

---

# Assessment of Compulsory Entrepreneurship Education Policy on Start-Ups Intention among Undergraduates in North-Eastern Nigeria

**Lawan Amdan Lawan<sup>1</sup>, Babagana Ibrahim Imam<sup>2</sup>, Mohammed A. Mustapha<sup>3</sup>, Mohammed Abba<sup>4</sup>**

Department of Marketing, Ramat Polytechnic Maiduguri, Nigeria

Corresponding Email: [lawanamdan@gmail.com](mailto:lawanamdan@gmail.com)<sup>2</sup>

---

**Abstract:** *The Federal Government of Nigeria through its education Ministry and agencies introduced a mandatory entrepreneurship education for student in tertiary institutions regardless of areas of specialization. Over a decade down the line there is no study that systematically assess its implementation and impact at least in the Northeastern region. The present study made a modest attempt to assess the impact this program on students' attitudes and intention toward business start-ups. To achieve this objective, we adapted the theory of planned behaviour by dropping the subjective norm in the original theory and adding entrepreneurial knowledge offered in the classroom. Data were collected in six tertiary institutions including Universities, Polytechnics, and Colleges of education. A sample of 359 undergraduate, who were selected using multi-stage sampling technique participated in the study. Linear and multiple regressions were employed to determine the individual and collective effects of personal attitude and perception of control capabilities over entrepreneurial behaviour on students' intention to starting new business. Entrepreneurial. Results of the study showed that entrepreneurial knowledge offered in the classroom significantly influences students' personal attitude and perception of control capabilities over entrepreneurial engagement. These factors were in turn found to have significant effect on entrepreneurial intention. However, the study could not find any evidence to show that entrepreneurial knowledge offered in the classroom has direct impact on entrepreneurial intention. Recommendations and directions for future studies were offered.*

**Keywords:** *Start-ups intention, entrepreneurship education, Undergraduates, Northeastern Nigeria*

---

## 1. Introduction

Behavioural intention have been studied as the immediate predictor of actual behaviour in different context and validated across many disciplines especially in the field of psychology. It is found to be the single immediate predictor of actual behavior, particularly when the behavior is rare, difficult to observe, or involves unpredictable time lags, and involves some degree of planning process (Krueger et al., 2000), which is typical of entrepreneurial behaviour (starting a business). Bird (1988) defines intention as “a state of mind directing a person's attention (and therefore experience and action) toward a specific object (goal) or a path in order to achieve something (means)”. Drawing from Bird's definition, entrepreneurship intention can be said to be a state of mind that directs ones attention towards starting a business. Determining

entrepreneurship intention and the factors influencing it, therefore, serve as a means through which actual entrepreneurial behavior can better be understood.

The introduction of compulsory entrepreneurship education in Nigerian tertiary education institutions is borne out of the desire to inculcate positive mindset and intention towards entrepreneurship among undergraduates. Theoretically, scholars refer to entrepreneurship education as a specific knowledge that focuses on skills acquisition and attitude development with a view to preparing participants towards self-dependence. It instills into participants the ability to identify new trends and opportunities, the traits of risk-taking, innovation, and coordination of factors of production for the purpose of new value creation (Kanothi, 2010). Further, Entrepreneurship education is defined as “the whole set of education and training activities – within both formal and informal educational system that try to develop in the participants the intention to perform entrepreneurial behaviors, or some of the elements that affect that intention, such as entrepreneurial knowledge, desirability of the entrepreneurial activity, or its feasibility” (Linan, 2010).

Proponents of both classical and neo-classical economists believe that one of the surest way through which youth unemployment can be tackled is to encourage them to engage in entrepreneurial activities, as entrepreneurial activities boost human potentials, job creation, empower the underprivileged individuals, and grow the economy (Oluremi & Gbenga, 2011). The European Commission believes that an entrepreneurial-oriented society can be natured through entrepreneurship education, as it can effectively equip individuals with the necessary abilities to identify and convert opportunities in their environment into prosperous businesses.

It is consequent upon this premise that the recent past has witnessed a growing interest and emphasis on the need to encourage entrepreneurship programs in institutions of learning in order to inculcate entrepreneurship culture in students. For instance, the European Commission recommended to all its members to integrate enterprise courses in programs of study at all levels from the primary to university education in addition to specific strategies already initiated by the northern European region (The European Commission, 2010). Furthermore, the World Bank also advocated that entrepreneurial education, if well-developed could help in tackling the growing unemployment, and poverty in developing countries, particularly sub-Saharan Africa. It is believed that higher institutions of learning would aid the development of entrepreneurial mindsets, talents, positive attitude, and intention toward entrepreneurial activities among students, through well-tailored entrepreneurship education (World Bank, 2013).

This was earlier envisaged, when the Nigerian Government, through its relevant ministries and agencies directed that entrepreneurship be taught as a mandatory course for all students in the universities, polytechnics, and colleges of education, regardless of students’ departments or area of specialization. The program, which took effect in the 2007/2008 academic year, was intended to avail students the opportunity of gaining both theoretical and practical knowledge of entrepreneurship.

The policy thrust of the mandatory entrepreneurship education was to provide undergraduates with the required entrepreneurship abilities and positive entrepreneurial attitude, so that they can target entrepreneurial career in the future. It is expected that quite a large number

of graduates would acquire adequate entrepreneurship capacities through the program in the first few years, out of which appreciable percentage of the graduates would presumably start their own businesses.

However, over a decade since the launching of the mandatory entrepreneurship education initiative, youth unemployment has been rising at an alarming rate. Nigerian graduates are seemingly interested, but yet to embrace business as a professional option; they are apparently more attracted to salaried jobs that are virtually non-existing. This does bring to question, the effectiveness of the compulsory entrepreneurship education program in yielding the desired objectives. Hence, we raised the following research questions:

RQ1- Does EE plays any role in developing positive attitude towards entrepreneurship among undergraduates in Nigeria?

RQ2- Does EE improve entrepreneurial capabilities and confidence of Nigerian undergraduates?

In the light of above background and the research questions raised, the study has been divided into following sections. Section II deals with conceptual clarifications and empirical Literature Review and the identified gap; Section III deals with Design and Methodology; Section IV deals with Data Analysis and findings; Section V deals with Discussions-implications of the study, limitations and directions for future research.

## **2. Conceptual Clarifications and Empirical Literature Review**

Many studies on factors influencing entrepreneurial intention have routinely used personal characteristics and other demographic variables. This approach to understanding entrepreneurship intention has, however, been criticized based on the premise that personality attributes, beliefs, and attitudes are not always static; they change with exposure to events, especially real-world entrepreneurial experience or simulation in an entrepreneurship education class. The drawback of this approach is that researchers collect data on an entrepreneur after they are exposed to entrepreneurship event under the assumption that traits and attitudinal beliefs do not change.

Thus, the present study adapts the Ajzen's theory of planned behaviour, which is the most dominant intention models used in entrepreneurship studies. Ajzen's TPB postulated that intention is the immediate antecedent of planned human behavior and intention itself is preceded by personal attitude toward, subjective norm, and perceived behavioral control. Attitude toward a given behavior is the product of expected outcome of the behavior and the positive or negative evaluations of the outcome. Drawing from this definition, **attitude toward entrepreneurship** is, therefore, the level of favorably or unfavorably disposition towards entrepreneurship, which is formed by the student's conviction about the possible prospects of entrepreneurship and their appraisals. Thus, favorable evaluations of the prospects lead to a favorable attitude towards entrepreneurship and vice-versa. Perceived behavioral control refers to beliefs about the presence of factors that may facilitate or impede the performance of a given behavior. The behavior in the present study is **entrepreneurship, therefore, perceived control over entrepreneurship** indicates the feeling of having or not having the personal abilities and confidence towards a successful entrepreneurship career. Kanothi (2010) in his conceptualizations, agreed that **entrepreneurship education** is a specialized program, which instills into students, the abilities

to fully understand the challenges of life as they are and explore developments and opportunities, in the environment to appropriately respond to the challenges in all facets of life. Entrepreneurship education as the independent variable in the present study is modelled as a precursor to two of the three immediate antecedents of intention (personal attitude and perceived behavioral control).

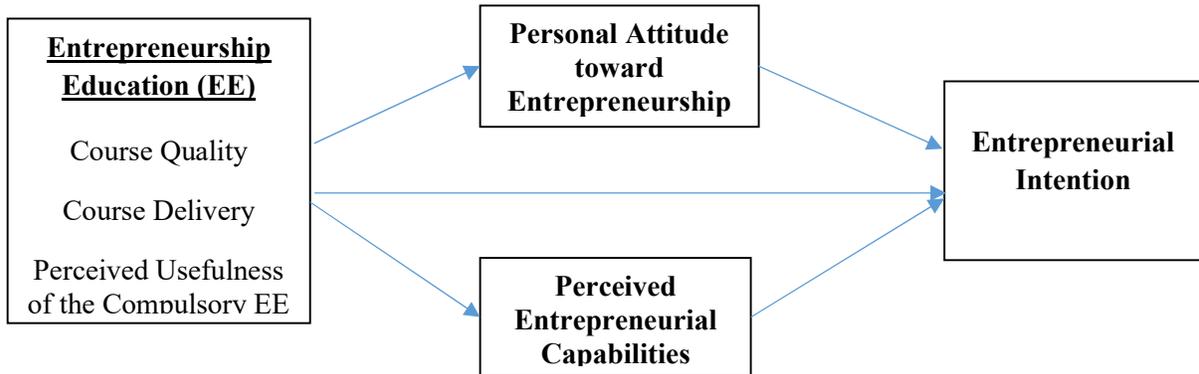


Figure 1. The conceptual research model

### 2.1 Entrepreneurship education and entrepreneurial intention

While many scholars in the field of entrepreneurship simply described entrepreneurship, others focused on the content of entrepreneurship education or the impact of courses by comparing takers and non-takers of entrepreneurship courses.

In the present study, entrepreneurship education is modeled as an influencer of entrepreneurial intention directly and indirectly through attitude and perceived behavioural control (capabilities) components of the Theory of Planned Behaviour. Although few studies (e.g. Karali, 2013) showed that the impact of entrepreneurship education on entrepreneurial intention is mediated by all the three components of the TPB, a good number of scholars who studied these relationships demonstrated that entrepreneurship education impact upon entrepreneurial intention through only attitude and perceived control over entrepreneurial behaviour.

While some of these studies reported negative effect, quite a number of them showed that entrepreneurship education positively affects attitude and perceived control over entrepreneurial behaviour. On the negative side, for instance, (von Graevenitz, Harhoff, & Weber 2010) observed that education lessens the entrepreneurial desire of the individual. The argued that when business schools teach their students to be too analytic, problem-conscious and risk-averse, they scare them from establishing new business ventures. Instead, they prepare them for jobs in corporations and suppress creativity and entrepreneurship. Oosterbeek, van Praag, and Ijsselstein (2010) in a similar study found that the entrepreneurship education programme had no positive impact on entrepreneurial intentions, this result, according to the authors may not be unconnected with the fact that participants for the study were drawn from a university where entrepreneurship education programme was compulsory for certain degree program. Similarly, Aslam et al. (2012), Ramayah et al. (2012) reported that entrepreneurship education does not statistically significant impact on attitude toward entrepreneurship and the other components of

the theory of planned behavior. Abina, Oyeniran, and Oniskosi (2015) found that entrepreneurship education does not have significant impact on entrepreneurial intentions in Nigeria; yet, other studies (e.g. Ibrahim, 2014) showed that entrepreneurship education have positive impact on entrepreneurial intention. However, these studies were largely limited by scope and methodological issues as they concentrated on very small samples in a particular geopolitical region, and were not based on known theoretical framework used by most scholars in entrepreneurial intention studies.

On the positive side, Giacomini et al. (2011) assert that people's entrepreneurial inclination actually increases with education. This assertion is in line with several empirical investigations. For instance, an empirical investigation of the role of university entrepreneurship programs in developing students' entrepreneurial leadership competencies in Malaysia revealed that university entrepreneurship programmes significantly contribute in the development of students' personal leadership qualities, entrepreneurial leadership learning opportunities, interpersonal leadership competencies and link students to the world of entrepreneurial venturing (Bagheri, Akmaliah & Pihie, 2013). Similarly, Pruett et al. (2009) and Indarti et al. (2010) pointed out that one of the main barriers for entrepreneurial intention among students is the lack of knowledge in management, business, accountancy and other administrative topics, which can be overcome through proper education. They also observed that entrepreneurship education, especially education that provides technological training is crucial to enhance entrepreneurs' innovation skills in an increasingly challenging environment. This view was also shared by Rauch and Frese (2010), who argue that entrepreneurial education can enhance an individual's creativity, flexibility and ability to respond to changing situations and thus contribute to innovative behaviors.

Likewise, in a study of the impact of college entrepreneurial education on entrepreneurial attitudes and intention to start a business in Uganda using a longitudinal design in which college students responded to a questionnaire before and after they undertook an entrepreneurial education course, Byabashajja (2011) found that attitudes toward entrepreneurship as a career choice changed during the period the students were subjected to entrepreneurship education as all the attitude variables show statistically significant positive changes after the entrepreneurship course.

In the same vein, Diaz-Garcia, Saez-Martinez and Jimenez-Moreno (2015) assessed the impact of the Entrepreneurship education programme on participants' entrepreneurial intentions using control group. Their study revealed that participants in the programme had higher levels of self-efficacy and entrepreneurial attitude at both moments in time than non-participants. The participants in the programme also had a less optimistic perception of the economic climate, although this difference disappeared in the follow-up questionnaire. Entrepreneurial intention was significantly higher for the participants in comparison to the control group after the six-month period. Ramoni et al. (2016) also found overwhelming evidence that taking two or more core entrepreneurship elective courses positively influenced the attitude and intention to become an entrepreneur both at the time of graduation and long afterward.

Several other studies conducted across different cultural context with similar focus showed that entrepreneurship education correlates positively with students' intention towards

founding new businesses. Such studies include Autio et al. (2001) Scandinavia and the US, Kuttim et al. (2014), Europe, including Spain (Linan, 2005), Germany (Tegtmeier, 2012), and Netherlands (Karali, 2013). Studies in Egypt (Hattab, 2014), South Africa (Malebana, 2014), in Malaysia (Bagheri et al., 2014) among others, all shared similar or the same results.

However, Sanchez (2011) observed that entrepreneurship education may not necessarily leads to the formation of entrepreneurial intention. He believes that what can change the entrepreneurship intentions of students during education programs is not what people learn about entrepreneurship itself, but rather what they learn about themselves and their own capabilities. As such, it can be right to say that entrepreneurship education does influences entrepreneurial intention mostly through attitude, and perceived confidence or control over entrepreneurial behaviour.

## **2.2. Attitude and entrepreneurial intention**

Studies (e.g. Kuttim et al., 2014; Malebana, 2014) showed that attitude influence entrepreneurial intention; they revealed that the respondents' outlook in terms of prospects for self-employment is positive, and the TPB's antecedents of intention appeared to have explained a significantly higher portion of the variance in their intent for entrepreneurship. They, however indicates more specifically that attitude toward entrepreneurship was the most significant predictor of entrepreneurial intention. This holds true considering the Ajzen's theory of planned behaviour, which stated that an individual's attitude toward a given behaviour is a function of the individual's beliefs that performing a given behavior will result in certain outcome, usually weighted by the desirability of the outcome; desired outcome leads to positive attitude and then intention.

## **2.3. Perceived control over entrepreneurial behavior and entrepreneurial intention**

Theoretically, authors linked self-efficacy (perceived control/capability over a behaviour) to managerial and entrepreneurial phenomena. For instance, Bandura (1977) showed that correlations between self-efficacy and career intent range is positive they observed self-efficacy (PBC) to be a better predictor than most personal traits used in entrepreneurship research, such as locus of control. Bandura (1986) also linked self-efficacy to initiating and persisting at behavior under uncertainty, to setting higher goals, and reducing threat-rigidity and learned helplessness. He added that when people are faced with setbacks, self-efficacy influence our choices, enthusiasm, effort and perseverance, meanwhile it could also affect our faith to successfully achieve the target. Further, Delmar and Davidson (2000) believed that self-awareness is one of the important characteristics of the decision of starting a new business by individuals, the concept of self or consciousness is the prototype of the self-efficacy theory. They pointed out that once self-efficacy in any skill is internalized by the individual. Confidence encourages the individual to accept greater challenges, and succeeding in them reinforces his/her perception of efficacy, creating a spiral effect that improves self-efficacy even more.

Empirically, Hattab (2014) showed that a spiraling increase in self-efficacy, obtained particularly through entrepreneurship education, can cause entrepreneurial attitudes to increase over time. Similarly, Izquierdo and Buelens (2018) found evidence that entrepreneurial self-efficacy mediates the relationship between the students' perceived competencies for

entrepreneurship and their intentions to new venture creation, suggesting that individuals who self-reported higher on competencies for entrepreneurship each reported higher levels of entrepreneurial self-efficacy and, in turn, more entrepreneurial intentions. In a study entrepreneurial intent among Romanian students, Shook and Bratianu (2010) found that self-efficacy and the desirability associated with creating a venture were positively related. They also showed that a person's intentions to create a new business will be strongest when he or she has a high degree of self-efficacy resulting from mastery experience, entrepreneurial role model, social persuasion, and a high degree of goal setting. Similarly, Yushua and Changpin (2014) pointed out that Self-Efficacy primarily works in the viability of entrepreneurial cognition. These authors suggested that only if people have enough faith to entrepreneurship and confidence in entrepreneurial success, that would produce a stable tendency of entrepreneurship, otherwise it can only be a short impulse of entrepreneurship that is only a desire for entrepreneurial cognition.

Generally, the extant literature suggest that scholars have attempted to address the issues raised in the introductory part of this study. However, generalizing such studies include the area of present study may not be justified as the studies were conducted in different countries with contrasting cultural backgrounds when compared to Northeastern Nigeria. The few studies conducted in Nigeria focused on the Southern part (e.g. Okeke, 2016) and the authors have not used any known behavioral intention models, particularly the Ajzen's Theory of Planned Behaviour or Shapero's Model of Entrepreneurial Event, both of which have been proven as having the capabilities to predict entrepreneurial intention. Therefore, the methodologies adopted in the studies were not systematic enough to allow for generalization. Hence, the present study attempt modestly fill these identified gaps by University, Colleges of education, and Polytechnics in Northeast Nigeria.

### **3. The Objectives of the Study**

The main objective of the study is to assess the impact of the implementation of entrepreneurship education policy on entrepreneurial intention among higher education students in Nigeria. The specific objectives are:

- i) to examine the effect of entrepreneurial knowledge on attitude towards entrepreneurship among undergraduates in Northeastern Nigeria.
- ii) to examine the effect of entrepreneurial knowledge on perceived entrepreneurship capabilities among undergraduates in Northeastern Nigeria.

### **4. Hypotheses**

HO1: Entrepreneurship education does not have significant impact on students' entrepreneurial attitude

HO2: Entrepreneurship education does not have significant impact on students' perceived entrepreneurship capabilities

## **5. Methodology**

### **5.1 Target Population**

The present study targets final year (2020/2021 academic year) students of tertiary institutions. The choice of this population is informed by the believe that studying entrepreneurship by surveying people, who have not been exposed to entrepreneurship instead of drawing a sample from a population of successful or current entrepreneurs may reduce data-biases. This is in line with Carter et al. (2003), who observed that it is more appropriate to study entrepreneurial intention phenomena prior to its occurrence, otherwise, responses may be biased to justifying successful entrepreneurship. Therefore, university, polytechnic, and college of education students, who may or may not have interest in entrepreneurship, are suited to this study. The participants were drawn among final year students because it is the time they are expected to start contemplating different occupational decisions as they enter the labor market. Such samples, in the opinion of Krueger, et al (2000) clearly comprise subjects with wide-ranging intentions and attitudes toward entrepreneurship. Their minds may not have coalesced yet with details of a business, but wider career intentions.

### **5.2 Instrument**

The questionnaire which consisted of different scales for assessing the variables under investigation was developed by the researchers in strict compliance with Krosnick, and Presser (2010) recommendations for optimal questionnaire design as well as Azjen's operational description of the constructs of the Theory of Planned Behaviour. In line with Zikmund et al. (2009), the validity of the data collection instrument used in the present study was assessed five three professors (expert) in entrepreneurship domain. The experts scrutinized and determined the all-inclusiveness of the variables under investigation and offered useful suggestions on clarity and some misconception, which resulted in the elimination of few ambiguous statements, double-barreled and irrelevant questions. They also suggested a few additional questions and statements. Cronbach alpha coefficient, which is the prevalent technique used in the social sciences for testing internal consistency (Drost, 2011) was applied in the present study. The Cronbach alpha coefficients from 0.725 to 0.798 for all the variables under investigation. The final instrument was then pilot-tested final year students (n = 80). The participants in pilot study were randomly drawn from three out of the six institutions

### **5.3 Sampling and Data collection**

Data were collected in 18 tertiary institutions (universities, polytechnics, and colleges of education) in the northeast Nigeria. We adopt multistage sampling procedure to select the institutions. This process is shown in table 1. We first obtained approval from the staff members responsible in all selected institutions and questionnaire were administered to students during timed classes. About 405 students participated in the study. This was reduced to the absolute samples size 359 after data cleaning. The sample size was determined using Saunders et. al (2009) table of absolute samples sizes at 5% error margin.

Selected states in the Northeast Nigeria	Selected Tertiary Institutions	Selected Schools/Faculties (Strata)	Population as per Sampling frame	Sample Size
<b>North-East</b> Borno State	Kashim Ibrahim College of Edu (KICOE)	A (Vocational studies) B (Sciences) C (Arts)		
	Ramat Polytechnic Maiduguri (RAMPOLY)	A (Management Sci) B (Sciences) C (Vocational studies)		
	University of Maiduguri (UNIMAID)	A (Arts) B (Social & Mgt Sci) C (Sciences)		
Gombe State	Gombe State Polytechnic (GSP)	A (Management Sci) B (Sciences) C (Vocational studies)		
	Gombe State University (GSU)	A (Arts) B (Social & Mgt Sci) C (Sciences)		
	College of Educ. Technical Gombe (COETG)	A (Vocational studies) B (Sciences) C (Arts)		

Table 1. Multi-stage sampling procedure

### 5.5 Analysis and Findings

First, an exploratory analysis was carried out to check for normality of the data, check of for outliers as well as to clean the data of errors. Both descriptive and inferential statistics such as the Two-way ANOVA, Logistic regression, and multiple linear regression will be used as per the objectives and variables in the study.

Table 2. Background Profile of the Respondents

Variables	Freq.	%	Mean	SD	Min.	Max.
<b>Gender</b>						
Male	198	55.2				
Female	161	44.8				
<b>Age Group</b>			<b>24.63</b>	<b>3.22</b>	<b>17</b>	<b>35</b>
17 – 25 years	204	56.8				
> 25 years	155	43.2				

<b>Marital Status</b>						
Married	65	18.1				
Not Married	294	81.9				
<b>Type of Institution of Study</b>						
University	138	38.4				
College of Education	97	27.0				
Polytechnic	124	34.5				

**2.1 Gender:** Table 2 indicates that the distribution of participants in the study, based on gender is fair. Out of the 359 undergraduates that took part in the investigation, male respondents constitute 55.23% (198). This means that female respondents constituted the remaining 44.8% (161). Male students, therefore, constitute the bulk of the respondents in the study.

**2.2 Age Groups:** The investigation shows that the age of the undergraduates that partook in the investigation ranged between 17 to 35 years. In this regard, the respondents, who are 17 – 25 years old constituted 56.8 (204) and those, who are 26 years and older were 53.2% (155). Considering the age mean score of 24.6 years ( $\approx$  25 years) which falls within 17 – 25 and the standard deviation of 3.22 years, the average age respondents in the study is 25 years.

**2.3 Marital Status:** The analysis showed that the majority of the undergraduates, who took part in the study were not married (81.9%). About 65 respondents (18.9%) were single were married.

**2.4 Type of Institution of Study:** The analysis revealed that most of the students, who participated in the present study were drawn from the Universities (38.4%). Polytechnics students constitute the second highest with 34.5% representatives. Whereas students from colleges of education were the least represented with 27.0%. The population of students in the Universities are larger than those of Polytechnics and Colleges of education. Hence, the Universities students were expectedly the majority in the study because the total sample size were distributed proportionately based on the population sizes of final year undergraduates in the institutions.

**2.5 Analyzing the sub-objectives I. to examine the effect of entrepreneurship education on attitude towards entrepreneurship among undergraduates in Northeastern Nigeria and II to examine the effect of entrepreneurship education on perceived entrepreneurship capabilities among undergraduates in Northeastern Nigeria.**

These objectives are addressed using simple regression. The factor contributing to the two precursors to intention is the entrepreneurship education (taught courses). Therefore, the regression models of “attitude toward entrepreneurship ( $\hat{Y}_1$ ); and perceived behavioral control ( $\hat{Y}_2$ ) contains only one predicting variable namely; entrepreneurship education ( $X_1$ ) as shown in the prediction equations below:

$$\hat{Y}_1 = b_0 + b_1X_1 + e_i \dots\dots\dots (1)$$

$$\hat{Y}_2 = b_0 + b_1X_1 + e_i \dots\dots\dots (2)$$

Where:

$\hat{Y}_1$  = attitude toward entrepreneurship  
 $\hat{Y}_2$  = perceived behavioral control  
 $X_1$  = entrepreneurial knowledge offered in classroom  
 $e_i$  = Random error

The mathematical expression of the suggested hypotheses, which examine the soundness of regression models, are as follows:

*H01a:*  $Y_1 = \beta_0 + e_i$

*H1a:*  $Y_1 = b_0 + b_1X_1 + e_i$

*H01b:*  $Y_3 = \beta_0 + e_i$

*H1b:*  $Y_2 = b_0 + b_1X_1 + e_i$

The summary ANOVAs in Table 3.1, which shows the regression models indicate that the models 1 and 2 with one predictor were significant  $F_{(1, 357)} = 38.176, p = .000$ ; and  $F_{(1, 357)} = 97.318, p = .000$  respectively. This showed that the slopes of the models lines are not the same as zero. Thus, *H01a* and *H01b* have been rejected. The unstandardized coefficients in Table 4 have been used to construct the mathematical derivative of the regression equations for the two separate models are given as:  $\hat{Y}_1 = 2.473 + (.330)X_1 + \text{Error}$   $\hat{Y}_2 = 2.130 + (.446)X_1 + \text{Error}$

**Table 3.1 Summary ANOVA**

“Model”		“Sum of Squares”	df	“Mean Square”	F	Sig.
1	Regression	5.008	1	5.008	38.176	.000 <sup>b</sup>
	Residual	46.830	357	.131		
	Total	51.837	358			
Model						
2	Regression	9.182	1	9.182	97.318	.000 <sup>b</sup>
	Residual	33.681	357	.094		
	Total	42.863	358			

Furthermore, the Model Summaries in Table 4 revealed the R-values and coefficients of determination values for the two separate outcome variables namely; “attitude toward entrepreneurship and perceived behavioral control” in relation to one predictor variable (entrepreneurial taught courses). Concerning attitude toward entrepreneurship, model 1 in Table 4 revealed an R-value of .311, which means that the teaching of entrepreneurship courses and entrepreneurial attitude correlates in a statistically significant manner and in a positive direction. This suggests that the independent variable (EE) could significantly predict the outcome variable. Expectedly, the  $R^2$  value of .097 implies that about 9% of the variance in attitude toward entrepreneurship was accounted for by entrepreneurship education.

**Table 3.2 Model Summary (ies)**

Model	R	“R-Square”	“Adjusted R-Square”	“Std. Error of the Estimate”
1	.311 <sup>a</sup>	.097	.094	.362
Model 2	.463 <sup>a</sup>	.214	.212	.307

Predictors: (Constant), EE, ATE, PBC

Dependent Variable: EI

Similarly, the analysis showed a significant correlation (R-value of .463) between entrepreneurship knowledge taught in the classroom and the perception of entrepreneurship abilities (model 2). This certainly showed that the independent (EE) variable could significantly predict the outcome variable (PBC). This is confirmed by the  $R^2$  value of .214, which indicates that about 21% of the variance in students’ perception of their entrepreneurship abilities was accounted for by entrepreneurship knowledge taught in the classroom

**Table 3.3 Regression coefficients of effects of taught entrepreneurial courses on PA & PBC**

		B	Std. Error	$\beta$	$t$	Sig	LB	UB
Model 1	Constant	2.473	.190		13.042	.000	2.100	2.846
	Entrepreneurship Education	.330	.053	.311	6.179	.000	.225	.435
Model 2	(Constant)	2.130	.161		13.247	.000	1.814	2.447
	Entrepreneurship Education	.446	.045	.463	9.865	.000	.357	.537

“B: Unstandardized Coefficients; S.E: Standard Error;  $\beta$ : Standardized Coefficients;  $t$ :  $t$  – value;  $p$ :  $p$ -value”

The simple linear regression (models 1 & 2) showed that the effects of the independent variable on the outcome variable in both the models are statistically significant. Specifically, Model 1 revealed that entrepreneurship knowledge taught in the classroom and entrepreneurial attitude significantly correlates ( $\beta = .311$ ,  $t = 13.042$ ,  $p = .000$ ). The standardized coefficient indicates that entrepreneurship knowledge explained about 31% of the variance in students’ entrepreneurial attitude. Hence **(HO1a) is rejected**. Therefore, there is enough evidence to conclude that the entrepreneurship knowledge taught in the classroom in Nigeria significantly influences the students' personal attitude about entrepreneurship.

Similarly, the regression analysis for model 2 indicates that taught entrepreneurship knowledge significantly influences subjective norm ( $\beta = .463$ ,  $t = 9.865$ ,  $p = .000$ ). The standardized coefficient showed that taught entrepreneurship knowledge accounts for about 46% of the variance in students’ perception of their abilities to start and successfully manage a business. Therefore, the research hypothesis **HO1b**, which states that entrepreneurship knowledge taught in the classroom is not a significant predictor of perception of capabilities *is rejected*. The two models proved separately that entrepreneurial knowledge offered to Nigerian undergraduate significantly influences their entrepreneurial attitude and perception of personal abilities about entrepreneurship.

We went further to check the combined effect of the three variables using multiple regression. Therefore variables entered into the regression equation as contributors to intent for a business startup are entrepreneurial knowledge offered in the classroom, personal attitude about entrepreneurship, and perceived level of control over entrepreneurial behavior. Hence, the regression model of entrepreneurial intention ( $\hat{Y}$ ) consists of three predictor variables namely; entrepreneurial knowledge offered in classroom ( $X_1$ ), personal attitude ( $X_2$ ), and perceived behavioral control ( $X_3$ ). Hence, the prediction equation is as follows:

$$\hat{Y} = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + e_i \dots\dots\dots(1)$$

Where:

$\hat{Y}$  = entrepreneurial intention

$X_1$  = entrepreneurial knowledge offered in classroom

$X_2$  = personal attitude toward entrepreneurship

$X_3$  = perceived level of control over entrepreneurial behavior

$e_i$  = Random error.

The proposed hypothesis, which assesses the strength of the entrepreneurial intention regression model, is expressed as follows:

HO2:  $Y = \beta_0 + e_i$

HA2:  $Y = b_0 + b_1X_1 + b_2X_2 + b_3X_3 + e_i$

The ANOVA summary (Table 3. 4) indicates that the regression model containing all the three predictor variables is statistically significant  $F_{(3, 355)} = 58.283, p = .000$ . This suggests there would be more than zero variance in the outcome variable consequent upon the change in the predictor variable, thus, **HO2 is rejected**. Based on the unstandardized coefficients in Table 4.3.3.4, the regression equation for the model is given by:

$$\hat{Y} = .890 + (.070)X_1 + (.371)X_2 + (.314)X_3 + \text{Error}$$

**Table 3.4 Summary of ANOVA**

Model		Sum of Squares	Df	Mean Square	F	P
1	Regression	16.909	3	5.636	58.283	.000
	Residual	34.332	355	.097		
	Total	51.241	358			

Dependent Variable: Entrepreneurial Intention, Sig =  $p < 0.05$

Moreover, the Model Summary indicated significant multiple correlations between all the explanatory and the outcome variables ( $R$ -value = .574). This means that the explanatory variables are expected to influence the outcome variable significantly. As expected, the  $R^2$  value of .324 confirms the significance of the effect. About 32% of the variation in the intent of Nigerian undergraduates, is accounted for, by the predictor variables entered in the regression equation.

**Table 3.5 Model Summary**

Model	R	R-Square	Adjusted R-Square	Std. Error of the Estimate
1	.574	.330	.324	.311

Predictors: (Constant), EE, ATE, PBC

Dependent Variable: EI

**Determination of the contribution of each of the independent variables:**

**HO2a:** Taught entrepreneurial courses are not relatively important in predicting the business start-up intent of undergraduates in Nigeria.

**HO2b:** Attitude towards entrepreneurship is not relatively significant in predicting the intention of founding a new business among undergraduates in Nigeria.

**HO2c:** Perception of personal abilities towards an entrepreneurial career is not a relative predictor of the intent of founding a new business among undergraduates in Nigeria.

The regression analysis presented in Table 3.6 indicated that the contribution of entrepreneurial knowledge offered in the classroom to entrepreneurship intention is not statistically significant ( $\beta = 0.066$ ,  $t(355) = 1.331$ ,  $p = 0.184$ ). Hence, there is no evidence to reject the null hypothesis **HO2a**. However, personal attitude about entrepreneurship is found to have statistically significant impact on intention to new venture creation ( $\beta = 0.373$ ,  $t(355) = 7.963$ ,  $p = 0.000$ ). More specifically, the standardized coefficient ( $\beta$ ) indicates that one unit change in entrepreneurial knowledge leads to about a 37% change in the intention for entrepreneurial activities among undergraduates in Nigeria. Moreover, the semi-partial or part correlation  $.346^2$  (.119) indicates that entrepreneurial knowledge uniquely accounts for about 12% of the variance in students' intent for entrepreneurship, which cannot be accounted for, by other predictors in the model. Thus, hypothesis **HO2b is supported**

The regression model also showed that students' perception of control over business venture (PBC) has a significant influence on students' intention to starting new business firms. The standardized regression coefficient and its associated values ( $p$  and  $t$ ) indicate that perception of entrepreneurship abilities is relatively a significant contributor to the intention to starting a business ( $\beta = 0.287$ ,  $t(355) = 5.707$ ,  $p = < 0.01$ ,  $pr = 0.248$ ). The standardized coefficient (Beta weight) showed that a unit change in perceived behavioral control leads to about 29% change in entrepreneurial intention of Nigerian undergraduates. Further, the part correlation  $.248^2$  (.0615) indicates that perceived behavioral control uniquely accounts for an additional 6% of the variance in students' entrepreneurship intent, which is not due to the existence of the other predictors in the model. Hypothesis **HO2c is supported**.

**Table 4.3.3.4 Multiple Regression of the effects of EE, PA, & PBC on EI**

		B	S. E	$\beta$	$t$	Sig	Partial	Part	Tolerance	VIF
1	Constant	.881	.218		4.041	.000				
	Entrepreneurial knowledge	.070	.053	.066	1.331	.184	.070	.058	.758	1.319
	Attitude towards entrepreneurship	.371	.047	.373	7.963	.000	.389	.346	.859	1.164

	Perceived Behavioral Control	.314	.055	.287	5.707	.000	.290	.248	.747	1.339
--	------------------------------	------	------	------	-------	------	------	------	------	-------

**Note:**  $R^2 = .574$ ; adjusted  $R^2 = .324$ ; [ $F_{(3,355)} = 58.283, p = .000$ ] **DV:** Entrepreneurial Intention, B- Unstandardized Coefficients; S.E: Standard Error;  $\beta$ : Standardized Coefficients;  $t = t - \text{value}$ ;  $p$ :  $p - \text{value}$

The multiple regression above evidently showed that attitude towards entrepreneurship accounts for the highest variation in the intent for entrepreneurship amongst the students. Hence, it is the highest contributor, when compared with the other predictors in the model. Perceived behavioral control is the second-highest contributor. However, entrepreneurial knowledge offered in the classroom failed to have statistically significant impact on students' intention towards starting new businesses. It is, however, worthy of note that the regression model consisting of all the three independent variables (i.e. entrepreneurial knowledge offered in the classroom, personal attitude towards entrepreneurship, and perception of personal capabilities toward entrepreneurship) as shown in the model summary, explained only about 32% of the variation in the intention to new firm creation amongst Nigerian undergraduates. It means that unknown factors outside the scope of the present study are expected to account for about 68%.

### 6.1 Discussion and Conclusion

The purpose of this study was assess the influence of entrepreneurial knowledge offered in the classroom to Nigerian undergraduates on the intention to starting their own businesses. We adapted the TPB model; the most successful and commonly used intention model to effectively accomplish this objective.

There are three key findings of the present study. Whereas an earlier study by the researcher using University undergraduates only showed that entrepreneurial education influence intention to founding new business directly and indirectly through Ajzen's antecedents of intention, the present study has shown that entrepreneurship knowledge compulsorily offered in Nigerian tertiary institutions does not have a statistically significant impact directly on intention to a business career. Other past researchers in Africa and other contexts with a similar focus have also found that that mandatory entrepreneurial education influences the students' intention to business startup (Oguntimehin & Olaniran, 2017; Malebana, 2016) and (Oosterbeek et al., 2010; VonGraevenitz et al., 2010) respectively.

However, the present finding found credence Zapeda (2015), who found no supporting evidence that compulsory entrepreneurship education significantly affects entrepreneurial intentions. These pattern of results is in line Ajzen's (1991) original theory. The TPB postulates that intention, which is the immediate predictor of any planned behaviour is in turn immediately preceded by attitude, subjective norm, and perceive behavioural control. The TPB added that other external factors could only affect intention through these immediate antecedents.

Secondly, in line with Karimim et al. (2016), Fayolle and Gailly (2015), and Manuere et al. (2013) who found in their separate studies that both elective and compulsory entrepreneurship education had significantly influence students' TPB's antecedents of intention, results of the present study also provide supporting evidence that entrepreneurial education does have significant influence on students' personal attitude and perception of control over entrepreneurial behaviour. In our view, one compelling interpretation for the present set of findings is that exposing students to entrepreneurship classes, especially experiential or innovative pedagogical approaches, where students had hands-on knowledge would foster positive attitudes, abilities,

and confidence towards entrepreneurship among participants. This finding may also be explained by the idea that a good knowledge of entrepreneurship through courses that enables interaction with successful entrepreneurs, and brings together students with strong motivation for entrepreneurship or interacting with lecturers who value entrepreneurial mindset would boost the participants' confidence to start and run business ventures. Thirdly, we showed that personal attitude towards entrepreneurship is the highest contributor to intention, followed by perception of control over entrepreneurship, then entrepreneurial education was not statistically significant. Taken together, the predictors accounted for about 32% of the variation in intention to founding business.

Our findings highlight 1) that compulsory entrepreneurship education policy is partially achieving the purpose of its introduction in Nigerian higher education institutions. 2) The finding of the study also confirms that tertiary institutions in Nigeria can serve as a vehicle to foster entrepreneurial attitude and entrepreneurship among the youth. 3) Since the result of the study is based on data from current students, who are just graduating or about to graduate, Nigeria would probably begin to see graduates that positive attitude towards entrepreneurship and are more willing to start their own businesses, given the opportunity and volitional control.

### **6.1 Limitations of study**

One limitation of this study is that data are collected once (cross sectional design). Hence, we were not able to monitor the development of entrepreneurial intention of the participants before and through the entrepreneurship education offered in the classroom. This could only be achieved through longitudinal or pre and posttest study design. Another limitation of this study may be in terms of both sample size and scope as it focused on tertiary institutions in Northeastern Nigeria. Its findings, therefore, should cautiously be interpreted.

### **6.2 Contributions of the Study**

Despite these limitations, results of our study offer significant contributions both in terms of theory and practice. By dropping subjective norm and adding entrepreneurial knowledge offered in classroom, the present study demonstrates that the theory of planned behaviour is open to modification and/or extension and is capable of predicting intention in different context. Further, the present study will serve as a reference point and a useful framework to guide prospective researchers in the field of entrepreneurship.

In practice, findings of the present study provides a deeper understanding of the nature of the correlation between entrepreneurial knowledge offered in classroom, students' personal attitude and their perception of entrepreneurship control factors as well as intention to startup. The Government, policymakers or institutions' administrators can particularly use the knowledge provided in the current study as a basis for evaluation and justification of the resources allocated for the program as well as for future interventions.

### **6.3 Directions for future research**

Although this study made meaningful contribution to both theory and practice, its most unique contribution may be that it raise a variety of interesting questions for future study. In terms of future studies, it would be worthwhile to extend the current findings by examining the intention-behavior relationship as proposed by Ajzen's TPB in entrepreneurship domain. More studies based on longitudinal data and/or pre and post-test design are required to track students'

entrepreneurial intention development before, during, and after completing graduation. The present study has surveyed students taking compulsory entrepreneurship courses in the classroom. Future studies can compare the impact of compulsory vs voluntary entrepreneurship education on entrepreneurial intentions.

## References

- Abina, M. B., Oyeniran, I. W., & Onikosi-Alliyu, S. O. (2015). Determinants of entrepreneurial intention among Nigerian students. *Ethiopian Journal of Environmental Studies & Management*, 8(1), 107 – 112. doi: <http://dx.doi.org/10.4314/ejesm.v8i1.10>
- Ajzen, I. (1991). The Theory of Planned Behaviour. *Organizational Behaviour and Human Decision Processes*, 50(2), 79–211. Doi.org/10.1016/0749-5978 (91)90020-T
- Aslam, T. M., Awan, A. S. & Khan, T. M. (2012). Entrepreneurial intentions among University Students of Punjab a Province of Pakistan. *International Journal of Humanities and Social Science*, 14 (2), 114–120.
- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., & Hay, M. (2001). Entrepreneurial intent among students in Scandinavia and in the USA. *Enterprise and Innovation Management Studies*, 2(2), 145-160.
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191-215. [dx.doi.org/10.1037/0033-295X.84.2.19](http://dx.doi.org/10.1037/0033-295X.84.2.19)
- Bagheri, A., Akmaliah, Z., & Pihie, L. (2013). The role of university entrepreneurship programs in developing students' entrepreneurial leadership competencies: Perspectives from Malaysian Undergraduate students. *Journal of Education for Business*, 88, 51–61. DOI: 10.1080/08832323.2011.638681
- Bird, B. (1988). Implementing Entrepreneurial Ideas: The Case for Intention. *Academy of Management Review*. 13(3), 442-453. DOI: 10.2307/258091
- Byabashaija, W. (2011). The impact of college entrepreneurial education on entrepreneurial attitudes and intention to start a business in Uganda. *Journal of Developmental Entrepreneurship*, 16(1), 127–144. DOI: 10.1142/S1084946711001768
- Diaz-Garcia, C., Saez-Martinez, F., & Jimenez-Moreno, J. (2015). Assessing the impact of the Entrepreneurs education program on participants' entrepreneurial intentions. *RUSC Universities and Knowledge Society Journal*, 12(3), 17-31. DOI /10.7238/rusc.v12i3.2146.
- Drost, E. A. (2011). Validity and reliability in social science research. *Education Research Perspective* 38, 105-23. Retrieved from [https://www.researchgate.net/publication/261473819\\_Validity\\_and\\_Reliability\\_in\\_Social\\_Science\\_Research](https://www.researchgate.net/publication/261473819_Validity_and_Reliability_in_Social_Science_Research)

- Hattab, H. W. (2014). Impact of entrepreneurship education on entrepreneurial intentions of University Students in Egypt. *The Journal of Entrepreneurship*, 23(1), 1–18. DOI: 10.1177/0971355713513346
- Ibrahim, W. N. Z., Bakar, A. R., Asimiran, S., Mohamed, S., & Zakaria, N. S. (2015). Impact of entrepreneurship education on the entrepreneurial intentions of students, in technical and vocational education and training institutions (TVET) in Malaysia. *International Education Studies* 8(15). Doi: org/10.5539/ies.v8n12p141
- Kuttim, M., Kallaste, M., & Aino Kiis, U. V. (2014). Entrepreneurship education at university level and students' entrepreneurial intentions. *Social and Behavioral Sciences*, 110, 658–668. Retrieved from [www.sciencedirect.com](http://www.sciencedirect.com)
- Izquierdo, E. & Buelens, M. (2008, July 17 – 20). *Competing models of entrepreneurial intentions: The Influence of entrepreneurial self-efficacy and attitudes*. Internationalizing Entrepreneurship Education and Training Conference. Oxford, Ohio, USA.
- Linan, F. (2004). Intention-Based Models of Entrepreneurship Education Small Business, 11-35. Retrieved from [https://www.researchgate.net/publication/235937886\\_Intention-Based\\_Models\\_of\\_Entrepreneurship\\_Education](https://www.researchgate.net/publication/235937886_Intention-Based_Models_of_Entrepreneurship_Education)
- Kanothi, R.N. (2009). *The dynamics of entrepreneurship in ICT: Case of mobile phones downstream services in Kenya*. ISS Working Paper Series / General Series 466, 1–76. Erasmus University Rotterdam. Retrieved from <http://hdl.handle.net/1765/18727>
- Karali, S. (2013). The Impact of entrepreneurship education programs on entrepreneurial intentions: An application of the theory of planned behavior (Master's thesis, Erasmus University of Rotterdam, Netherlands).
- Krueger, N. F., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurial intentions. *Journal of Business Venturing*, 15(6), 411-432. doi.org/10.1016/S0883-9026(98)00033-0
- Malebana, M. J. (2014). Entrepreneurial intentions of South African rural university students: A test of the theory of planned behaviour. *Journal of Economics and Behavioral Studies*, 6(2), 130-143. Retrieved from <https://pdfs.semanticscholar.org/2eb0/a7ed1b21aa22974ec912f3ae1d9a27c3.pdf>
- Oluremi, H. A., & Gbenga, G. M. (2011). Environmental factors and entrepreneurship development in Nigeria. *Journal of Sustainable Development in Africa*, 13 (4)
- Okeke, M. N., Okonkwo, G. I., & Oboreh, J. C (2016). Entrepreneurship education as a catalyst for entrepreneurial inclination in selected universities in South-Eastern Nigeria. *Arabian Journal of Business and Management Review*, 5(11), 767-775. DOI: 10.3923/jas.2014.767.775...

- Oosterbeek, H., van Praag, M., & Ijsselstein, A. 2010. The impact of entrepreneurship education on entrepreneurship skills and motivation. *European Economic Review*, 54(3), 442-454.
- Ramayah, T., Ahmad, N. H., Char Fei, T. H. (2012). Entrepreneur education: Does prior experience matter? *Journal of Entrepreneurship Education*, 15, 65–81.
- Ramoni, S.D (2016). Determinants of entrepreneurial intention among Nigerian University graduates. *World Journal of Social Sciences*, 6(1), 45–59. Retrieved from <http://www.wjsspapers.com/static/documents/March/2016/4.%20Suraju.pdf>
- Sanchez, J. C. (2013). The Impact of an Entrepreneurship Education Program on Entrepreneurial Competencies and Intention. *Journal of Small Business Management*, 51(3), doi.org/10.1111/jsbm.12025
- Tegtmeier, S. (2012). Empirical implications for promoting students' entrepreneurial intentions. *Journal of Enterprising Culture*, 20 (2) 15–169. DOI: 10.1142/S0218495812500070
- Von Graevenitz, G., Harhoff, D., & Weber, R. 2010. The effects of entrepreneurship education. *Journal of Economic Behavior & Organization*, 76(1), 90-112.
- World Bank (2013). Youth development. Retrieved from: [www.worldbank.org/childrenandyouth](http://www.worldbank.org/childrenandyouth).
- Yushuai, W., N., Y. & Changping, W. (2014). An analysis of factors which influence entrepreneurial motivation focused on entrepreneurs in Jiang Xi Province in China. *Journal of Applied Sciences*, 14: P 767-775. DOI: 10.3923/jas.2014.767.775...
- Zikmund, W. G., Babin, J. B., Carr, J. C., Griffin, M. (2010). *Business Research Methods*. South-Western Cengage Learning.