. So far so good. But to answer your question, I have not received any training’.

The finding suggests that the universities did not adequately consider the relevant training required for the success of the programme. Had they thought it through, perhaps relevant and adequate training would have been given to the lecturers. Similarly, steps that would complement the activities of the teachers and facilitate learning, such as engaging local entrepreneurs as guest lecturers, could have been utilised. A synergy between the universities and the local entrepreneurs may be necessary and this concept seems to support the literature on the need to adopt an entrepreneurship ecosystem in the implementation of EEPs. Similarly, there is empirical evidence that implementing an entrepreneurship ecosystem in universities is a positive causative factor to the development of entrepreneurial intentions (see section 2.4.1).

Without relevant training, the lecturers might be limited in their ability to deliver effective EE teaching. Accordingly, channelling the attitude of the learners towards entrepreneurship which facilitates the development of EI will likely be a daunting task. This implies that universities need to develop and implement training programmes for the EE lecturers.

Inadequate facilities also appear to be a challenge. For example, the classroom environment looks to be one of the lecturers' main frustrations. Given that the course is compulsory for every undergraduate, the classrooms also tend to be inadequate for the EEP class sizes because various departments are combined. As the extracts in section 7.4.4 showed, in some

cases students receive lectures through the windows. Most of the lecturers interviewed mentioned that the large classes make it impracticable for some relevant practices such as students' needs assessments and the application of some teaching methods. For instance, the respondents were asked,

*Are guest lecturers/practitioners with practical experience used in entrepreneurship classes? Give reasons for your answers.*

M003 responded as shown below:

[Laughs] Madam, you are talking as if you are not a Nigerian. We do not have provision for such. Besides, the lecture rooms/environment are not conducive. Our classes are like marketplaces. I think you are thinking that we are in England. [laughs] [pauses] I wish that is practicable. But under the current circumstances, it is not practicable. So, I do not involve practitioners in teaching. Even the sizes of the classes will not permit it. All second-year students of the university offer the course and they are divided into only four groups. I wish you have time to attend one of our sessions but unfortunately, we are currently in exam period [laughs] you will be sorry for us.

F002 responded likewise saying,

[Hmmm...] There are so many methods that can be applied but we limited the methods to the three I mentioned earlier because of the number of students and the time allotted that is rather short for the programme considering that there are too many topics to cover – to adopt many styles will reduce the time to cover the syllabus

Similarly, a question was posed on students' needs assessment, and some of the responses follow:

*Did you assess the skills needs of the students at the commencement of the GST Entrepreneurship course in order to know the practical skills to teach on the programme?*

[Serious kind of look] Not at all, because the course is a university-wide course and the size of the students does not require or should I say permit such practice (M003). Another respondent answered,

Madam, [pauses]...if we are to do that, that may take us to the end of the semester and that means that the programme will suffer. Apart from that, if we assess their needs, we will not be able to provide all the training. You need to see the number of students in each group, maybe then you will understand what I'm talking about [laughs] (M001).

Facility inadequacy is thought to undermine the success of the programme. The findings therefore underscore the need for the provision of more facilities for the implementation of the programme.

Furthermore, conceptual and design conflicts which could pose difficulties in the implementation of the programme were revealed in the benchmark minimum academic standard (BMAS) of GST Entrepreneurship. The BMAS, a document by the National Universities Commission states the objective thus:

To redirect education for relevance and quality by developing in the undergraduate/graduate an entrepreneurial mindset (spirit) and equipping him with the skills necessary to start and run a business successfully (NUC, 2011:2).

This objective appears to conflict with the stated goal of the programme:

The goal is to empower graduates irrespective of their areas of specialisation with skills that will enable them to engage in income-yielding ventures if they are unable to secure paid jobs. It is a re-orientation from the take-a-job mentality to the make-a-job mentality (National Universities Commission, 2011:1).

From the investigation of the goal, it would seem that the primary element is to train the graduates to secure a paid job while the training to engage in income-yielding ventures is secondary. Note the phrase ‘if they are unable to secure a paid job’. The direction of the EE training tends to be confusing in terms of whether it is to enable the graduates to secure paid jobs or to develop their mindsets towards entrepreneurship. Equally, such phrases impose implementation conflicts because they have an impact on which pedagogy is suitable. The two areas require the utilisation of different pedagogies. These contradictory statements represent a conceptual conflict that requires correction to provide proper guidance as to how the programme is to be implemented.

Another conflict is in the design of the programme. The BMAS specifies that the programme should be managed by the entrepreneurial centres of each university. On the same page, it stipulates that the programme is to be run within the General Studies Department. In support of this, the course is entitled GST Entrepreneurship – the GST represents general studies and is generally used as code for courses run in that department. Consequently, in some of the universities, entrepreneurship development centres have no form of association with the programme, let alone the students. Respondent M001 presented these conflicts thus,

...But madam, the entrepreneurship is a GST programme and it is in the GST unit and not domiciled in the entrepreneurship directorate... the directorate does not handle the course. So, you get my point. We have the centre, but the centre has nothing to do with the teaching of the programme. The teaching aspect is at the GST unit... The Prof [centre director] has been fighting for the course to be domiciled there but the argument of the GST department is that it is titled GST Entrepreneurship and as such it should be in the GST department. ...

These inconsistencies in the module guide tend to create anomaly in the programme implementation and makes for clumsiness on the part of the lecturers. Hence, these inconsistencies have implications for the programme designers and, indeed, the university supervisory agency.

Another conflict in design is in the time allotted for the teaching of the course in relation to the size of the syllabus. The BMAS allotted two hours a week for the programme, which the universities adopted. At the same time, it provided for a large number of areas to be covered within a single semester. The lecturers interviewed considered the time to be inadequate and a hindrance to the achievement of the objective of the programme. The responses of the lecturers to the question below regarding time were similar.

*'Do you think that the two hours per week is adequate for the programme?'*

Not at all. The two hours is grossly inadequate particularly when you consider the enormity of the course content. It is not possible to cover every item in-depth with the two hours a week allotted to the programme' (M003). Similarly, F004 responded, 'It is not adequate because there are so many topics to cover. The programme content is almost like a year syllabus.

These challenges perhaps added to the apathy of the teachers and thus constitute hindrances to the programme implementation which invariably seem to reduce the capacity of the programme to foster positive attitudinal change.

Overall, it can be inferred from the results that the packaging of the programme is flawed. The defects which are seen in the conceptualisation, design and implementation of the programme appear to constitute constraints to its effectiveness and consequently the achievement of its objective. The defective packaging observed, may have dampened the

interest of the EEP participants. This outcome can be seen in the failure of students in some of the universities to register for the second part of the programme, which is optional. As one respondent stated,

Do you know that there is a second part in the programme that is not compulsory? We don't have a single student on that because it is elective. Unfortunately, the skills acquisition contents are on that, but we have no registered students on it. So, we don't run it (F004).

If the interests of the students were enhanced by the first part of the programme, some students would have registered for the second part. The implication of the results is that the programme requires a complete overhaul to effectively reform it. Without such reform, achieving the long-term goal of reducing graduate unemployment through the EEP may never happen. As Bechard and Gregoire (2005) affirmed, it seems apparent from the findings of this study, that the effect of EE cannot be separated from its pedagogical engineering at both the design and programme implementation levels. Overall, the implementation strategies thus appear to be limiting the capacity of the programme to produce the desired outcome.

## 7.5 Summary

In this chapter, the results and discussion of both the quantitative and qualitative phases of the research were presented. A summary of the test results from the structural models were presented and discussed according to the research questions. It was revealed that six of the ten hypothesised paths were supported while four were not. Additionally, the finding that the teaching methods which were used as proxies for EEP had only partial influence on the participants EI was presented in the chapter. This finding was shown to be at variance with several academics who argue that EEPs influence EI. A balanced mix of pedagogies was proposed for the effective implementation of the EE programme.

Another significant result was that the undergraduates who constituted the control group in the quasi experiment had higher PA and EI than the graduates, the experimental group, who had completed the EE programme. It was also found that the graduates' EI decreased with the addition of the teaching methods to the analysis. In addition, the EEP participants' attitude towards entrepreneurship did not change. The inability of the EEP to positively increase PA complements the results of failure of PA in the graduates to mediate the effect of teaching methods on EI. Indeed, it is interesting to note that except with teaching methods, the hypotheses related to PA were supported. These results point to the ineffectiveness of the EEP.

The results also showed that cultural values (CV) influence EI through PA, but do not do so directly. Although SN is believed to be traditionally weak in predicting intentions, it was shown in this study to have both direct and indirect predictive ability on EI. The results hence support the literature that the effect of SN on EI could be contextual.

The qualitative research results showing the thematic network of the EEP implementation strategy was presented. Five organising themes were generated by grouping basic themes into clusters of identical subjects and summarised into different categories. In the process of the discussion, the quantitative results were integrated, and the qualitative findings were used to explain some of the quantitative outcomes. The results supported the quantitative findings in several ways.

It was indicated in the chapter that the lecturers knew the objective of the programme, but this knowledge did not translate to the use of appropriate pedagogies in the EEP classroom as the quantitative findings revealed. The chapter further presented large classes as some of the reasons advanced by the lecturers as to why lecture methods was mostly used. Hence, there is no coherence between the objectives and the methods applied as indicated in the chapter.

The chapter revealed that continuing professional development was lacking despite that virtually all the EEP lecturers had no qualifications in the subject. Furthermore, only three of the six lecturers had some form of entrepreneurial experience. This situation calls for action on the part of the NUC and the universities.

The chapter also examined participants' assessment and found that the assessments procedures used are not in line with the requirements in the BMAS. It was consequently suggested that this finding has policy implication for monitoring to ascertain that the assessment criteria are implemented. Furthermore, it was indicated in the chapter that conceptual and design conflicts and inadequate facilities are some of the main challenges in the implementation of the EEP in Nigerian universities. Accordingly, the results indicate the need for policy and implementation reforms and the monitoring of the implementation process.

In conclusion, and in response to Storen (2014) as to 'whether it makes more sense for some students to take a more comprehensive EE rather than that many students taking some EE', it is suggested that an EE elective model be promoted, and adequate infrastructural facilities provided to enable the programme market itself. Consequently, a model of EEP in Nigerian universities should include the following main elements:

1. A student-centred teaching/learning pedagogy that includes the use of guest lecturers and other suitable methods to stimulate the idea of self-employment in students.
2. A collaboration between the identified stakeholders in the Nigerian context. This includes local entrepreneurs in the locality of the universities and industries.
3. The invitation of parents and guardians to special programmes aims at re-orientation them to accept entrepreneurship as viable career options for their children and wards



4. Students assessments to include business plans of businesses that students are interested in venturing into and where possible local entrepreneurs can be invited for possible seed capital or investment into the businesses.
5. The establishment and use of incubators to encourage start-ups right from school.
6. Periodic monitoring and evaluation to assess the programme for restructuring, change or the maintenance of status quo for now.

The next chapter will present the conclusion of the research.

## **Chapter 8 - Conclusions**

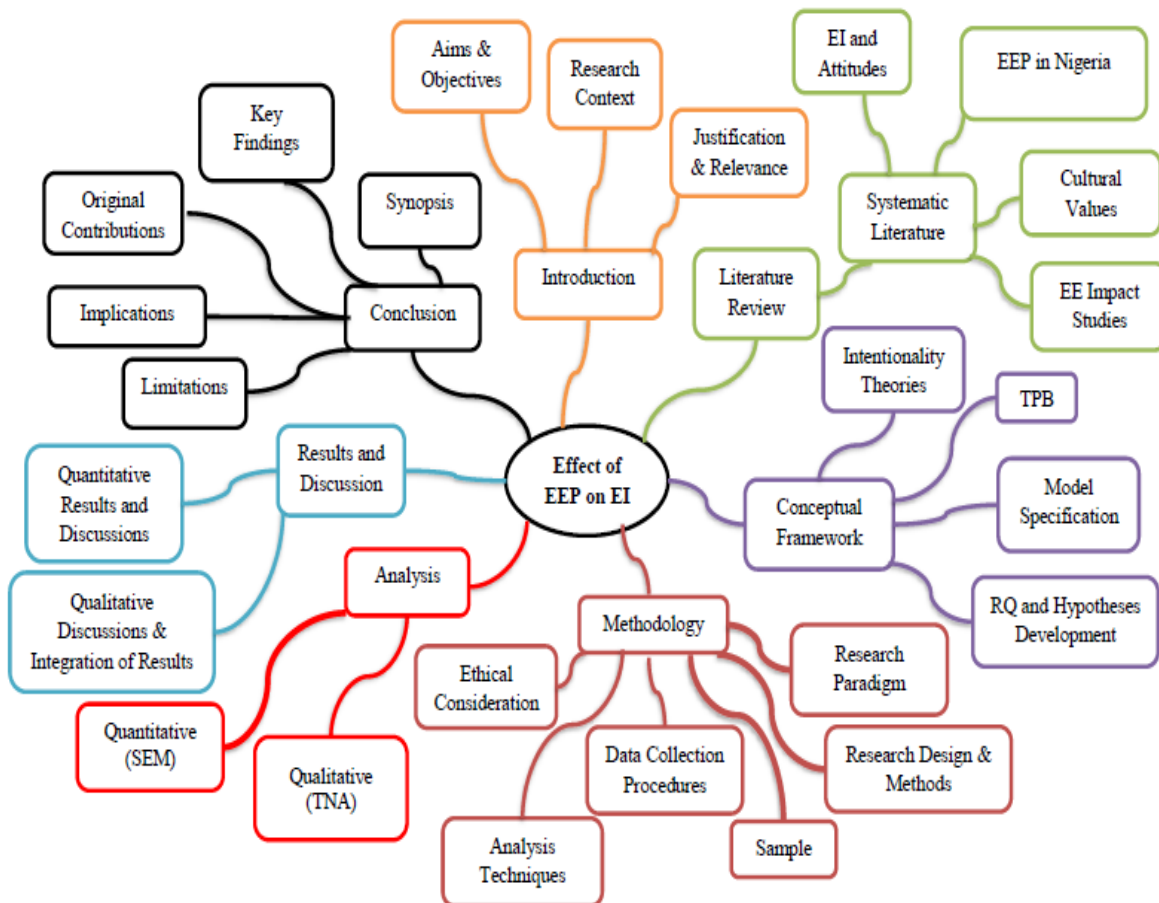
The chapter presents the overall summary of the main findings of the study. In the preceding chapters six and seven, the results and discussions were presented in consideration of the literature review in Chapters Two, Three and Four showing where the study sits and in relation to the application of the methodology outlined in Chapter Five. Following this introduction, section 8.1 presents a synopsis of the study while section 8.2 focuses on the summary of the key findings. Section 8.3 presents the various contributions of the research and in section 8.4, the implications of the study are outlined. Next, section 8.5 discusses the limitations of the study which serve as possible areas for future research. Section 8.6 indicates a proposed schematic model for a successful EEP implementation in Nigerian universities. In section 8.7, the concluding remarks are presented. Lastly, section 8.8 is a reflexivity of the researcher's journey through the PhD.

### **8.1 A Synopsis of the Research**

This research investigated the effect of the EEP in Nigerian universities in shaping graduates' EI. The investigation was motivated by three issues. First, a personal desire to contribute to the success of EEP in Nigerian universities considering its acknowledgement as a route by which university graduates can create jobs. The passion for young people, and the first-hand witness of their inability to secure paid jobs, which results in frustrations, crystallised the resolve of the researcher to investigate the effectiveness of the programme. Secondly, a motivation derived from professional practice. The need to determine whether the EE programme in Nigerian universities is achieving its objective of nurturing an entrepreneurial mindset in the graduates, the end point being to curb graduate unemployment, which has become endemic in Nigeria. Thirdly, to fill gap in literature. It was necessary to extend research on the connection between entrepreneurship education and entrepreneurial intentions beyond its traditional concentration in the West to Africa, a region of different cultural setting

and economic development where such research is sparse. These motivations, together with the research problem and objectives and the research gaps, are detailed in Chapter One. A snapshot of the thesis is presented in Figure 8-1.

***Figure 8-1: A Pictorial Synopsis of the Research***



Designed by Author

The broad RQ was *How effective is the entrepreneurship education programme in Nigerian universities in nurturing entrepreneurial intentions among the graduates?* The broad research hypothesis embedded in the RQ and posits that: entrepreneurship education programme is effective in fostering entrepreneurial intentions among graduates. To facilitate the research,

an extensive review of related literature was conducted. The outcomes were presented in Chapters Two and Three.

Following the literature review in chapters two and three, it was possible to adopt a Ajzen's (1991) TPB as the theoretical model and articulate a conceptual framework that was used to propose the relationships among the variables of the study (Miles and Huberman, 1994). These are presented in Chapter Four together with the detailed research questions, hypotheses and model specifications. The study was backed by a variation of the theory of planned behaviour (TPB), perhaps the most utilised intentionality theory in EE research, and adopted a sequential explanatory mixed method design.

Likewise, the methods involved a quantitative study of cross-sectional survey with quasi-experimental design and a qualitative study of in-depth personal interviews. Moreover, two samples comprising 409 university graduates and 402 undergraduates were used for the quantitative studies. The graduates were the experimental group and the undergraduates were the control group. A sample of six EE programme lecturers were used for the qualitative study. All these factors were explained in detail in Chapters Four and Five.

The quantitative data analysis utilised SEM-AMOS version 22, while the qualitative data analysis was performed with Attride-Stirling (2001) thematic network analysis. The quantitative analysis modelled the effects of the entrepreneurship education programme (EEP) and cultural values (CV) on EI with two of the TPB constructs, namely, personal attitude (PA) and subjective norm (SN), as intervening variables. Traditional teaching methods (TTM) and innovative teaching methods (ITM) were used as proxy for the EE programme. To answer the five research questions, ten hypotheses were tested. It was found that EE has only a partial effect on EI and that CV affect EI indirectly through PA and SN, but not directly. It was also found that both PA and SN are important in predicting EI.

Findings further showed that the EEP adversely affected the EI of the participants and does not therefore seem to be achieving its objective. Consequently, ten hypotheses were developed and tested to answer the research questions. These are outlined in Table 8-1.

**Table 8-1: Research Questions and Hypotheses**

Research Questions		Hypotheses
RQ1	What is the effect of entrepreneurship education on graduates' entrepreneurial intentions?	<b>H1a:</b> Traditional teaching methods have a direct positive effect on entrepreneurial intentions.
		<b>H1b:</b> The effect of traditional teaching methods on entrepreneurial intention is positively mediated by personal attitude
		<b>H1c:</b> Innovative teaching methods have direct positive effect on entrepreneurial intentions.
		<b>H1d:</b> The effect of innovative teaching methods on entrepreneurial intentions is positively mediated by personal attitude
RQ2	How do cultural values influence graduates' entrepreneurial intentions?	<b>H2a:</b> Cultural values have direct positive effect on entrepreneurial intentions of university graduates.
		<b>H2b:</b> The effect of cultural values on entrepreneurial intention is positively mediated by personal attitude.
		<b>H2c:</b> The effect of cultural values on entrepreneurial intention is positively mediated by subjective norm.
RQ3	What is the effect of personal attitude relevant on entrepreneurial intentions?	<b>H3:</b> Personal attitude has a direct positive influence on entrepreneurial intentions of university graduates
RQ4	What is the effect of subjective norm on entrepreneurial intentions?	<b>H4a:</b> Subjective norm has significant direct effect on the entrepreneurial intentions.
		<b>H4b:</b> Subjective norm will influence EI indirectly through PA.

The qualitative method explored the pedagogical aspect of the implementation of the EE programme. The qualitative findings confirmed the quantitative results that traditional teaching methods are the most commonly used, with the lecture method being the most prevalent (Bannett 2006; Mwasalwiba, 2010). The implication from this result is that the lecturers do not apply the innovative methods because either they do not know the methods, or they consider the large classes to be a limitation to the application of the methods. It was again found from the qualitative study that the EEP faces some challenges, including policy and design conflicts and inadequate facilities. Another finding indicated that the assessment methods prescribed in the policy document are not followed. Overall, the implementation seems to be limiting the capacity of the programme to produce the desired outcome. The data analyses are presented in Chapter Six while the results are presented and discussed in Chapter Seven.

The research has made several contributions to knowledge, among which is a theoretical contribution through extending the theory of planned behaviour without altering its logic. The variation of the model through the change in the causal paths, significantly altered the understanding of the relationship between the constructs. Traditional teaching methods, innovative teaching methods and cultural values were introduced as exogenous variables in this study while personal attitude and subjective norm, which are exogenous variables in the TPB, served as mediating variables. An important inference from the outcomes is that research results on the subject vary depending on the context (Liñán *et al.*, 2013), thus making research in different cultural settings necessary.

The research also has implications for policy and research. An implication for policy is that the research can provide a framework for policy reforms to the undergraduate curriculum

particularly with respect to EEP. Similarly, an implication for research is seen from the finding that subjective norm is significant in predicting EI, which seems to support the suggestion in the literature that the effect of SN could be better determined if used as a mediator. The finding calls for further research to ascertain the effect of this construct as a mediating variable in different contexts. The implications and contributions of the research and the concluding remarks are detailed in this closing chapter.

Overall, it can be deduced from the results that entrepreneurial intention is a planned behaviour formed by people's personal attitude towards entrepreneurship and the perception of their significant others about entrepreneurial activities.

## **8.2 Summary of Key Findings**

1. The results of this research support the proposition that EEP participants generally have intention towards entrepreneurship (Liñán *et al.*, 2011; do Paço *et al.* 2011; Zhang *et al.*, 2014). This is substantiated by the amount of variance in EI explained by the structural model despite the reduction in EI with the addition of TM to the analysis. The 65.7% in variance in EI which the model in this found explained are considered high (Liñán *et al.*, 2013).
2. EEP did not result in a change in attitude but resulted in a decrease in entrepreneurial intentions. With the addition of EEP to the analysis, attitude remained the same, but the entrepreneurial intentions decreased. This result is at variance with several authors who suggest that attitude and intention move in the same direction. Although attitude did not change, it had significant impact on intention as several authors have found (Douglas and Shepherd, 2002; Packham *et al.*, 2010; Law and Breznik, 2017).
3. Traditional teaching methods directly influence the EI of graduates, but do not have indirect effect on graduates' entrepreneurial intentions through personal attitude. This means that personal attitude did not mediate the relationship between EEP and EI.

4. Traditional teaching methods are the main methods used in the EEP classrooms with the lecture methods being the most common. This finding is consistent with Fiet, (2001) Bennet, (2006) and Mwasalwiba, (2010). Furthermore, innovative teaching methods are rarely employed.
5. Innovative teaching methods have neither direct nor indirect effect on entrepreneurial intentions. This finding, and the findings of a fall in EI, in addition to the lack of change in PA following participation in EE, prompted the need for qualitative research to offer more explanation of the outcomes.
6. Cultural values have indirect effect on graduates' EI through PA and SN but do not have direct effect. Thus, culture influences people's intentions towards entrepreneurial activities by influencing their attitude towards entrepreneurship and the perception of their significant others about entrepreneurship.
7. Personal attitude has direct effect on entrepreneurial intentions. The finding confirms the widely-reported results in the literature that attitude is important in predicting intentions.
8. Subjective norm has both direct and indirect effect on entrepreneurial intentions. Many prior studies, including Krueger *et al.* (2000), indicate that subjective norm is traditionally weak in predicting intentions. Thus, some researchers have excluded it from their analysis. Based on the finding in this study, it may be that the effect of subjective norm is contextual.
9. The EEP lecturers do not seem to have the relevant training that would have equipped them with the knowledge of the experiential pedagogies and assessments used in the EEP classes.
10. The implementation of the entrepreneurship education programme in Nigeria is faced with challenges, including design conflicts. For example, continuing professional



development for the lecturers was lacking despite that they do not possess cognate qualifications. It was also found that facilities were either lacking, inadequate or that lecturers and students had no access to available facilities.

### **8.3 Original Contributions to Knowledge**

Given the findings in this thesis, the research has improved the understanding of the relationship between entrepreneurship education and entrepreneurial intentions from the perspective of Nigerian university graduates. Accordingly, it has made the following contributions to knowledge.

1. This thesis extends research on EEP beyond its traditional concentration in the West to Africa, a region of different cultural setting and economic development where researchers argue that such research is lean (Forbes 1999; Liñán and Chen 2009; Fayolle *et al.*, 2006; Solesvik *et al.*, 2012; Liñán, *et al.*, 2013; Farrukh *et al.*, 2018). Hence, it contributes to the EI literature and makes an original contribution to knowledge by providing an emerging economy perspective based in the Nigerian context.
2. The study provided empirical evidence of the entrepreneurial intentions of the graduates in Nigerian universities as an outcome of the compulsory entrepreneurship education programme, which is aimed at contributing to the reduction of graduate unemployment and as a means of improving their socio-economic status (Adeyeye and Tugbobo, 2011). By evaluating the effectiveness of the compulsory EEP in Nigerian universities, a programme that is over a decade since its implementation and which has not been evaluated since its inclusion in undergraduate curriculum, it makes an original contribution to knowledge.
3. The study makes a theoretical contribution to knowledge by extending the TPB without altering its logic. Nevertheless, the addition of other variables with EI

predictive ability (Ajzen, 1991) (TM constructs and cultural values as exogenous variables and the application of PA and SN as mediator) the thesis reordered the causal paths of the relationship between the construct. This significantly altered our understanding of the relationship between EEP and EI (Whetten, 1989), thus constituting a theoretical contribution.

- 4 The finding that EEP has adverse impact on the graduates' EI, which is reported in this thesis confirm the findings of Oosterbeek *et al.* (2010) and von Graevenitz *et al.* (2010). The study offered recommendations including a proposed framework to make the programme more effective.
- 5 The research challenges the understanding of the relationship between attitude and entrepreneurship intention. The literature shows that EEP increases participants' attitudes and improved their EIs (Souitaris *et al.*, 2007). It further indicates that as attitude increases as a result of participation in EEP, intention also increase. This study failed to support this line of argument given that attitude remained the same while intention declined in the structural model. Thus, it makes an original contribution to knowledge.
- 6 Prior studies have found that subjective norm is weak in predicting entrepreneurial intention (Krueger *et al.* 2000; Autio *et al.* 2001). However, empirical evidence from Spain indicates that the effect of SN could be indirect (Liñán and Chen, 2009). Hence, SN was utilised as a mediator in this study. Findings indicate that SN has both direct and indirect effect. Thus, the research makes an original contribution to knowledge.
- 7 Culture is thought to influence entrepreneurial intentions (Ferreira *et al.*, 2015). Packham *et al.* (2010) also observed that culture can regulate the effect of EE. However, these are research evidence based in the western world that are believed not to be applicable to emerging economies. This thesis fills gap in literature as it reports

findings of the effect of cultural values from Nigeria, a developing country. Hence it makes an original contribution to knowledge.

- 8 This thesis reports the findings of the quantitative phase that included a control group by adopting the quasi-experimental design. Accordingly, it filled the gap identified by several EI researchers including OECD (2009), Martin *et al.* (2013), Rideout and Gray (2013), Bae *et al.* (2014) and Chell and Huber, (2015) for the need to include control groups in EEP outcome studies. Hence, it makes an original contribution to knowledge.
- 9 The study delineated teaching methods into innovative and traditional teaching methods to provide an understanding of the grouping of TM from the perspective of the participants and demonstrated the effect of each method on graduates' entrepreneurial intentions. Thus, it makes empirical contribution to knowledge.
- 10 This thesis reports findings based on the application of SEM (quantitative phase), which authors suggest for use for its robustness and sophistication in allowing simultaneous testing of the relationships between the variables that provides improved understanding of the effects of the TPB constructs and by explicitly accounting for measurement error (Liñán *et al.*, 2013).
- 11 This research confirms prior research showing that attitude is essential in intention formation (Ajzen 1991; Douglas and Shepherd, 2002). This finding suggests that the teaching of EEP should include exercises and methods that can increase learners' attitude towards entrepreneurship.
- 12 The study developed a conceptual framework to test the outcome of EEP. This can be applied to other populations.
- 13 The examination of the implementation strategies of EEP contributes to the practice of teaching entrepreneurship programmes.

## 8.4 Implications

The research has some implications which are outlined below.

### 8.4.1 Implications for Policy

1. The finding that CV in this study influences EI indirectly through PA and SN reflects the importance that participants attach to the perception of their significant others regarding the choice of entrepreneurship as a career option. It could be that because the significant others are the main sources of support and funding for entrepreneurial ventures led to the significant path. This finding further echoes the problem of institutional void in emerging economies (Doh *et al.*, 2017) as shown section 3.3.3. Consequently, policy to restructure public agencies and policy to guide the operations of private sector establishments that support entrepreneurship is required to make new venture creation feasible for new graduates.
2. The research can provide a framework for policy reforms in the undergraduate curriculum, particularly in respect of EEP. For example, the conceptual and design conflict found in the EEP policy document requires reform. The finding that the module guide states the goal of the programme to be: ‘to re-orientate from the take-a-job mentality to the make-a-job mentality’ and at the same time as: ‘to empower graduates irrespective of their areas of specialisation with skills that will enable them to engage in income-yielding ventures if they are unable to secure paid jobs’ (National Universities Commission, 2011:1) is a conceptual conflict that creates ambiguity as to the exact goal of the programme. This finding makes a policy reform in relation to the careful articulation of the policy statement in the EEP implementation document to provide clarity and concision, devoid of ambiguity as it is currently.
3. The finding that the graduates rated ‘If I had the opportunity and resources, I would love to start a business’ has implication for policy. Findings indicate that the

respondents are determined to create business ventures, but they have not given it serious thought perhaps due the lack of access to resources. Government should therefore ensure the implementation of policies to ascertain that relevant institutions are functional Makinde (2005) to facilitate access to seed capital for potential graduate entrepreneurs.

4. The research demonstrated the importance of providing the lecturers with CPD as the main implementers of the programme. This is further essential since most of the lecturers do not have cognate qualifications in entrepreneurship. A clear policy on the training of EEP implementers should be formulated and implemented. Government policy in this regard should be well articulated, properly coordinated and unambiguously communicated and implemented to enable EEP lecturers deliver the experiential teaching and learning that is required for a successful EEP outcome.
5. The finding in this study indicate that the assessment of EE learners is not in line with the assessment in the module guide. This finding has implications for policy regarding monitoring. Government policy to ensure periodic monitoring to ascertain that the lecturers follow the laid down criteria for assessing the programme is recommended.
6. The study found that infrastructure is inadequate, and this has implication for policy. Government policy should ensure that essential infrastructural facilities are made available as required.
7. The finding further has implication for policy to provide a favourable environment to make entrepreneurial activities attractive. The media has an important role to play by projecting activities that encourage societal and parental support for entrepreneurship to facilitate increased EI. This could perhaps support the reorientation of parents from the expectations of their children getting jobs in large corporate organisations after graduation to thinking of them choosing entrepreneurial career paths. If the media

plays this role, it could imbue values that foster positive attitude towards entrepreneurship and consequently, lead to a reduction in graduate unemployment

8. The Igbos in Southeast Nigeria that dominate entrepreneurial activities in Nigeria and beyond utilises mentoring in business (Olutayo, 1999; MG Modern Ghana, 2013; Orugun and Nafiu, 2014). Similarly, the UK HEIs use business coaches and mentors because of the benefits associated with experiential and indirect learning (Monk and Purnell, 2014). A policy to ensure that the implementers adopt coaching and mentoring should be formulated, implemented and monitored.

#### 8.4.2 Implication for Research

1. The introduction of additional constructs to extend the TPB and the application of some of the original constructs of the theory as mediators, has implications for research. The extension of the theory could generate further interest in the application of the theory of planned behaviour in EI research.
2. The model that was built in this study can be applied to measure EI in other populations.

#### 8.4.3 Implication for Practice

1. The finding on the effect of EEP on attitude and EI has implications for practice and research. This will help EEP lecturers to determine weak points of teaching and the areas to focus on for improvements. It also underscores the necessity for further research on the specific relationship between EEP and EI in different contexts.
2. The study found that the appropriate teaching methods for the EEP in Nigerian universities are rarely used. As EEP is believed to encompass the acquisition of attitudes for entrepreneurship (Fayolle *et al.*, 2006) that this study fails to confirm has implication for policy. There is need to ascertain that appropriate pedagogies (like engaging guest lecturers) are employed to facilitate improved attitudes towards

entrepreneurship to create a ripple effect of graduate unemployment reduction. Reforms are required regarding the general implementation of the programme.

### **8.5 Limitations and Further Research**

As with any other study, this research has some limitations. First, the use of a cross-sectional survey to determine causal relationships, which is thought to be limited for use in drawing valid conclusions about possible causality. The cross-sectional survey is however mitigated using qualitative data. A key reason for this limitation is the simultaneous measurements of all factors. This tends to make it difficult to confidently make inferences.

Secondly, although both attitude and intention are antecedents of behaviour, they are affected by time. The variables might have different outcomes if measured at other times. Nevertheless, as the investigation is a cross-sectional survey, it predicted attitudes and intentions at a point in time. Therefore, the values obtained are considered valid for the purpose of the investigations into the EEP in Nigerian universities. Further research using longitudinal study is suggested to permit the collection of data at various times and to allow the use of the same set of respondents in a pre-test-post-test survey.

Furthermore, there is no limit to the factors that can influence entrepreneurial intentions. Introducing other variables to the model may mean different outcomes. Therefore, future research that uses other variables, like EEP curriculum contents, is advised.

Intention does not always culminate in behaviour. Therefore, a future study focused on the hard outcome of entrepreneurship programmes could be interesting to understand the real impact of entrepreneurial intentions and those graduates who actually follow the entrepreneurial career path. However, it should be noted that the main objective of this study is to determine whether the EEP in Nigerian universities is achieving its objective of

engendering an entrepreneurial mindset. A future study on intentions to determine the hard outcome of becoming entrepreneurs in the context of this study might be interesting to discover the real effect of entrepreneurial intentions on entrepreneurial behaviour.

The innovative methods that nurture EI as literature had no influence on the participants' EI. This suggests that there may be something wrong with the teaching. Therefore, future research that interviews graduates about their perception of the programme vis-à-vis their expectations could increase knowledge about how the programme can be improved to deliver the expected outcome. Similarly, future research that focuses specifically on the teaching methods with current participating students and their lecturers as respondents through qualitative research is recommended.

However, despite these limitations, the study has generated findings that have significance for theory, method, practice and policy. Likewise, the limitations of this study provide areas for future research.

## 8.6 Recommendations

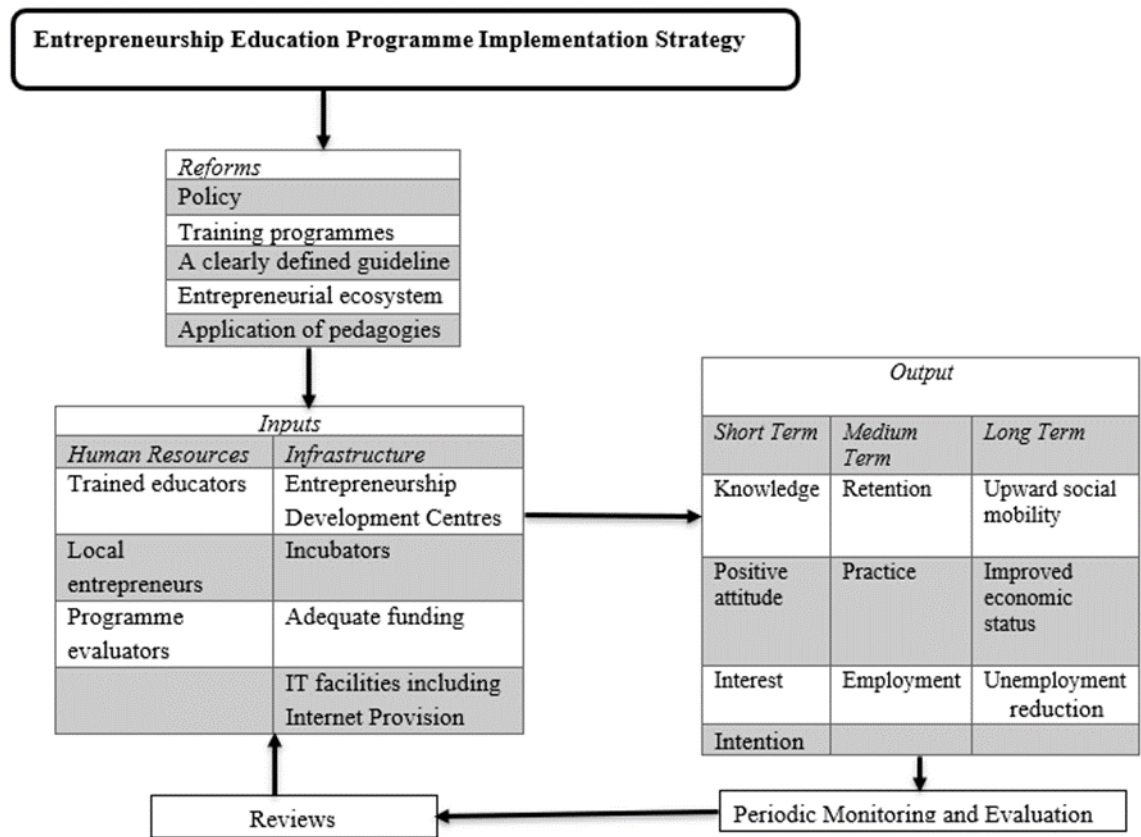
Based on the research findings, the researcher makes the following recommendations on the implementation of the EEP.

1. It is proposed that the current EEP typology should be pivoted and replaced with an elective variant. It is believed that if the lecturers have the requisite training and the necessary infrastructure is made available, the few initial students who will register on the programme could potentially gain entrepreneurial insights and attributes might be maximised. Accordingly, it is suggested that the programme starts with a limited number of participants and gradually other students might be attracted through its visible outcomes.



2. A diagrammatic representation of a proposed strategy for the implementation of EEP in Nigerian universities is presented in Figure 8-2. The figure shows that if the inputs described below are provided, the programme will likely result in goal attainment.

***Figure 8-2: Proposed Entrepreneurship Education Implementation Strategy***



Source: Proposed Nigerian EEP Strategy by the author

3. These suggestions are based on the findings that there are no suitably trained professionals to handle either the programme or the number of students that register on the programme annually due to its compulsory nature. Similarly, the apathy on the part of both the teacher and the taught might be reduced if these suggestions are implemented. If the elective variant is implemented appropriately (made functional), it is hoped that, with time, more students will be interested when the outcome is positive and becomes obvious.

4. The phrase 'if they are unable to secure a paid job' in the current EEP module guide gives the impression that that the primary objective of the programme is to train the graduates to secure a paid job, whilst the training to engage in income-yielding ventures is secondary. This tends to create implementation conflicts because the education for entrepreneurship (the GST Entrepreneurship in Nigerian universities) and the education about entrepreneurship require the utilisation of different pedagogies and implementation strategies. This contradictory statement represents a conceptual conflict that requires correction to provide the appropriate instruction as to how the programme is to be implemented. Consequently, it is recommended that the policy document be carefully rewritten to accentuate the actual goal of the programme.

### **8.7 Concluding Remarks**

Graduate unemployment has been one of Nigeria's daunting socio-economic problems. In a bid to address the problem, in 2002, the government introduced entrepreneurship education in the undergraduate curriculum as a compulsory module in all universities. Its objective is to nurture entrepreneurial mindset in the graduates and students, which it is believed could lead them to become entrepreneurs rather than seeking scarcely available paid jobs after graduation. The need to evaluate this programme has become apparent given its importance and the length of time it has run. This study took up the challenge to address this need.

The investigation is premised on the belief that findings from Western countries where EE research has hitherto concentrated may not be applicable to the Nigerian context due to differences in culture and level of economic and social development. Consequently, it was thought that the best place to start such evaluation is the programme's objective. Therefore, this research investigated the effect of the EE programme on the entrepreneurial intentions of university graduates. The key finding that the programme occasioned a decline in the EI of its

participants led to the conclusion that the programme has an adverse effect on the graduates' entrepreneurial intentions and accordingly, does not seem to be achieving its objectives. Given this finding, comprehensive reforms in the programme policy and implementation are advised. Other inferences from the findings are stated below.

1. It can be inferred from the effects of cultural values and subjective norm that it is only some aspects of culture that condition career choice.
2. Considering the challenges identified with the implementation of the programme, such as inadequate facilities and the lack of relevant training, it can be deduced that the programme has not been given the attention that it deserves, particularly in the light of the socio-economic problem that it was designed to address.

With its extension of the theory of planned behaviour, the research has made significant contribution to the entrepreneurial intentions debate, more so as it is in a context where EE and EI research is scarce. The research has implications for policy and practice as earlier presented, and it is believed that it will generate further research in EE. It is also thought that it will be useful to the government in its educational interventions to reduce the problem of graduate unemployment. For example, Fayolle and Gailly (2005) determined, presenting positive images of entrepreneurs within universities in Nigeria could serve as incentives to students towards entrepreneurial career choices. Given the outcome of this study and following the argument of Støren (2014:13) about policy that: 'it may make more sense for some students to participate in a more comprehensive EE programme, rather than that many more student taking some EE programme.'

## 8.8 Researcher's Reflexivity through the PhD Journey

This remarkable journey started in March 2015. The journey fluctuated constantly, between the endless delight of being a PhD student in an advanced country and the dread of the unknown. Within the first year, I continually heard the old familiar voice in my head that told me that I was not good enough and will not be able to go far academically. Finding some PhD samples with writing in first person, somewhat gave me the feeling that I now had my own voice. But this was short-lived as I later discovered that I should not write in first person. Once again, I felt that my voice was silenced, and the old familiar voices re-echoed. This was further complicated by some negative comments during the journey. Nevertheless, my passion for my goal and a constant reminder that I heard those old familiar voices during my MSc degree, but failed to succumb and rather worked hard which earned me a distinction in both the semester exams and dissertation, strengthened me even more. Despite the emotional rollercoaster that I was experiencing, I determined to take my passion and perseverance like the air that I breathe. This strengthened me as I kept at my reading, writing and reviewing my work plan from time-to-time.

Through the combination of reading and attending several PhD workshops/conferences organised by the University of Northampton, the Institute for Small Business and Entrepreneurship (ISBE) and the British Academy of Management (BAM), and presenting bits and pieces of my research at local and international arenas, I finally found my voice. I recognised that the journey was not going to be an easy ride, yet not once did I contemplate giving up. Rather, I was determined to make a success of the journey by constantly repeating my goal to myself aloud to shut out some negative comments that reminded me of the old familiar voice and had a print out of my vision which I looked at daily and tell myself; 'Kemi, you are getting there'.

With the PhD journey nearing its end, I started reflecting on the emotional ‘rollercoaster’ journey and the several lessons that I learned as I went through the process of learning to become an independent researcher, a proud holder of the Doctor of Philosophy and realised that I have learned much more than the acquisition of a PhD.

1. One of the very first lessons that I learned was at the first seminar which I presented at the Northampton Business School. During the presentation, colleagues were giving me hand signals to slow down which of course, I did not understand. During the question and answer session after my presentation, someone commented that he really liked my topic and the information on my slides but would have benefitted more from the presentation if I had slowed down a little bit more to enable him to understand my presentation well. Following this experience, I learned to communicate better in an international environment.
2. I learned very early on in this journey that my motivation to do research as a result of personal experience and indeed professional practice were not sufficient reasons to embark on a PhD. My research has to develop from extant literature and fill gaps to make an original contribution to knowledge.
3. Reading to explore for specific themes and subjects, developing my own perspective on a research finding, writing critically and thinking creatively are skills that I gained on this journey, including networking with my research community.
4. As I progressed, I realised that I had to be open minded and accept that despite being a quantitative researcher, my scientific proofs are not final. My empirical findings, therefore, cannot be 100% correct 100% of the time, but will constantly evolve.
5. I discovered that there is a lot of good on social media if discipline is applied. I learned to use structural equation modelling from a colleague that responded to my

post on British Academy of Management's Facebook page requesting for where I can learn the software. She also taught me without us meeting in person, through Skype.

6. Painfully, I learned that this PhD for which I dedicated over four years of my life to pursue in the UK, cannot solve the world's problems. But I resolved to be the voice of the students on this programme and through the dissemination of this research be an advocate for policy changes that could contribute to making the programme more effective. Similarly, although this PhD may not change the world like Graham Bell did with his telephone or like Thomas Edison with his incandescent lamp, I hope that with the knowledge that I have gained on this journey, I can change the world for some people, one person at a time. Being able to do this will mean the fulfilment of my purpose in life.
7. Above all, I have learned to love my family more. Their constant calls, prayers and words of encouragement was a major contribution to arriving at this point.

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## Appendices

### Appendix A: Graduates' Questionnaire

#### Important Note!

1. Please **note the code provided** in Part A. You are to supply a code to enable your withdrawal from the study in case you want to. Withdrawal is allowed from now up to 14 days after this data collection. Therefore, feel free to send me an email indicating the code on your questionnaire if at any time within the 14 days cooling-off period you wish to withdraw from the survey and your response will be excluded from the analysis.
2. Please use the key below in completing Part B, Sections 1 to 6 of the questionnaire. The key indicates your level of agreement with the relevant statements on a scale of 1 to 7

**Key:** 1 = Totally disagree

2 = Disagree

3 = Somewhat disagree

4 = Neutral

5 = Somewhat Agree

6 = Agree

7 = Totally Agree

#### Part A- Profile

##### Respondents' Profile

Please provide information about you in this section. Information provided will be treated with confidence

Code .....

Sex      Female                       Male

Married                                       Single

Age in years: .....

Course of Study .....

Location of University: .....

State of Origin: .....

At least one of my parents is a business owner  Yes  No

**Part B**

**Attitude towards Entrepreneurship**

Indicate your level of agreement with the following statements from **1 (totally disagree)** to **7 (totally agree)**. Please tick (√) the appropriate boxes. See key above

S/N	Items	Scale						
<b>Section 1</b>								
<b>1</b>	<b>Personal Attitude</b>							
		1	2	3	4	5	6	7
1a	Being an entrepreneur implies more advantages than disadvantages to me							
1b	A career as an entrepreneur is totally attractive to me							
1c	If I had the opportunity and resources, I would love to start a business							
1d	Being an entrepreneur would give me great satisfaction							
1e	Amongst various career options, I would rather be an entrepreneur							
<b>Section 2</b>								
<b>2</b>	<b>Perceived Behavioural Control</b>	1	2	3	4	5	6	7
2a	Starting a business and keeping it viable would be easy for me							
2b	I am able to control the creation process of a new business							
2c	If I tried to start a business, I would have a high chance of being successful							
2d	I know all about the practical details needed to start a business							
<b>Section 3</b>								
<b>3</b>	<b>Subjective Norm</b>	1	2	3	4	5	6	7
3a	My friends would approve of my decision to start a business							
3b	My immediate family would approve of my decision to start a business							
3c	My colleagues would approve of my decision to start a Business							
<b>Section 4</b>								
<b>4</b>	<b>Entrepreneurial Intentions</b>	1	2	3	4	5	6	7
4a	I am ready to do anything legal and morally acceptable to be							

	an entrepreneur								
4b	I will make every effort to start and run my own business								
4c	I have seriously thought about starting my own business								
4d	I am determined to create a business venture in the future								
4e	My professional goal is to be an entrepreneur								
4f	I have got the firm intention of starting a business someday								
<b>Section 5</b>									
<b>5</b>	<b>Cultural Values of Entrepreneurship</b>								
	Please rate the extent to which you agree with the following statements, where <b>1 is Total disagreement</b> and <b>7 is Total agreement</b> . Please see key above								
		1	2	3	4	5	6	7	
5a	The culture in Nigeria is highly favourable to entrepreneurship								
5b	Entrepreneurship is considered to be worthwhile in Nigeria in spite of its risks								
5c	Most people consider it acceptable to be an entrepreneur in Nigeria								
5d	The role of the entrepreneur is undervalued in Nigeria								
<b>Section 6</b>									
<b>Entrepreneurship Teaching and Learning Methods</b>									
<b>Teaching Methods used by lecturers to teach Entrepreneurship Courses</b>									
	To what extent did your lecturers use the following teaching methods in your entrepreneurship courses? Rate from 1 to 7 where <b>1 means not used at all</b> and <b>7 means mostly used</b>								
		1	2	3	4	5	6	7	
6a	Lecturing (Conducting normal lectures)								
6b	Class participation – (making students participate in class activities during lectures, etc.)								
6c	Lecturers using case studies (real or hypothetical) to teach entrepreneurship courses								
6d	Giving students individual assignments and projects								
6e	Giving students group projects and assignments								
6f	Students making oral presentations in the class								
6g	Role Play								
6h	Asking students to prepare business plans								
6i	Students present entrepreneurial projects								
6j	Guest entrepreneurs invited to share their life experiences with the students								
6k	Lecturer organising visits to companies by the class as part of the study								
6l	Industrial Training (IT) in companies (as part of entrepreneurship courses, not the general IT )								

## Appendix B: Students' Questionnaire

### Important Note!

1. Please **note the code provided** in Part A. You are to supply a code to enable your withdrawal from the study in case you want to. Withdrawal is allowed from now up to 14 days after this data collection. Therefore, feel free to send me an email indicating the code on your questionnaire if at any time within the 14 days cooling-off period you wish to withdraw from the survey and your response will be excluded from the analysis.
2. Please use the key below in completing Part B, Sections 1 to 5 of the questionnaire. The key indicates your level of agreement with the relevant statements on a scale of 1 to 7

**Key:** 1 = Totally disagree

2 = Disagree

3 = Somewhat disagree

4 = Neutral

5 = Somewhat Agree

6 = Agree

7 = Totally Agree

### Part A- Profile

#### Respondents' Profile

Please provide information about you in this section. Information provided will be treated with confidence

Code .....

Sex          Female                   Male

Age in years: .....

Course of Study .....

Location of University: .....

State of Origin: .....

At least one of my parents is a business owner           Yes                   No

Married                           Single

## Part B

### Attitude towards Entrepreneurship

Indicate your level of agreement with the following statements from **1 (totally disagree)** to **7 (totally agree)**. Please tick (✓) the appropriate boxes. See key above

S/N	Items	Scale						
<b>Section 1</b>								
<b>1</b>	<b>Personal Attitude</b>							
		1	2	3	4	5	6	7
1a	Being an entrepreneur implies more advantages than disadvantages to me							
1b	A career as an entrepreneur is totally attractive to me							
1c	If I had the opportunity and resources, I would love to start a business							
1d	Being an entrepreneur would give me great satisfaction							
1e	Amongst various career options, I would rather be an entrepreneur							
<b>Section 2</b>								
<b>2</b>	<b>Perceived Behavioural Control</b>							
		1	2	3	4	5	6	7
2a	Starting a business and keeping it viable would be easy for me							
2b	I am able to control the creation process of a new business							
2c	If I tried to start a business, I would have a high chance of being successful							
2d	I know all about the practical details needed to start a business							
<b>Section 3</b>								
<b>3</b>	<b>Subjective Norm</b>							
		1	2	3	4	5	6	7
3a	My friends would approve of my decision to start a business							
3b	My immediate family would approve of my decision to start a business							
3c	My colleagues would approve of my decision to start a Business							

<b>Section 4</b>								
<b>4</b>	<b>Entrepreneurial Intentions</b>	1	2	3	4	5	6	7
	Please rate the extent to which you agree with the following statements, where <b>1 is Total disagreement</b> and <b>7 is Total agreement</b> . Please see key above							
4a	I am ready to do anything legal and morally acceptable to be an entrepreneur							
4b	I will make every effort to start and run my own business							
4c	I have seriously thought about starting my own business							
4d	I am determined to create a business venture in the future							
4e	My professional goal is to be an entrepreneur							
4f	I have got the firm intention of starting a business someday							
<b>Section 5</b>								
<b>5</b>	<b>Cultural Values of Entrepreneurship</b>							
	Please rate the extent to which you agree with the following statements, where <b>1 is Total disagreement</b> and <b>7 is Total agreement</b> . Please see key above							
		1	2	3	4	5	6	7
5a	The culture in Nigeria is highly favourable to entrepreneurship							
5b	Entrepreneurship is considered to be worthwhile in Nigeria in spite of its risks							
5c	Most people consider it acceptable to be an entrepreneur in Nigeria							
5d	The role of the entrepreneur is undervalued in Nigeria							



## Appendix C: Interview Protocol

<p>Greetings and Questionnaire Guide</p>	<p>Thank you for accepting to complete this questionnaire. I am Eunice Oluwakemi Chukwuma-Nwuba a PhD student of the University of Northampton, United Kingdom.</p> <p>I am evaluating the entrepreneurship education programme which is offered as GST Entrepreneurship in Nigerian universities. University graduates and students and the entrepreneurship education lecturers are the samples for the study. The graduates and the students have been surveyed through questionnaires in the first phase of the study. The lecturers are being interviewed in the second phase. You have been selected as a respondent in the lecturers' sample. As a lecturer of the entrepreneurship education programme, you are among the key personnel responsible for the implementation of the entrepreneurship education programme. Your participation in this interview is therefore being solicited. Areas to be covered in the interview include your educational background, teaching methods and the evaluation learners on the course, and the challenges you face regarding the teaching of the course.</p> <p>Your answers will be treated as confidential. Your name and any information that can identify you will not be included in the report. The responses may be archived in the university and may be used for future research. However, anonymity will still be maintained if and when the data is used. The raw data collected will be destroyed when this study is completed.</p> <p>Please note that there is no limit to the amount of information that can be provided. Therefore, feel free to express yourself. Your honest responses will be highly appreciated.</p>	
<p><b>Topics</b></p>	<p><b>Questions</b></p>	<p><b>Responses</b></p>
<p><i>Educational Background</i></p>	<p>What is your educational background?</p>	
<p><i>Educational Set up/Teaching methods (TM)</i></p>	<ol style="list-style-type: none"> <li>1. To start, I would like you to give a general description of the GST Entrepreneurship course.</li> <li>2. What is the objective of GST Entrepreneurship?</li> <li>3. What methods do you use in the teaching of GST Entrepreneurship?</li> <li>4. Are guest lecturers/practitioners with practical experience used in entrepreneurship classes? Give reasons for your answers.</li> <li>5. What other methods could be applied in teaching the subject and why?</li> </ol>	
<p>Skills</p>	<ol style="list-style-type: none"> <li>1. Did you assess the skills needs of the students at the commencement of GST Entrepreneurship course? Give reasons for your answer.</li> <li>2. If yes, what skills are students interested in and to what extend would you say that you been able to</li> </ol>	

	provide them with the skills?	
<b><i>Institutional Characteristics</i></b>	<p>Topic 3 Internship</p> <ol style="list-style-type: none"> <li>1. Does your university provide for internship on GST Entrepreneurship?</li> <li>2. If yes, in which type of organisations do students usually intern? And for how long?</li> <li>3. If no, please explain why it is not provided?</li> </ol>	
<b><i>Educational Scope and Outreach</i></b>	<ol style="list-style-type: none"> <li>1. Does your university have ties with small businesses in your community? If yes, what role do they play on the GST entrepreneurship course?</li> <li>2. Does your university have an organised entrepreneurship networking activity, e. g. alumni network to assist the growth of GST Entrepreneurship? If yes, what does the networking activity comprise of?</li> <li>3. Do business plan competitions take place on the course? if so, how has it benefitted your students</li> <li>4. If not, please explain why.</li> </ol>	
<b><i>Evaluation</i></b>	<ol style="list-style-type: none"> <li>1. How do you evaluate students in GST Entrepreneurship?</li> </ol>	
<b><i>Final thoughts</i></b>	Would you like to share any final thoughts on GST Entrepreneurship?	

Source: Interview protocol developed by author for current study

Appendix D: Approval Letter from the National Universities Commission

# NATIONAL UNIVERSITIES COMMISSION

**PROFESSOR JULIUS A. OKOJIE**  
EXECUTIVE SECRETARY

TEL: (09) 4133185, 4133176-82  
FAX: 07098212004



AJA NWACHUKWU HOUSE  
No. 26, AGUIYI-IRONSI STREET  
MAITAMA DISTRICT  
P.M.B. 237, GARKI G.P.O.,  
ABUJA-NIGERIA

25 January, 2016

**Mrs. Eunice Oluwakemi Chukwuma-Nwuba**  
University Of Northampton  
Northampton Business School  
United kingdom

## TO WHOM IT MAY CONCERN

Your letter of 4 December, 2015 requesting for authority to carry out Research on "**Entrepreneurship Education Programmes in Nigeria Universities**" refers please.

I am pleased to inform you that you have been authorized to conduct research in the Seven Universities in the North-Central Geo-political zone of Nigeria.

The Vice-Chancellors have been duly notified and requested to grant you all necessary assistance.

Please accept the assurances of the Executive Secretary's best wishes.

*enlbrade*  
**Mrs. Constance N. Goddy-Nnadi, MNIM**  
Director, Executive Secretary's Office  
For: Executive Secretary

CC: Vice-Chancellor, University of  
Vice-Chancellor, University of  
Vice-Chancellor, Federal University of  
Vice-Chancellor, University of  
Vice-Chancellor, Federal University of  
Vice-Chancellor, Federal University  
Vice-Chancellor, Federal University

Website: <http://www.nuc.edu.ng>

Appendix E: Approval Letter from the National Youth Service Commission



## NATIONAL YOUTH SERVICE CORPS

Directorate Headquarters

Yakubu Gowon House  
Plot 416, Tigris Crescent,  
off Aguiyi Ironsi Street,  
Maitama District,  
P.M.B. 138, Garki,  
Abuja.

Ref No. NYSC/NDHQ/002/Vol.II/299

14/03/2016

Eunice O. Chukwuma-Nwuha  
Through: The Vice Chancellor  
University of Northampton  
Park Campus  
Boughton Area Road  
Northampton MN 27A6

RE: REQUEST FOR PERMISSION TO ADMINISTER RESEARCH QUESTIONNAIRES  
ON CORPS MEMBERS IN NYSC ORIENTATION CAMPS

Further to Your letter on the subject matter above and the assessments of the sample copy of the questionnaire forwarded to NYSC, I wish to convey the Director General's approval for you to administer your Research questionnaire on "Attitude Towards entrepreneurship" on corps members in some selected NYSC orientation camps.

I am also to inform you that the copy of the Research work is expected to be submitted to our library for reference purpose.

Accept the Director General best regards.

  
A.T. AJAYI  
FOR: DG NYSC

Appendix F: Research Participants Information Sheet (Graduates)

**Research Title: The Effect of Entrepreneurship Education Programme on Graduates' Entrepreneurial Intentions**

Dear Potential Respondents,

**Why you have been invited?**

You are being invited to take part in a research study. It is essential that you have an understanding of the reason the research is being conducted and what it will entail before you make your decisions. Take time to read the information provided here carefully and have a discussion with the other participants if you so desire please. Feel free also to ask me any aspect of the information that is not clear to you or indeed if you need further clarifications or information. Decide afterwards if you wish to take part in the survey or not. Thank you for your time.

**2. What is the purpose of the study and duration?**

The directive for the inclusion of entrepreneurship modules in the curriculum of Nigerian universities was given in 2002 and it is to be designated as General Studies (GST). The draft curriculum for the GST entrepreneurship was to incorporate specific trades to be certified and the requirement was to include the establishment of entrepreneurship study centres. This was because of the increasing unemployment rate among Nigerian graduates. In spite of this, the unemployment rate among graduates has continued to soar. This study therefore is aimed at exploring empirically entrepreneurial intentions among Nigerian graduates resulting from their participation in the compulsory GST entrepreneurship module. It hoped that the outcome of the study will offer measures through which the programme can be advanced to better fulfil its objectives. That is, fostering entrepreneurial intentions among graduates and equipping them with the skills necessary for starting and running new businesses. The findings will be used as a platform for the development and or advancement of policies/guidelines for the effective implementation of entrepreneurship modules.

This study is planned to last for a period of thirty months.

**3. Who are the participants to the survey?**

You were chosen purely based on the fact that you are among the group of graduates of one the [REDACTED] in the North central geo-political zone of the country – [REDACTED] [REDACTED] (Blocked for anonymity).

**4. Do you have to take part?**

Taking part in this survey is entirely voluntary. You do not have to take part in this survey if you do not want to. It is therefore up to you to decide whether or not to participate. In the event that you decide to take part, you will be given this information sheet for keeps. You will also be required to sign a consent form. Nevertheless, you can still withdraw at any point if you do not wish to continue to participate and you do not have to give any reasons for your decision. Furthermore, if you decide to take part you are free to withdraw from the study without giving any reason up to 14 days after you completed the questionnaire.

**5. What you do have to do?**

Your participation is limited to responding to the survey questionnaires to be administered once. If you do require a summary copy of the report at the end of the research, please leave your email addresses and electronic copies of the report will be sent to you.

**6. Any possible benefits of participating?**

Although there are no immediate benefits for participating in this study, it is hoped that this research will extend the frontiers of knowledge in entrepreneurship modules by adding value to the substantial body of knowledge in entrepreneurship. In addition, it is expected to bring to the fore the success of GST entrepreneurship in preparing graduates for entrepreneurial activities from a developing country perspective. Furthermore, it is hoped that the study will contribute to providing the basis for subsequent action planning among other benefits by policy makers and universities.

**7. What are the risks?**

There are no risks involved by taking part in the survey.

**8. How will the information provided be managed?**

The raw data collected will be stored in locked up boxes in Nigeria and stored in locked up file cabinet in the researcher's office on arrival to the UK. All the information collected from you for this research will be kept strictly confidential. Full anonymity of you and your universities/Alma mater will be ensured by the researcher. Therefore, you and your universities will not be identifiable in ensuing publications or the thesis reports or any subsequent publications even where the data is used at a later date by other researchers. Codes assigned will be used throughout the research process and in the Thesis. You will be known only by this code. In addition, because data will be analysed at group level, no individual person will be identifiable. The data collected will be stored in the University of Northampton archives and your anonymity and that of your universities/alma mater will be maintained.

**9. Who is sponsoring the research?**

This research is funded by Tertiary Education Trust Fund (TETFUND) of Nigeria under the auspices of the FCT College of Education, Zuba – Abuja, Nigeria and with support from the Ford Foundation Institute of International Education.

**10. Who gave permission for the survey?**

Permission for the administration of these questionnaires was sought and obtained from the directorate of the National Youth Service Corps (NYSC) headquarters in Abuja, Nigeria and from the National Universities Commission in Abuja, Nigeria in the case of the undergraduate respondents

**11. What will happen if I withdraw from the survey?**

If you withdraw from the survey within the 14 days cooling-off period given, all the information and data collected from you will be withdrawn and destroyed and your code will be removed from the study files. You will also not be eligible to have an e-copy of the report.

**12. What will happen to the results of the study?**

The results will be available as a thesis and various parts will be published in peer reviewed journals. You and your institutions will not be identifiable in any of the reports or publications. All information provided will remain confidential.

**13. Appreciation**

I wish to use this opportunity to thank you for taking the decision to volunteer to participate in this noble research.

**Important Note**

If you wish to obtain further information about this research, please email

[Eunice.Chukwuma-Nwuba@northampton.ac.uk](mailto:Eunice.Chukwuma-Nwuba@northampton.ac.uk)

Appendix G: Research Participants Information Sheet (students)

**Research Title: The Effect of Entrepreneurship Education Programme on Graduates' Entrepreneurial Intentions**

Dear Potential Respondents,

**Why you have been invited?**

You are being invited to take part in a research study. It is essential that you have an understanding of the reason the research is being conducted and what it will entail before you make your decisions. Take time to read the information provided here carefully and have a discussion with the other participants if you so desire please. Feel free also to ask me any aspect of the information that is not clear to you or indeed if you need further clarifications or information. Decide afterwards if you wish to take part in the survey or not. Thank you for your time.

**2. What is the purpose of the study and duration?**

The directive for the inclusion of entrepreneurship modules in the curriculum of Nigerian universities was given in 2002 and it is to be designated as General Studies (GST). The draft curriculum for the GST entrepreneurship was to incorporate specific trades to be certified and the requirement was to include the establishment of entrepreneurship study centres. This was because of the increasing unemployment rate among Nigerian graduates. In spite of this, the unemployment rate among graduates has continued to soar. This study therefore is aimed at exploring empirically entrepreneurial intentions among Nigerian graduates resulting from their participation in the compulsory GST entrepreneurship module. It is hoped that the outcome of the study will offer measures through which the programme can be advanced to better fulfil its objectives. That is, fostering entrepreneurial intentions among graduates and equipping them with the skills necessary for starting and running new businesses. The findings will be used as a platform for the development and or advancement of policies/guidelines for the effective implementation of entrepreneurship modules.

This study is planned to last for a period of thirty months.

**3. Who are the participants to the survey?**

You were chosen purely based on the fact that you are among the group of year one students of one the [REDACTED] in the North central geo-political zone of the country – [REDACTED]

(Blocked for anonymity).

**4. Do you have to take part?**



You do not have to take part in this survey if you do not want to take part. It is therefore up to you to decide whether or not to participate. In the event that you decide to take part, you will be given this information sheet for keeps. You will also be required to sign a consent form. Nevertheless, you can still withdraw at any point from now up to 14 days from today if you do not wish to continue to participate and you do not have to give any reasons for your decision. (Last date withdrawal will be allowed to be inserted when known). Furthermore, if you decide to take part you are free to withdraw from the study without giving any reason up to 14 days after you completed the questionnaire.

**5. What you have to do?**

Your participation is limited to responding to the survey questionnaires to be administered once. If you do require a summary copy of the report at the end of the research, please leave your email addresses and electronic copies of the report will be sent to you.

**6. Any possible benefits of participating?**

You can benefit in this study because it is hoped that this research will identify ways by which the entrepreneurship programme can be better advanced to fulfil its goal of preparing Nigerian participants to become entrepreneurs so as to contribute to job creation and graduate unemployment reduction. The study therefore is expected to provide the basis for subsequent action planning by policy makers, entrepreneurship programme lectures and universities.

**7. What are the risks?**

There are no risks involved by taking part in the survey.

**8. How will the information provided be managed?**

The raw data collected will be stored in locked up boxes in Nigeria and stored in locked up file cabinet in the researcher's office on arrival to the UK. All the information collected from you for this research will be kept strictly confidential. Full anonymity of you and your universities/Alma mater will be ensured by the researcher. Therefore, you and your universities will not be identifiable in ensuing publications or the thesis reports or any subsequent publications even where the data is used at a later date by other researchers. Codes assigned will be used throughout the research process and in the Thesis. You will be known only by this code. In addition, because data will be analysed at group level, no individual person will be identifiable. The data collected will be stored in the University of Northampton archives and your anonymity and that of your universities/alma mater will be maintained.

**9. Who is sponsoring the research?**

This research is funded by Tertiary Education Trust Fund (TETFUND) of Nigeria under the auspices of the FCT College of Education, Zuba – Abuja, Nigeria and with support from the Institute of International Education [IIE (Ford Foundation)].

**10. Who gave permission for the survey?**

Permission for the administration of these questionnaires was sought and obtained from the directorate of the National Youth Service Corps (NYSC) headquarters in Abuja, Nigeria (for Corps members) and from the National Universities Commission in Abuja, Nigeria.

**11. What will happen if I withdraw from the survey?**

If you withdraw from the survey within the 14 days cooling-off period given, all the information and data collected from you will be withdrawn and destroyed and your code will be removed from the study files. You will also not be eligible to have an e-copy of the report.

**12. What will happen to the results of the study?**

The results will be available as a thesis and various parts will be published in peer reviewed journals. You and your institutions will not be identifiable in any of the reports or publications. All information provided will remain confidential.

13. I wish to use this opportunity to thank all those who have taken the decision to volunteer to participate in this noble research.

**Important Note**

If you wish to obtain further information about this research, please email

[Eunice.Chukwuma-Nwuba@northampton.ac.uk](mailto:Eunice.Chukwuma-Nwuba@northampton.ac.uk)



Appendix I: Summary of Bootstrap Iterations (Default model)

Iterations	Method 0	Method 1	Method 2
1	0	0	0
2	0	0	0
3	0	0	0
4	0	0	0
5	0	0	0
6	0	0	0
7	0	0	0
8	0	8	0
9	0	68	0
10	0	165	0
11	0	294	0
12	0	285	0
13	0	291	0
14	0	264	0
15	0	214	0
16	0	140	0
17	0	94	0
18	0	66	0
19	0	111	0
Total	0	2000	0

0 bootstrap samples were unused because of a singular covariance matrix.

0 bootstrap samples were unused because a solution was not found.

2000 usable bootstrap samples were obtained.

Source: Author's AMOS Output

Graduates AIC

AIC

Model	AIC	BCC	BIC	CAIC
Default model	502.389	510.139	751.240	813.240
Saturated model	552.000	586.500	1659.785	1935.785
Independence model	3006.110	3008.985	3098.426	3121.426

Source: Author's AMOS Output

<b>Feedback from Research Ethics Committee</b>	
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Student: Oluwakemi Chukwuma-Nwuba	Date: 21 <sup>st</sup> April 2016
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<b>Action required</b>	Tick
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No action required	✓
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Submit amendments for Chair's Action	
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Submit amendments for consideration by members by email	
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Resubmit application to future REC meeting	
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<b>Decision relating to the proposal</b>	Tick
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Full approval was given	
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Advisory comments were given	✓
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Amendments are required before full approval can be given	
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Approval in principle was given	
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Amendments are required before approval in principle can be given	
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In its current form, approval could not be given	
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<b>Feedback on proposal</b>
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It was noted that the researcher had responded to the feedback on the whole and full approval was given subject to the researcher resolving the following issues:

- 1) Ensuring that documents were consistent in relation to the participant withdrawal strategy (withdrawal at any time was still allowed by the consent forms although the issue was dealt with better in other documents)
- 2) A strategy for the security of electronically held data (e.g. voice recordings, transcribed material)
- 3) Consider the accessibility of the language used on information sheets and consent forms
- 4) Ensure that the Health and Safety Risk Assessment has been approved according to Northampton Business School procedures prior to travel for fieldwork.

<b>Advice and guidance:</b>
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Please note that if you have been asked to make amendments then you should include a cover note with your resubmission that notes the way(s) in which you have responded to RDB comments and suggestions. You should also highlight any changes made to the proposal (e.g. by using a different ink colour).

The Committee dates and deadlines for submission can be found in the [Student Toolkit](#).

The Chair of the Board/Committee can be contacted via the Graduate School if you have any questions about this feedback.

## Appendix K: Abstract of Publication

### Abstract

Culture influences entrepreneurship and it is becoming essential to determine its role in entrepreneurship development in different countries especially in those with cultural diversities like Nigeria where there are less studies. Nigeria included a compulsory variant of entrepreneurship education in the curriculum of universities to nurture entrepreneurial mind-sets. Despite the general recognition of the instrumentality and significance of entrepreneurship, there are no studies evaluating the programme or the role of culture in entrepreneurial intention development. This study applied an extended version of the theory of planned behaviour to examine the interaction between culture and entrepreneurship how this impact on the entrepreneurial intentions of graduates. This article analysed and reported results of the survey of 409 graduates from six universities using structural equation modelling-AMOS, analysis of moment structures. Findings indicate that culture has both direct and indirect effect on graduates' entrepreneurial intentions. The study has implications for policy and practice.

Appendix L: **Graduates' AIC**

Model	AIC	BCC	BIC	CAIC
Default model	502.389	510.139	751.240	813.240
Saturated model	552.000	586.500	1659.785	1935.785
Independence model	3006.110	3008.985	3098.426	3121.426

Source: Author's AMOS Output