Review Article

A Relationship between Sustainable Entrepreneurship Education and Entrepreneurial Intentions among Students: A Developing Country's Perspective

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Abstract

This paper aims to empirically examine the causal relationship between sustainable entrepreneurship education and entrepreneurial intention amongst undergraduates. The paper investigates how the outcome of an effective entrepreneurial education system- attitude, skills and knowledge affects the intention of university undergraduates to building a career in entrepreneurship. The study was conducted in Enugu state, Nigeria among university undergraduates. The structural model and the hypotheses were tested using partial least square-structural equation modelling (PLS-SEM) approach in SmartPLS M2.0 software. The current study reveals that all the proposed determinants bear positive relationships with entrepreneurial intention in varying degrees. Also, entrepreneurial knowledge was found to have a direct impact on entrepreneurial attitude. Thus, to reduce dependence on paid employment and reduce the rate of graduate unemployment among youths requires that their attention should be moved towards entrepreneurship by forming the right attitude, acquiring necessary skills and having requisite knowledge about the importance of entrepreneurship in building economies and growing societies.

Keywords: Entrepreneurship, Entrepreneurial Intention, Entrepreneurial Education, Youth Unemployment, Partial Least Square-Structural Equation Modelling (PLS-SEM)

Introduction

The past few decades have experienced a notable growth in entrepreneurship education (hereafter known as EE) in most industrialised countries (Matlay & Carey, 2006) and it has reduced unemployment and improved optimal resource allocation leading to economic development (Shane and Venkataraman, 2000). EE has become an issue of high concern for most governments of the world and agencies of regional organisations such as the Association of African Universities as well as the Organisation for Economic Cooperation and Development (OECD) (Johnson, Hirt, & Hoba, 2011; Wilson, 2008).

Youth unemployment in Nigeria has continued to be on the increase amidst concerted efforts by government and the private sector to ameliorate this condition. In 2018, the rate of unemployment rose from 21.8% in the first quarter to 22.7% in the second quarter and 23.1% in the third quarter (NBS, 2018), an indication of an increasing rate of unemployment and lack of faith in paid employment to absolve the teeming population of Nigerian graduates.

Governments at different levels and institutions of higher learning believe that entrepreneurship education in universities contributes positively to creating employment opportunities, poverty alleviation and economic growth (Arogundade, 2011; Audretsch, 2017). This has led the National Universities Commission (NUC) to introduce a mandatory entrepreneurship course to enhance undergraduates' entrepreneurship knowledge within the school curriculum (Ojeifo, 2013). This move as Aja-Okorie and Adali (2013) believe will equip them with the requisite information on entrepreneurship and build their skills level, with the aim of ameliorating graduate unemployment, high dependence on paid employment in Nigeria, and influence the entrepreneurship behaviour among university students and graduates (Anosike, 2017). However, the result of these efforts seems still missing in the mainline EE literature, particularly from the developing countries context (Henry, Hill & Leitch, 2005) and as such the generalisation of its effect cannot be reached without a reasonable error in judgement as this population is substantial. Thus, integrating this perspective is worthwhile.

Bae, Qian, Miao and Fiet (2014), opine that entrepreneurship education refers to the learning process for entrepreneurship attitude and skill, while entrepreneurship intention is the desire to start a firm. The current researcher align with these lines of thought, as the current research argues that, in addition to attitude and skill, entrepreneurship education also include entrepreneurship knowledge- awareness about the place of entrepreneurship in growth of the society and economic growth. This will go a long way to address the low entrepreneurship culture noticed among most Nigerian graduates, lay emphasis on the development of competence and reduce the high dependence on paid employment in a country where graduate unemployment is tremendously growing (NBS, 2017; NBS, 2018).

The increasing complexity in the world of today shows that there is a gap between what is learnt in schools and the requirement to function professionally (Achtenhagen and Grubb, 2001; Eraut, 1994). This can be said of entrepreneurship today as graduates seem not to be as motivated by the entrepreneurship drive as expected; which is evident in the rising unemployment levels. Thus, there is need to look beyond just entrepreneurship education and ensure that it necessarily gives rise to competence. Moreover, the extant literature on the entrepreneurship education and entrepreneurship intention relationship shows that little empirical research has focused on developing economies (Ajike, Nnorom, Akinlabi, Onyia, & Kwarbai, 2015; Byabashiaja and Katono, 2011), such as Nigeria and has reported conflicting and vague findings (Lorz, Volery and Muller, 2011; Bae et al., 2014). Given the peculiar challenges of less developed and developing economies, such as the instability of business environment and the unpredictable business climate, it has become imperative to embark on this study.

This study is therefore, an attempt to examine these observed weaknesses in the literature, as they form gaps which we seek to fill by empirically examining the impact of entrepreneurship education on entrepreneurship intentions using Nigeria undergraduates.

In a bid to fill the identified research gaps to boost the literature, this study develops and tests a conceptual model that explains how entrepreneurship knowledge, skill and attitude have an effect on entrepreneurship intentions. Specifically, the study argues that entrepreneurial education will drive the intention of Nigeria's teeming graduates to become entrepreneurs if attention is paid to these key attributes of entrepreneurship education, hence reducing unemployment. The methodology used in this study is presented and justified in the second section while the data analysis and discussions follow. The concluding part of the paper presents the implications and sets the agenda for further research.

Review of Relevant Literature

This section covers the literature review of this paper, exploring entrepreneurship as a career option for Nigerian undergraduates, as well as entrepreneurship education and intension.

Entrepreneurship as a career option for Nigerian undergraduates

Adopting entrepreneurship as a source of livelihood is considered deliberate and voluntary (Krueger, Reilly, & Carsrud, 2000). On this basis, it is appropriate to analyze the processes leading to this decision. Gartner et al. (1994) and Kyro and Carrier (2005) are of the opinion that entrepreneurship is a process occurring over a time, and in this sense, entrepreneurship intentions becomes the initial stage leading to venturing into the world of entrepreneurship (Lee and Wong, 2004). This is in agreement with Ajzen's (1991, 2005) theory of planned behaviour which argues that the best antecedent of any behaviour is intention. Even in the face of unrealised intention, it is rational and valid to have an initial intention that will lead to the formation and other set up activities as necessary precursors to entrepreneurial venturing (Ekundayo & Durowaiye, 2014). Entrepreneurship intention is not usually inherited, but can be learnt through educational training and development. This agrees with Athayde's (2009) point of view that entrepreneurship features can be significantly shaped through the instructive program that students are exposed to; that is making entrepreneurship a career option for undergraduate students. Cooper (1985, 1993) argues that familiarity with and awareness of a subject exerts positive influence towards learning, particularly as it provides the learner of additional knowledge about the subject. This could be the reason why Linan (2004) asserts that the higher the information a person has towards a career, the higher his awareness about the reality of such career choice.

Entrepreneurship Education and Entrepreneurship Intention: Meaning and Components

Entrepreneurship education is one that started long ago, advancing overtime into a widespread trend (Katz, 2003; Kurako, 2005). It consists of any process of learning for entrepreneurship attitudes and skills (Fayolle, Gailly, & Lassas-Clerc, 2006). This has being operationalised as been of several types and targeted at different audiences (Bridge, O'Neill, & Cromie, 1998; Gorman, Hanlon, & King, 1997). Entrepreneurship awareness education is targeted at students who hitherto were not familiar with business set-up; this is the basis of our argument in this study. Moreover, scholars have been able to show a positive relationship between entrepreneurship education and entrepreneurship intention; Galloway and Brown (2002) in their study examined the extent to which entrepreneurship electives influence

students' ambition and assert that it might be longer-term rather than immediate. Henderson and Robertson (2000) on their part supported that effective entrepreneurship education can be a driver to help people desire entrepreneurship as a career choice. Similarly, educational programmes have been found to influence entrepreneurship attributes (Gorman et al., 1997). On the other hand, entrepreneurship intention has been considered the main predictor leading to business establishment and a positive attitude towards the venture should precede this (Yoon, 2004). Entrepreneurship intention has been described by Krueger et al. (2000) as an individual's determination to establish his own business, without which the fellow cannot proceed further. In addition to that, Shapero (1981) asserts that getting entrepreneurs with clear entrepreneurship intentions is important for a nation to find a way out of economic downturns. This therefore, makes it imperative for a society such as Nigeria to find a way to inculcate the entrepreneurship drive in students as a way to advance the course of business venturing.

Meanwhile, Turker and Selcuk (2009) argue that the bulk of research outputs concentrated efforts on adult entrepreneurs. This is echoed by Henderson and Robertson (2000) who opine that there is scarce literature on young entrepreneurs' perspective. To close this identified literature gap, this study takes a look at young adults (university undergraduates) who are still in the course of their training; to assess their intention towards entrepreneurship and their level of entrepreneurship skills and knowledge as well as attitudinal disposition.

Entrepreneurship education has been proven by previous studies as a key antecedent of entrepreneurship intentions; they have shown a direct relationship between entrepreneurship education and entrepreneurship intentions (Galloway and Brown, 2002; Gorman et al., 1997; Henderson and Robertson, 2000). Empirical studies have also identified the relevance of entrepreneurship education (see Donckels, 1991; Zhao, Hills, & Siebert, 2005; Robinson and Sexton, 1994, Crant, 1996). However, there has been little research on the nature of what is gained in the course of the education, which should drive the students to desire entrepreneurship as a source of livelihood. Increasing complexity in the world of today shows that there is a gap between what is learnt in schools and the requirement to function professionally (Achtenhagen and Grubb, 2001; Eraut, 1994). This can be said of entrepreneurship today as graduates seem not to have taken the entrepreneurship drive as expected, as evidenced in the rising unemployment levels. Thus, there is need to look beyond just education but to include effective entrepreneurship education which should give rise to competence. As Lizzio and Wilson (2004) posits, it is a mix of knowledge, skills and attitude which is expected to be criterion for effective performance in any job (Hager, Gonzzi and Athanasou, 1990).

Theoretical Foundation

Ajzen (1985) proposed the theory of planned behaviour as a successor to the theory of reasoned action (Fishbien and Ajzen, 1975). Both the theory of reasoned action and the theory of planned behaviour assert that behaviour is a direct outcome of intention (Shih and Fang, 2004). The theory of planned behaviour incorporates the concept of perceived behavioural control, thus extending the belief that behaviours are completely within the control of the individual as posited by the theory of reasoned action. According to Ajzen (1985, 1991), perceived behavioural control relates to the belief that an individual has the ability and capacity required to carry out an action. Perceived behavioural control is added as an external variable with a direct relationship with actual behaviour and indirect relationship through behavioural control and behaviour swhen the behaviour is not totally subject to choice and the assessment of control over the behaviour is

accurate. The path from perceived behavioural control to intentions shows the influential drive of control on behaviour through intentions (Madden, Ellen and Ajzen, 1992). This implies that the view of low levels of influence over performing behaviour results in low intentions to perform the behaviour. Perceived behavioural control encompasses two components- facilitating conditions and self-efficacy (Ajzen, 1991). Facilitating conditions reflects the availability of the required resources needed to perform behaviour such as time, money and other resources. The second one, self-efficacy refers to the individual's self-assurance in his capability to execute an action required to produce expected results (Bandura 1977, 1982). Given this explanation, a student with a selfassured skill, knowledge and attitude of enterprise is more inclined to adopt the path of entrepreneurship.

Aligning with Bandura's (1977) idea of self efficacy, individuals who perceive themselves as possessing the competence to perform a task will be more disposed to adopting and carrying on with the task. Same can be said in the course of taking up entrepreneurship as a career. Baartman and Bruijn (2011) are of the view that when measuring competence, the level of knowledge, skill and attitudes can be assessed as they are applied together to carry out a task. This explains why most competence development theories argued that for vocational competence to be attained, individuals must in addition to acquiring knowledge, skills and attitudes; integrate them (Eraut, 1994; Kaslow *et al.*, 2007). Hence, knowledge, skills and attitudes should be operationalised in the same context and time as it become noticeable in behavioural patterns (Leont'ev, 1977; Wertch, 1981).

Shapero (1975) in his study posits that the decision to go into entrepreneurship requires credibility, i.e. a believable opportunity, and also requires some kind of precipitating event which can be in the form of mixed experiences. He argues that for this to be achieved an entrepreneur's new venture creation idea should be believable and some propensity to act upon the opportunity should exist. In a later study, Shapero and Sokol (1982) expanded the Entrepreneurial Intentions Model to Entrepreneurship Events Model (EEM). They posited entrepreneurial intention is a function of desirability, feasibility and propensity to act. They argue that these three factors are the most important determinants affecting an individual's drive to go into entrepreneurship. Desirability refers to the extent to which one finds the idea of business venturing attractive, feasibility is the degree to which the potential entrepreneur believes in his own personal ability to initiate a start-up, while propensity reflects the disposition to start a business. However, in an earlier study, Shapero (1982) explains that perceived feasibility and perceived desirability are sufficient indicators of entrepreneurship intentions, and that including the third variant (propensity) presents a complex issue. He argues that the propensity to act is complex in nature.

Moreover, Davids (2017), opines that the EEM has not been extensively applied in predicting entrepreneurship intentions. In two alternate studies, Krueger *et al.* (2000) found that EEM is a more sufficient model for predicting entrepreneurship intention, while, Schlaegel and Koenig (2013) found the Theory of Planned Behaviour to be a better predictive framework of entrepreneurship intentions. Davids (2017) in his study agrees that the TPB model is a more sufficient predictor of entrepreneurship intention, but further argues that the difference in results between his study and that of Krueger et al (2000) maybe as a result of socio-cultural characteristics and the exclusion of the propensity to act.

Hypotheses Formulation

Attitude and entrepreneurship intentions

An entrepreneurship attitude embraces an individual's total personality, including his drive for scholarship, vocation and life. Personal attitude towards entrepreneurship has been measured without restriction in some instances (Krueger et al., 2000) and in some other instances have been limited as being in contrast to paid employment (Kolvereid, 1996). However, this latter opinion is vague. There is evidence supporting the assertion that a large number of business owners today started their businesses as a part-time operation while in a paid employment (Delmar & Davidsson, 2000; Kolvereid & Isaksen, 2006). Attitudes towards owning a business refers to the disposition of an individual towards been an entrepreneur (Ajzen, 2001; Autio et al., 2001). It includes both emotional and evaluative considerationsattractiveness and advantages. Entrepreneurship is an intentional and conscious attempt at been self-employed. It involves the application of properly planned thoughts and factual results for a good decision. Bagozzi et al. (1989) opine that intention is the best predecessor of planned behaviour. Understanding intentions thus proves valuable, particularly in uncommon situations involving a reasonable interval such as entrepreneurship (MacMillan and Katz, 1992). Simply put, intentions predict behaviour while certain attitudes predict intention and so, to understand the outcome of intentions such as actions and behaviours, antecedents of intention require being studied (Krueger et al., 2000). From the foregoing discussions, we hypothesise thus:

H1: Entrepreneurial attitude has a significant and positive influence on entrepreneurship intentions among Nigerian undergraduates.

Entrepreneurship Skills and entrepreneurship intentions

Entrepreneurship skills are those needed to turn ideas into action. Developing entrepreneurship skills and mindset is among the aims of introducing entrepreneurship education in institutions of higher learning. Research has shown that more than developing some personality trait is to capture a mindset and attitudinal approach towards entrepreneurship (European Commission, 2012). Athayde (2009) opines that teaching students how to be entrepreneurs is possible only through nurturing the talents that are needed to turn their concepts into workable plans and action. These skills include creativity, analytics and adaptability. Creativity refers to the capacity to link ideas to solve societal problems (Bird, 1995) while analytics refers to the act of separating main ideas from supporting ideas and recognising patterns and consequences (De Jong, 2008). Adaptability involves mastering activities such as observation, interpretation, anticipation and response in that order. Successful entrepreneurs have been known to be those with the capacity to respond to environmental changes or market fluctuations (Oosterbeek, Hessel and Ijsselstein, 2010). This way, ideas from various sources are used in meeting environmental needs. Individual creative skill is considered a necessity in paid employment and the novelty upon which entrepreneurship prides is accounted for by it. (Nystrom, 1979). Based on the foregoing discussions, we hypothesise thus:

H2: Acquisition of entrepreneurship skills will increase the potential of having entrepreneurship intentions among Nigerian undergraduates.

Knowledge of entrepreneurship and entrepreneurship intentions

Entrepreneurial knowledge refers to the awareness and familiarity of entrepreneurship and understanding of the importance of entrepreneurs and entrepreneurship in stimulating economic growth and development of societies (European Commission, 2012). Entrepreneurship education should improve the possibility of more entrepreneurs by enhancing the knowledge of students and improving their self confidence (Krueger and Brazeal, 1994). This will increase their desirability and perceived feasibility of entrepreneurial venturing by showing the high regard placed in the career choice and the role it plays in the society and economy (Souitaris, Zerbinati and Al-Laham, 2007). Peterman and Kennedy (2003) in their study found that students exposed to entrepreneurship education are more prone to desire entrepreneurship as a career option. However, he studied high school students rather than undergraduates. Hence we hypothesise that:

H3: Nigerian undergraduates who have entrepreneurship knowledge will be inclined to desire entrepreneurship as a career choice

Attitude and entrepreneurship knowledge

There has been an increasing recognition in literature that the strength of attitude is derived from some factors (Petty and Krosnick, 1995). Some attitudes are strong, enduring and consequential whereas others are weak in the sense that they lack these features. Earlier research endeavours have discussed and extensively investigated the construct of attitude-relevant knowledge which refers to a number of principles and occurrences that resonate in an event of confronting an attitude object (Davidson, 1995; Wood, Rhodes and Biek, 1995). Thus, knowledge is a basic property of attitudes (Fabrigar, Petty, Smith, & Crites, 2006).

Researchers have been interested in knowledge and assume that with more awareness and familiarity with a subject comes a higher attitude towards it. Kallgreen and Wood (1986) examined attitudes towards environmental protection and measured attitude-relevant knowledge; it was revealed that behaviour was predicted more when attitudes was based on greater amount of knowledge than in situations when they were lesser. In the same vein, Davidson, Yantis, Norwood, & Montano (1985) noted that behaviours were better predicted in high-knowledge settings than in settings with only trivial amount of knowledge. Based on the foregoing discussion, we hypothesize thus;

H4: Entrepreneurship attitude mediates the relationship between entrepreneurship knowledge and intentions.

Conceptual Model

Methodology



Figure 1: Conceptual Model for the study

Operationalisation of the research constructs

We operationalised entrepreneurship education as an outcome variable, seeking to break it down into components that arise from effective entrepreneurship education- attitudes, skills and knowledge. The scale items employed in this study were existing scales in the literature. This was to improve the content validity (Saunders and Lewis, 2012). Scales for entrepreneurship attitudes, skills and knowledge were adapted from the European Commission (2012) and Turker and Selcuk (2009). Similarly, measures for entrepreneurship intention consisted of three items based on Linan and Chen (2009).

Sample and data collection

All the items were measured in a five-point Likert style rating scale ranging from strongly agree (5) to strongly disagree with a mid-point (3) indicating indecision.

The study sampled 250 undergraduate students using selfadministered questionnaires in the Enugu metropolis, a city in Southeastern Nigerian. The city is characterised by the presence of about 5 tertiary institutions including a Federal University (University of Nigeria, Enugu Campus), a state university (Enugu State University of Science and Technology) and several private universities and polytechnics. Of this number, only 196 valid responses were gathered, representing the 78.4% response rate.

The participants were purposively and conveniently approached to enable collection of a large pool of data within a short time and at the same time, reach out to only relevant respondents as the study sample comprises students who were at least in the third year of their tertiary education (those who have or are taking a course in entrepreneurship). The participants' demographics are as presented in table I.

Reliability and validity of research instrument

Hair *et al.*'s (2014) two step approach to assessing measurement model was adopted. The researchers adopted the Cronbach Alpha and composite reliability for reliability test and afterwards construct validity was tested. From table II, the Cronbach alpha scores of the constructs and the composite reliability scores were well above the 0.7 minimum acceptable lower limits (Nunnally and Bernstein, 1994).

Table 1. Respondents Demographics

Variables	Count	Percentage
Gender		
Male	89	45.41
Female	107	54.59
Marital Status		
Single	157	80.10
Married	39	19.90
Age		
<20	59	30.10
21-35	124	63.27
36-50	13	6.63
Year of Study		
3rd year	94	47.96
4th year	43	21.94
5th year and above	59	30.10
Religion		
Christian	179	91.33
Moslem	17	8.67
Total	196	100

Instrument validity was also confirmed by establishing both convergent and discriminant validity considering that construct validity is attained when both convergent and discriminant validity are met (Fornell and Larcker, 1981). An instrument can only attain convergent validity "if the average variance extracted (AVE) is 50 percent or above" (Bagozzi and Yi, 1988; Fornell and Larcker, 1981), and the reflective indicators load significantly (Gefen and Straub, 2005) (i.e. *t*-value should be equal or above 1.96). As shown in Table II, the four constructs have AVE values ranging from 0.521 to 0.647.

Our measure of the psychometric properties of validity also displayed discriminant validity as the criterion for acceptance was not violated as shown in table III (Fornell and Larcker, 1981).

Structural Model and Test of Hypotheses

The proposed research hypotheses were tested through a partial least square structural equation modelling (PLS-SEM) technique in the SmartPLS 2.0 software (Ringle *et al.*, 2005). Our preference for this SEM technique is based on its appropriateness for testing predictive models using data of all sizes (Segarra-Moliner *et al.*, 2013; Blunch, 2008). The structural outputs support all the hypothesised relationships as shown in table IV. A positive linear effect was found to exist between entrepreneurship attitude and entrepreneurship intention ($\beta = 0.39$; t = 3.59; p < 0.05). The relationship between entrepreneurship skills and entrepreneurship intention was also positive and significant ($\beta = 0.22$; t = 7.98; p < 0.05). Further, the effect of entrepreneurship knowledge

Table 2. Items' Factor Loadings, t-statistics, Reliability and Validity (AVE)

on entrepreneurship intention was found to be positive and significant ($\beta = 0.53$; t = 5.71; p < 0.05). Finally, the indirect relationship between entrepreneurship knowledge and entrepreneurship intentions through entrepreneurship attitude was also positive and significant ($\beta = 0.13$; t = 4.48; p < 0.05), implying that entrepreneurship attitude does transmit the effect of entrepreneurship knowledge onto intention.

In total, sixty-four percent (64%) of the variance in entrepreneurship intention was explained by the three variables. This implies that over 30% of the variations in entrepreneurship intention are explained by other variables. Hence, the predictive power of our model can be said to be strong.

Discussion and Limitations

This study was set to examine the predictive power of entrepreneurship education on the intention of undergraduates in Nigerian tertiary institutions to become entrepreneurs. The paper draws on the theory of planned behaviour; a theory that posits that the immediate antecedent of any behaviour is intention, and has been extended to studies in various disciplines including marketing and psychology. We subsequently subjected our hypotheses to tests with the partial least square structural equation modelling (PLS-SEM) technique in the SmartPLS 2.0 software. Our findings reveal that entrepreneurship attitude, skills and knowledge are direct predictors of entrepreneurship intentions. More so, the relationship between entrepreneurship attitude and knowledge is established. Our results

Construct	Indicators	Factor Loadings	<i>t</i> -value	Cronbach alpha (α)	Composite reliability	AVE
Entrepreneurship Attitude	EA1	0.834	49.712***		0.826	0.647
	EA2	0.686	14.082***	0.722		
	EA3	0.589	12.143***	0.723		
	EA4	0.810	28.521***			
Entrepreneurship Skill	ES1	0.781	35.379***	0.887	0.947	0.619
	ES2	0.809	24.757***			
	ES3	0.843	44.174***			
Entrepreneurship Knowledge	EK1	0.606	32.985***		0.881	0.521
	EK2	0.953	46.349***	0.797		
	EK3	0.828	13.146***			
Entrepreneurship Intention	EI1	0.725	24.193***		0.859	0.597
	EI2	0.733	41.555***	0.781		
	EI3	0.807	38.421***			

Note: Significant levels are denoted as ***p < 0.05

Table 3: Construct Correlations and Discriminant Validity

Constructs	Entrepreneurship Attitude (EA)	Entrepreneurship Skill (ES)	Entrepreneurship Knowledge (EK)	Entrepreneurship Intention (EI)	
EA	0.804				
ES	0.599	0.787			
EK	0.621	0.658	0.722		
EI	0.499	0.642	0.551	0.773	

Note: Square roots AVE are in bold italic print in the diagonal

Table 4: Estimated results of the structural model and hypotheses test outputs

Hypothesized relationships		Path coefficient	Standard error	<i>t</i> -value	Result
Direct	effects				
H_{l}	Entrepreneurial attitude \rightarrow entrepreneurship intention	0.39	0.06	3.59***	Supported
H_2	Entrepreneurship skills \rightarrow entrepreneurship intention	0.22	0.05	7.98***	Supported
$\overline{H_3}$	Entrepreneurship knowledge →entrepreneurship intention	0.53	0.06	5.71***	Supported
H_4	Entrepreneurship knowledge \rightarrow entrepreneurship attitude	0.13	0.04	4.48***	Supported
Notes: Significant level is denoted as $***p < 0.05$					

also contribute significantly to literature supporting the predictive role of intentions on behaviour.

Our findings bear some relationship with earlier studies, having found entrepreneurrial attitude to have a significant positive impact on entrepreneurship intentions. This is in line with the studies by Krueger *et al* (2000), Carter *et al* (1996) and Delmar & Davidson (2000). This clearly supports the theoretical position of Ajzen (1991); that intentions which predict behaviours are also predicted by some attitudes which are expressions of the individual's dispositions to the attitude item. Invariably, the more positive attitude students have towards entrepreneurship, the greater intention they have towards accepting entrepreneurship as a source of livelihood and vice versa.

Similarly, developing the skills of students while building their knowledge base and helping them form strong and positive attitudes was also found as a key to increasing their intention towards entrepreneurship. This finding aligns with those of Oosterbeek *et al* (2010) and Nystrom (1979). This shows that teaching students how to be entrepreneurs is possible only through assisting them and nurturing their entrepreneurship skills needed to turn their ideas into workable plans and action, implying that the teaching process should build in itself a system of motivating the students and encouraging them to venture into entrepreneurship.

In the same way our findings agree with that of Krueger and Brazeal (1994) that increasing the knowledge base of students will build their self efficacy and increase their entrepreneurship intention. Also similar to our finding on entrepreneurship knowledge is the study by Peterman and Kennedy (2003). They found that exposure to entrepreneurship education increases students' intention to become entrepreneurs. Finally our proposition that entrepreneurship attitude mediates the relationship between entrepreneurship knowledge and entrepreneurship intention is confirmed by our findings and gives credence to the works of Davidson (1995), Wood et al (1995) as well as Kallgreen and Wood (1986) which believes that increase knowledge about a phenomenon influences an individual's attitude towards it. This demonstrates that the right information about entrepreneurship should be conveyed across several platforms to help youths be better disposed towards it and increase their desire to pursue their careers as entrepreneurs.

The study limitations include that, similar to that of other earlier studies, entrepreneurship intention was the measure; this may not actually be realised giving the numerous uncertainties about the future. Also, the results of this study may not be safe for generalisation as the sample was gotten from only one developing country. It therefore implies that the need to conduct similar studies across countries and cultures exists, as to overcome this limitation. Given these limitations, future research endeavours are necessitated, perhaps with a different methodological approach, for further validation of the research findings and inclusion of other constructs which may have a significant effect of entrepreneurship intention in our context.

Conclusion and Implications

It is obvious from our study that the intention to become an entrepreneur does not depend only on perceived feasibility and desirability, as earlier entrepreneurship intention models state, but also on the "entrepreneurial orientation" of the individual which is built mainly by the nature of entrepreneurship education the individual receives. This if properly done will lead to entrepreneurial competence and show the educational process as effective. From the point of view of education, it means that entrepreneurship training needs to consider knowledge, skill and the attitude towards entrepreneurship which will enable the individual understand entrepreneurship, the role of entrepreneurs, the skills and attitudes required for the development of start-ups.

The results of our survey show that all the constructs in the proposed model were significant predictors of entrepreneurship intention. In line with our findings, if students are provided with good entrepreneurship knowledge, practicable skills, and they form the right attitude, there is more likelihood that they will intend to make entrepreneurship a career choice. These findings lay emphasis on the need for entrepreneurship education to create competence when rightly delivered. In light of this, it is safe and logical to conclude that the entrepreneurship education in Nigerian tertiary institutions should be modified and the players inspired to become more effective, and should subsequently create competent potential entrepreneurs thereby reducing the high dependence on paid employment by the teeming youth population. This creates the need for more structural support and encouragement to develop creative ideas and build a knowledge base for intending entrepreneurs.

A second dimension of interest in our findings is the role of entrepreneurship knowledge on entrepreneurship attitude. We found a significant effect of knowledge on attitude. Consequently, it is expected that the more knowledge students gain of entrepreneurship and its role in the society and economy, the more they will be favourably disposed towards it.

References

- Achtenhagen, F., & Grubb, N. W. (2001), "Vocational and occupational education: Pedagogical complexity, institutional diversity", in Richardson V. (Ed.), *Handbook of research on teaching*. Washington, DC: AERA. pp. 604–639
- Aja-Okorie And Adali (2013), "Achieving Youth Empowerment through Repositioning Entrepreneurship Education In Nigerian Universities: Problems And Prospects" *European Scientific Journal*, Vol. 3, No. 9, pp 2-8
- Ajike, O., Nnorom, K., Akinlabi,, B.H., Onyia,, A. & Kwarbai, D. (2015), "Entrepreneurship education and entrepreneurship intentions: the role of theory of planned behaviour", *International Journal of Advanced Research* in Social Engineering and Development Strategies, Vol. 3, No 1, pp. 119.
- Ajzen, I. (1985), "From intentions to actions: a theory of planned behaviour ", in Kuhl, J. and Beckman, J. (Eds), *Action-Control: From Cognition to Behaviour*, Springer, Heidelberg.
- 5. Ajzen, I. (1991), "The theory of planned behaviour", Organizational Behaviour and Human Decision Processes, Vol. 50, pp. 179–211.
- Ajzen, I. (2001). Nature and operation of attitudes. *Annual Review of Psychology*, Vol. 52, 27-58.
- 7. Ajzen, I. (2005), *Attitude, Personality and Behaviour* (2nd ed.). Open University Press, Poland, EU.
- Anosike P., (2017), "Entrepreneurship education knowledge transfer in a conflict Sub-Saharan African context", *Journal of Small Business and Enterprise Development*, https://doi.org/10.1108/JSBED-01-2017-0001
- Arogundade, B.B. (2011), 'Entrepreneurship education: an imperative for sustainable development in Nigeria', *Journal of Emerging Trends in Educational Research and Policy Studies*, Vol. 2, No. 1, pp. 26-29.
- Athayde, R. (2009), "Measuring enterprise potential in young people", *Entrepreneurship Theory and Practice*, Vol. 33, No. 2, pp. 481–500.
- Audretsch, D.B. (2017) 'Entrepreneurship and universities', Int. Journal of Entrepreneurship and Small Business, Vol. 31, No. 1, pp.4–11.

Cite this article : Christian UC. A Relationship between Sustainable Entrepreneurship Education and Entrepreneurial Intentions among Students: A Developing Country's Perspective. Psychology and Education. (2020) 57(7): 516-524.

- Autio, E., Keeley, R. H., Klofsten, M., Parker, G. G. C., & Hay, M. (2001), 'Entrepreneurship intent among students in Scandinavia and in the USA', *Enterprise and Innovation Management Studies*, Vol. 2, No.2, pp. 145-160.
- Baartman, L.K.J and Bruijn, E. (2011), "Integrating knowledge, skills and attitudes: Conceptualising learning processes towards vocational competence", *Educational Research Review*, Vol. 6, No 2, pp. 125–134
- Bae, T.J., Qian, S., Miao, C. and Fiet, J.O (2014), "The relationship between entrepreneurship education and entrepreneurship intentions: a meta-analytic review", *Entrepreneurship Theory and Practice*, DOI: 10.1111/etap.12095
- Bagozzi, R. P. and Yi, Y. (1988), "On the evaluation of structural equation models" *Journal of the Academy of Marketing Science*, Vol. 16, No. 1, pp. 74 – 94.
- Bagozzi, R., Baumgartner, H., and Yi, Y. (1989), "An investigation into the role of intentions as mediators of the attitude-behaviour relationship" *Journal of Economic Psychology* Vol. 10, pp. 35–62.
- 17. Bandura, A. (1977), *Social learning theory*. Prentice-Hall, Englewood Cliffs, NJ.
- Bandura, A. (1982), "Self-efficacy mechanism in human agency", *American Psychologist*, Vol. 37, No. 2, pp. 122–147.
- 19. Bird, B. (1995), "Towards a theory of entrepreneurship competency", *Advances in Entrepreneurship, Firm Emergence and Growth*, Vol. 2 No. 1, pp. 51-72.
- Blunch, N. J. (2008), Introduction to structural equation modelling using SPSS and AMOS. Sage Publications Ltd, London.
- 21. Bridge, S., O'Neill, K., & Cromie, S. (1998). Understanding enterprise, entrepreneurship and small firms, Macmillan, London.
- 22. Byabashaija, W. & Katono, I. (2011), "The impact of college entrepreneurship education on entrepreneurship attitudes and intention to start a business in Uganda". *Journal of Developmental Entrepreneurship*, Vol. 16, No. 1, pp. 127–144.
- Carter, N. M., Gartner, W. B., & Reynolds, P. D. (1996), "Exploring start-up event sequences", *Journal of Business Venturing*, Vol. 11, No. 3, pp. 151-166.
- Cooper, A.C. (1985), 'The role of incubator organizations in the founding of growth oriented firms', *Journal of Business Venturing* Vol1, No 1, pp. 75-86.
- Cooper, A.C. (1993), 'Challenges in predicting new firm performance', Journal of Business Venturing Vol. 8, No. 3, pp. 241-253.
- 26. Crant, J. M. (1996), "The proactive personality scale as a predictor of entrepreneurship intentions", *Journal of Small Business Management*, Vol.34, No. 3, pp. 42–50.
- 27. Davids, F. (2017). The theory of Planned Behaviour and the Entrepreneurship Event Model as predictive models of entrepreneurship intention. A Master dissertation submitted to the Dpartment of Organisational Psychology, University of Cape Town.
- Davidson, A. R., Yantis, S., Norwood, M., & Montano, D. E. (1985), "Amount of information about the attitude object and attitude– behaviour consistency". *Journal of Personality and Social Psychology*, Vol. 49, pp. 1184–1198.
- Davidsson, P. (1995). "Determinants of entrepreneurship intentions" Working paper. Jönköping, Sweden: Jönköping International Business School.
- 30. Delmar, F., & Davidsson, P. (2000), "Where do they come from? Prevalence and characteristics of nascent entrepreneurs", *Entrepreneurship and Regional Development*, Vol. 12, No. 1, pp. 1-23.
- Donckels, R. (1991), "Education and entrepreneurship experiences from secondary and university education in Belgium", *Journal of Small Business* and Entrepreneurship, Vol. 9, No 1, pp. 35–42.

- 32. Ekundayo, B.B and Durowaiye, B.E (2014), "The impact of entrepreneurship education on entrepreneurship intentions among Nigerian undergraduates", *International Journal of Research in Humanities, Arts and Literature*, Vol. 2, No. 11, pp. 15-26
- Eraut, M. (1994), Developing professional knowledge and competence, Routledge Falmer, London/New York, NY.
- 34. European Commission (2012), Effects and impact of entrepreneurship programmes in higher education. Brussels: DG Enterprise. European Commission
- 35. Fabrigar, L.R, Petty, R.E., Smith, S.M and Crites, Jr. A.L (2006), "Understanding knowledge effects on attitude-behaviour consistency: the role of relevance, complexity and amount of knowledge", *Journal of Personality and Social Psychology*, Vol. 90, No. 4, pp. 556–577
- 36. Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006), "Assessing the impact of entrepreneurship education programmes: a new methodology". *Journal of European Industrial Training*, Vol. 30, No. 9, pp. 701-720.
- 37. Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention and Behaviour : an introduction to theory and research, Addison-Wesley, New York
- Fornell, C., and Larcker, D. F., (1981), "Evaluating structural equation models with unobservable variables and measurement error". *Journal of Marketing Research*, Vol. 18, No. 1, pp. 39 – 50.
- 39. Galloway, L., & Brown, W. (2002), "Entrepreneurship education at university: a driver in the creation of high growth firms?", *Education and Training*, Vol. 44, Nos. 8/9, pp. 398–405.
- 40. Gartner, W. B., Shaver, K. G., Gatewood, E. J., & Katz, J. (1994), "Finding the entrepreneur in entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 18, No 3, pp. 5-10.
- 41. Gefen, D. and Straub, D. W. (2005) A practical guide to factorial validity using PLS-Graph: tutorial and annotated example. *Communications of the Association for Information Systems*, Vol. 16, pp. 91–109
- 42. Gorman, G., Hanlon, D., & King, W, (1997), "Some research perspectives on entrepreneurship education, enterprise education & education for small business management: A ten year literature review", *International Small Business Journal*, Vol. 15, No. 3, pp. 56-77
- 43. Hager, P., Gonczi, A and Athanasou, J. (1994), "General issues about assessment of competence", Assessment and Evaluation in Higher Education, Vol. 19, No. 1, pp. 3-16
- 44. Hair Jr., J. F., Sarstedt, M., Hopkins, L. and Kuppelweiser, V. G. (2014), "Partial least squares structural equation modelling (PLS-SEM): an emerging tool in business research", *European Business Review*, Vol. 26, No. 2, pp. 106 – 121.
- 45. Henderson, R. and Robertson, M. (2000), "Who wants to be an entrepreneur? Young adult attitudes to entrepreneurship as a career", *Career Development International*, Vol. 5, No. 6, pp. 279-87.
- 46. Henry, C., Hill, F. and Leitch, C. (2005), 'Entrepreneurship education and training: can entrepreneurship be taught?', *Education + Training*, Vol. 47, No. 2, pp. 98-111.
- 47. Johnson, A.T., Hirt, B. and Hoba, P. (2011), "Higher education, policy networks, and policy entrepreneurship in Africa: the case of the Association of African Universities", Higher Education Policy, Vol. 24, No. 1, pp. 85-102.
- Kallgren, C. A., and Wood, W. (1986), "Access to attitude-relevant information in memory as a determinant of attitude-behaviour consistency", *Journal of Experimental Social Psychology*, Vol. 22, pp. 328–338.
- 49. Kaslow, N. J., Bebeau, M. J., Lichtenberg, J. W., Portnoy, S. M., Rubin, N. J., Leigh, et al. (2007), "Guiding principles and recommendations for the assessment of competence", *Professional Psychology: Research and Practice*, Vol. 38, pp. 441–451.

Cite this article : Christian UC. A Relationship between Sustainable Entrepreneurship Education and Entrepreneurial Intentions among Students: A Developing Country's Perspective. Psychology and Education. (2020) 57(7): 516-524.

- Katz, J.A. (2003), "The chronology and intellectual trajectory of American entrepreneurship education: 1876–1999", *Journal of Business Venturing*, Vol. 18, No. 2, pp. 283–300.
- 51. Kolvereid, L. (1996), "Organizational employment versus self-employment: reasons for career intentions", *Entrepreneurship Theory and Practice*, Vol. 20, No. 3, pp. 23-31.
- Kolvereid, L., & Isaksen, E. (2006), "New business start-up and subsequent entry into self-employment", *Journal of Business Venturing*, Vol. 21, No. 6, pp. 866-885.
- Krueger, N., Reilly, M. D., & Carsrud, A. L. (2000). Competing models of entrepreneurship intentions. *Journal of Business Venturing*, Vol. 15, 411-432.
- 54. Krueger, N.F. & Brazeal, D.V. (1994), "Entrepreneurship potential and potential entrepreneurs", *Entrepreneurship Theory and Practice*, Vol. 18, pp. 91–104.
- 55. Krueger, N.F., Jr., Reilly, M.D. and Carsrud, A.L. (2000), "Competing models of entrepreneurship intentions", *Journal of Business Venturing*, Vol. 15, Nos. 5/6, pp. 411-432.
- 56. Kuratko, D.F. (2005), "The emergence of entrepreneurship education: Development, trends, and challenges", *Entrepreneurship Theory and Practice*, Vol. 29, No. 5, pp. 577–598.
- 57. Kyrö, P., & Carrier, C. (2005), "Entrepreneurship learning in universities: bridges across borders", in P. Kyrö & C. Carrier (Eds.), *The dynamics* of learning entrepreneurship in a cross-cultural university context, Hämmeenlinna, University of Tampere. pp. 14-43.
- Lee, S. H., & Wong, P. K. (2004), "An exploratory study of technopreneurial intentions: a career anchor perspective", *Journal of Business Venturing*, Vol. 19, No. 1, pp. 7-28.
- 59. Leont'ev, A. N. (1977), *Tätigkeit, bewusstsein, persönlichkeit,* Ernst Klett Verlag, Stuttgart.
- Liñán, F. (2004), "Intention-based models of entrepreneurship education", *Piccola Impresa / Small Business*, Vol. 3, pp. 11-35.
- 61. Liñán, F. and Chen, Y.W. (2009), "Development and cross-cultural application of a specific instrument to measure entrepreneurship intentions", *Entrepreneurship Theory and Practice*, Vol. 33, No. 3, pp. 593–617.
- 62. Lizzio, A., and Wilson, K. (2004), "Action learning in higher education: An investigation of its potential to develop professional capability", *Studies in Higher Education*, Vol. 29, pp. 469–488.
- 63. Lorz, M., Volery, T., & Müller, C.A. (2011), "*The impact of entrepreneurship education on entrepreneurship intention*", Doctoral dissertation, The University of St. Gallen.
- 64. MacMillan, I., and Katz, J. (1992), "Idiosyncratic milieus of entrepreneurship research: The need for comprehensive theories", *Journal of Business Venturing* Vol. 7, pp. 1–8.
- 65. Madden, T.J., Ellen, P.S. and Ajzen, I. (1992), "A comparison of the theory of planned behaviour and the theory of reasoned action", *Personality and Social Psychology Bulletin*, Vol. 18, No. 1, pp. 3-9.
- 66. Matlay, H. and Carey, C. (2006). "Impact of entrepreneurship education on graduates in the UK: conceptual and contextual implications", in EFMD Entrepreneurship, Innovation and Small Business Conference (EISB) 36th Conference proceedings, Brussels.
- 67. National University Commission (2004), Labour market expectations of Nigerian graduates. Abuja: Education Trust Fund (ETF).
- Nunnally, J. C. and Bernstein, I. H. (1994), *Psychometric theory* (3rd Ed.), McGraw-Hill, New York.
- 69. Nystrom, H. (1979), Creativity and Innovation, John Wiley and Sons, London, UK.
- 70. Ojeifo, S.A. (2013), "Entrepreneurship education in Nigeria: a panacea for youth unemployment", Journal of Education & Practice, Vol. 4 No. 6, pp. 61-67

- Oosterbeek, H., Van Praag, M., & Ijsselstein, A. (2010), "The impact of entrepreneurship education on entrepreneurship skills and motivation", *European Economic Review*, Vol. 54, No. 3, pp. 442–454.
- Peterman, N. E., & Kennedy, J. (2003), "Enterprise education: influencing students' perceptions of entrepreneurship", *Entrepreneurship Theory and Practice*, Vol. 28, No. 2, pp. 129–144.
- Petty, R. E., & Krosnick, J. A. (Eds.). (1995), Attitude strength: Antecedents and consequences, Erlbaum, Mahwah, NJ.
- 74. Ringle, C. M., Wende, S. and Will, A. (2005), *SmartPLS* (Version 2.0 M3) [Software]. University of Hamburg, Hamburg, Germany. Available from: http://smartpls.software.informer.com/2.0/ (Accessed 04 November 2018).
- 75. Robinson, P. B., & Sexton, E. A. (1994), "The effect of education and experience on self-employment success", *Journal of Business Venturing*, Vol. 9, No. 2, pp. 141–156.
- 76. Saunders, M. and Lewis, P. (2012). *Doing research in business and management: an essential guide to planning your project*. Harlow: Person Education Limited.
- Schlaegel, C. & Koenig, M. (2013). Determinants of Entrepreneurship Intent: A Meta-Analytic Test and Integration of Competing Models, *Entreprenuership Theory and Practice*, Vol. 38, No. 2, pp 291-332.
- Segarra-Moliner, J.-R., Moliner-Tena, M.-A. and Sanchez-Garcia, J. (2013), "Relationship quality in business to business: a cross-cultural perspective from universities", *Marketing Intelligence & Planning*, Vol. 31, No. 3, pp. 196 – 215.
- 79. Shane, S. and Venkataraman, S. (2000). "The promise of entrepreneurship as a field of research", *Academy of Management Review*, Vol. 25, No 1, pp. 217-226.
- Shapero, A. & Sokol, L. (1982). Social dimensions of entrepreneurship. In C.A. Kent, D.L.
- Shapero, A. (1975). The displaced, uncomfortable entrepreneur. *Psychology Today*, Vol. 9, pp. 83–88.
- Shapero, A. (1981), "Self-renewing economies", *Economic Development Commentary*, 5(Ap), pp. 19-22.
- Shih, Y and Fang, K. (2004), "The use of a decomposed theory of planned behaviour to study internet banking in Taiwan", *Internet Research*, Vol. 14, No. 3, pp. 213-223
- 84. Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007), "Do entrepreneurship programmes raise entrepreneurship intention of science and engineering students? The effect of learning, inspiration and resources", *Journal of Business Venturing*, Vol. 22, No. 4, pp. 566–591.
- Triandis, H.C. (1979), Values, attitudes, and interpersonal behaviour, Nebraska Symposium on Motivation, Belief, Attitudes, and Values, University of Nebraska Press, Lincoln, NE, pp. 195-259
- Turker, D. and Selcuk, S.S. (2009), "Which factors affect entrepreneurship intention of university students?", *Journal of European Industrial Training*, Vol. 33, No. 2, pp. 142–159.
- Wertch, J. V. (Ed.). (1981), The concept of activity in Soviet psychology, Sharp, New York, NY.
- Wilson, K.E. (2008), 'Entrepreneurship education in Europe', in Potter, J. (Ed.), Entrepreneurship and Higher Education, Chapter 5, OECD Publishing, Paris, pp. 119-138, available at: https://ssrn.com/ abstracts=1392369 (accessed 29 April 2019).
- 89. Wood, W., Rhodes, N., and Biek, M. (1995), "Working knowledge and attitude strength: An information-processing analysis", in R. E. Petty & J. A. Krosnick (Eds.), *Attitude strength: Antecedents and consequences*, Erlbaum, Mahwah, NJ, pp. 283–313

Cite this article : Christian UC. A Relationship between Sustainable Entrepreneurship Education and Entrepreneurial Intentions among Students: A Developing Country's Perspective. Psychology and Education. (2020) 57(7): 516-524.

 Yoon, B.S. (2004), "Determinants of entrepreneurship intentions: individual characteristics and environmental factors", *Korean Academic and Industrial Society of Business Administration*, Vol. 17, No. 2, pp. 89-110. 91. Zhao, H., Hills, G. E., & Siebert, S. E. (2005), "The mediating role of selfefficacy in the development of entrepreneurship intentions", *Journal of Applied Psychology*, Vol. 90, No. 6, pp. 1265-1272.