# ASSESSMENT OF INNOVATIVE ENTREPRENEURSHIP EDUCATION IN NIGERIAN TERTIARY INSTITUTIONS

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#### **ABSTRACT**

The aim of this research was to assess entrepreneurship education which is a relatively new phenomenon in Nigerian higher education institutions. Purposeful sampling was used to recruit the participants of the focus groups and the interviews. Research studies were also selected to demonstrate how diffusion of innovations theory provides a useful framework for understanding how change occurs within education domain. The study population includes lecturers and students of National College of Education, Polytechnics, and Universities clustered as higher institutions in Nigeria. Students and the lecturers were used in the study because the students are the direct beneficiary of entrepreneurship education and the lecturers are the direct facilitators of the entrepreneurship in Nigeria. Thematic analysis was adopted for the study and deductive coding technique was employed to extract utterances of the transcribed interviews. The findings indicated that those criteria employed in assessing entrepreneurship education which includes compatibility, complexity, observability, trialability, relative advantage and training are its driver in tertiary institutions in Nigeria and informs the academic community in Nigeria of the advancement of entrepreneurship education. It also reveals the importance of entrepreneurship education as a potential strategy to battle unemployment and serve as a tool for social, economy and societal development. The study proposes some managerial implications for all the entrepreneurship education stakeholders and offers suggestions for the future studies.

**Keywords:** Entrepreneurship, Entrepreneurship Education, Tertiary Institutions, Innovation Diffusion.

#### INTRODUCTION

Nigeria confronts several challenges that may be resolved if it is confined on all sides with innovative, enlightened, and entrepreneurial citizens who are inquisitive minded to cogitate in a new way and takes exception to manage the challenges contending with them. Moreover, an emerging economy that is willing to solve the problem of joblessness will need the attention of the innovative young mind who are willing to be schooled, trained to become entrepreneurs with a start-up and anticipation to become an innovator thus developing the economy. The global financial crisis has generated a heightened emphasis on entrepreneurship education (EE). Entrepreneurs are key to economic growth and new jobs, wherefore entrepreneurship education is declared to be one of the main instruments for the support of entrepreneurship at all levels of the educational system from basic school to higher education, (European Commission, 2012; 2013). The inclusion of entrepreneurship education into curricula of tertiary institutions started in the United States of America as far back as 1947 (Kuratko, 2003) unlike Nigeria where it is a recent development dated back to 2006 (Yahya, 2011; Gabadeen & Raimi, 2012).

The entrepreneurship education is a relatively new phenomenon in Nigerian higher education institutions. This occur when the Federal Government of Nigeria (FGN) adopted small and medium-sized enterprises (SMEs) as the building block of the country's economy and the right entrepreneurs to realize the objective of setting up small and medium scale enterprises were not available despite the existence of millions of unemployed youths, including higher institution graduates who regrettably, do not have the requisite skills and experiences for entrepreneurship in the country (Nwekeaku, 2013). Responding to the need to produce workers with the necessary entrepreneurial skills and experiences, the FGN directed all higher education institutions in the country to run entrepreneurship studies programme as a compulsory course for all students irrespective of their disciplines with effect from 2007/2008 academic session (Okojie, 2009). Entrepreneurship education practice by country differs, for example, high school students in the U.S. are already quite familiar with entrepreneurship (Lee, Chang. & Lim, 2005); it has become a central part of basic school curricula in most European countries (European Commission 2012), as a subject matter and as a mindset (European Commission 2002, Education and Culture DG 2007).

Like some other African countries, entrepreneurship was recently introduced to the tertiary curriculum in Nigeria. According to Otunla and Sanusi, (2016), Nigeria recently introduced 34 trade and entrepreneurship subjects in its secondary school curriculum in 2007 to match ideas and challenges of the changing economic structure of the modern society and in tertiary institutions (Okojie, 2009). Radipere (2012) assert that Entrepreneurship is a young and developing field of study in South Africa and there is an increasing demand for grounded knowledge in this field. According to Bwisa (2004), there are no entrepreneurship education at pre-school, primary and secondary school levels in Kenya and that the intervention level of entrepreneurship education has been at tertiary institutions and universities (Otuya, Kibas & Otuya, 2013). It is discovered that many Nigerian institution has embraced the entrepreneurship education (Nwekeaku, 2013) and most of the students indicated that they had taken some courses in entrepreneurship in their respective institutions (Oduwaiye 2009).

Several articles point to the participation in entrepreneurial education in higher institution (Salamzadeh, Azimi, & Kirby, 2013; Awang, Amran, Nor, Ibrahim & Razali, 2016) and the impact of entrepreneurship education in economic development (Amassoma & Ikechukwu, 2016; Sajuyigbe & Fadeyibi, 2017). Studies have shown the impact of entrepreneurship education on individual, institution, economy and the society. Graduates from entrepreneurship programs are three times more likely to be involved in new venture creation than nonentrepreneurship business graduates (Timmons, 1999; Chaney & Libecap, 2000; European Commission, (2015). A limited number of studies have been conducted in Nigeria to investigate the incorporation of EE into the curriculum of higher institutions. The studies done by Oduwaiye (2009), Akinbami (2011), Nwekeaku (2013) and Akhuemonkhan, Raimi, and Sofoluwe (2013) have focused on the state and challenges of EE in universities. To the best of our understanding, there are no specific studies done on the assessment of EE in Nigeria across tertiary institutions exploring lecturers' and students' perception and this omission creates a gap for this study to fill. We conduct the study with the following objectives: (1) to examine the state of EE in Nigeria institutions (2) to examine the drivers of EE in tertiary institutions and (3) to develop an explanatory theory that associates attributes of innovation and training to EE. The study is divided into four parts. First, we introduce the necessity of EE assessment in Nigerian institutions context, second, we gave a theoretical framework and a short review of extant studies, third, we discussed the methodology employed in the study, fourth, and we presented the result. Lastly, discussion, implication and future study direction were given.

#### THEORETICAL FRAMEWORK

Rogers' (2003) Diffusion of Innovations theory provided the theoretical framework for this study. In the following section, a brief overview of the theory is provided as well as a discussion of how it provided a conceptual framework to the study. For the purposes of this study, the innovation examined was Entrepreneurship Education implemented in tertiary institutions.

Diffusion of Innovation theory could be traced to Europe by one of the forefathers of sociology and social psychology Gabriel Tarde who observed certain generalizations about the diffusion of innovations that he called "the laws of imitation," in 1903. But his creative insights were not followed up immediately by empirical studies of diffusion until after a lapse of almost forty years (Rogers, 1983). The field of research on the diffusion of innovations took off after formation of diffusion paradigm by Ryan and Gross (1943) with the hybrid corn diffusion study. The diffusion research approach was taken up in a variety of fields: education, anthropology, public health/medical sociology, marketing, geography, communication and in rural sociology. Each of these disciplines pursued diffusion research in its own specialized way, and for some time without much interchange with the other diffusion research traditions, at least until the early 1960s when the boundaries between the traditions began to break down (Rogers, 1983). Figure 1 evinces the conceptual framework for innovative entrepreneurship education based on the perceived attributes of innovation by Rogers infused with training as a construct.

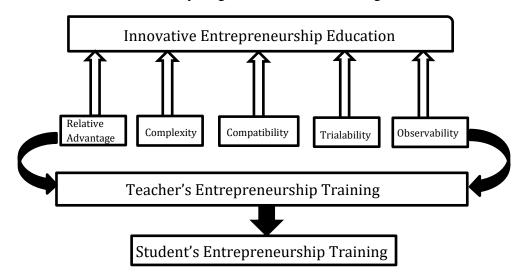


Figure 1
CONCEPTUAL FRAMEWORK FOR INNOVATIVE ENTREPRENEURSHIP
EDUCATION

Roger's adoption attributes as it connects with the training the teacher had to impact the students training as presented in the above figure was used as the framework for assessing the EE in Nigerian institutions as the criteria employed in assessing entrepreneurship education are its driver in tertiary institutions in Nigeria. Training is the acquisition of knowledge and skills for the present task (Fitzgerald, 1992). He further stressed that training must result in a change in

behavior such as the use of new knowledge and skills on the job as training must be tied to performance. The rate of adoption of an innovation, in (Rogers, 2003) opinion, is highly dependent upon the quality or attributes of that innovation. Rogers argues that there are five key characteristics of innovations that affect the rates of adoption: 1) relative advantage, 2) compatibility, 3) complexity, 4) trialability, and 5) observability. Relative advantage refers to "the degree to which an innovation is perceived as better than the idea it supersedes," while compatibility is used to describe "the degree to which an innovation is perceived as being consistent with the existing values, past experiences, and needs of potential adopters". Complexity refers to "the degree to which an innovation is perceived as difficult to understand and use," and trialability pertains to "the degree to which an innovation may be experimented with on a limited basis". The last quality of an innovation, observability, is described by Rogers as "the degree to which the results of an innovation are visible to others".

The scope of diffusion theory is incredibly vast and it extends to a multitude of disciplines outside education research domain (Katz et al. 1963), as the term innovation broadly encompasses an array of ideas, tools, practices, and behaviors. To ensure a comprehensive assessment of the appropriate parameters to determine the potential for the uptake of this innovative entrepreneurship education. Everett Rogers' diffusion of innovations was selected as a theoretical framework for the instrument used to gather the data. The literature review indicated that there is a dearth of empirical study in identifying adoption factors of EE across higher institutions that is, Polytechnic (vocational driven), University (research driven) and NCE (teaching driven). Several studies were found that provides a useful framework for understanding how change occurs within education (e.g. Shea et al., 2005; Minishi-Majanja & Kiplang', 2005; Buddy, 2006; Sloep et al., 2006; Bednarz & ven der Schee, 2006; Chen et al. 2008, Kebritchi, 2010). However, no study was found with a particular focus on EE adoption in schools in Nigeria. In addition, the relationship between EE adoption and training factors has not been investigated. Furthermore, much of diffusion research has focused on the rate of adoption, or how quickly an instrument or practice can be diffused through an organization (Thayer, 2013). Rather than specifically investigating how quickly a practice diffuses within schools, this study examined the narratives of the key individuals responsible for facilitating that diffusion and beneficiaries.

#### **METHODS**

## Sample

In this study, empirical data of EE experiences from three Nigerian tertiary institutions were gathered from students (n=28) by means of focus group discussions and from lecturers (n=3) through in-depth interviews as evident in Table 1. The tertiary institutions in Nigeria include colleges of education, polytechnics or colleges of technology and universities. The duration of studies ranges from three to seven years, depending on the nature of the programme. Colleges of education offer three-year programmes leading to the award of the National Certificate in Education. Polytechnics and Colleges of Technology award National Certificates and Diplomas, namely; the National Diploma, after two years of study following the Senior Secondary School; and the Higher National Diploma, awarded after a further course of two years' duration. At the university level, programmes leading to a first degree (e.g. bachelor's degree) should last not less than four years.

The samples for assessing innovative entrepreneurship education in Nigeria including students and entrepreneurship education lecturers were recruited from National College of Education (NCE), Polytechnics and Universities clustered as higher institutions in Nigeria. Students and the lecturers were used for this study because the students are the direct beneficiary of entrepreneurship education and the lecturers are the direct facilitators of EE. In this context, they are in the best position to give their perceptual experience on the development of entrepreneurship education. Purposeful sampling was used to recruit the participants of the focus groups and the interview. Purposeful sampling is a popular sampling method in a qualitative research and it is very useful for identification and recruitment of participants for an interesting field of study (Palinkas, Horwitz, Green, Wisdom, Duan & Hoagwood 2015). The sample was classified as the students that have participated in entrepreneurship education in one semester or the other and the tertiary institution's teachers that have taught entrepreneurship education. The sample size in this study is limited because of the required huge financial resource for coordination and implementation. The required sample size for the qualitative study is debatable but the principle of the United Kingdom researchers was adopted on the norm of acceptable sample size. According to Boddy & Boddy (2016, p.430), their "concern is more about gathering in-depth information rather than quasi-measurement and so smaller sample sizes are intuitively more appealing".

## **Description of Focus Groups**

The student data is from the focus group discussion. Focus Group Discussion (FGD) was opted for in this study because it is a method that can be used to glean important details of information within a stipulated time and it is a route to share the experiences, insights, perceptions and opinions of the participants. This is consistent with the opinion of Kraaijvanger, Almekinders & Veldkamp (2016). Focus groups as presented in Table 1 were conducted within the classroom settings of the tertiary institutions with each group being isolated to prevent communication interference and to facilitate a smooth conversation between the focus groups participants. Focus group questions were structured based on the six criteria in Figure 1. The research team reviewed the content to make it readable and coherent. The first draft of the focus questions was subject to scrutiny back and forth and modifications were made based on the discovered repugnance. Despite the semi-structured question used, there was a space for flexibility regarding the topics raised during the focus group conversation. The questions aimed primarily to assess the impact of entrepreneurship education in Nigeria tertiary institutions and to help the students think about factors influencing their choice for entrepreneurship education.

Table 1 DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS					
		University	Polytechnic	National College of Education	
Lecturers ( <i>n</i> =3)					
Sex	Male	1	1	1	
	Female	0	0	0	
Designation		Lecturer II	Senior Lecturer/ Assistant director of entrepreneurship center	Lecturer II	
Students (n=28)					
Sex	Male	3	4	6	
	Female	6	7	2	
Average Age (years)	Male	24	25	21	
	Female	22	23	21	

The focus group moderator with the help of facilitator introduced entrepreneurship education focus group and explicates the reasons for the focus group discussion. There was a brief introduction between the focus group moderator and the focus group participants to give an insight to the biodata of the focus groups. The focus group conversation was recorded with Blackberry Q10 phone and transferred to the laptop for effective transcription and systematic analysis. Focus groups ran for almost 1 h and the moderator and the co-moderator ensure the smooth running of the sessions. A senior study team member apprises the moderator of the nitty-gritty of focus group research earlier before the implementation. In the data transcriptions, the FGD is identified randomly by numbers 1-28 and their gender is indicated by capital letters F (female), M (male) and S denotes students.

#### **Entrepreneurship Education Lecturers Interview**

The lecturers' data is from the rigorous interview. The lecturers were purposefully selected from three institutions in Nigeria as evident in Table 1. All interviews were conducted face-to-face and the audio captured, lasting from 45 to 62 mints. Due to their years of experience in teaching EE across institutions (7 yrs or more), the informants produced very rich data in knowledge intensive discussion. Structured interview based on six criteria of relative advantage, trialability, compatibility, observability, complexity, and training (see Figure 1) was conducted on entrepreneurship education lecturers in NCE, Polytechnic, and University of Nigeria. The questions went through a rigorous assessment and finally tailored made for the teachers of entrepreneurship education to appraise their qualification and training and to know the impact of their teaching methodology on entrepreneurship education. In the data transcriptions, the interviewees are identified randomly by numbers 1-3 and their gender is indicated by capital letters F (female), M (male) and L denotes lecturers.

## **Data Analysis**

The recorded students' focus-group discussions and the lecturers' interviews were transcribed. The whole transcribed data consisted of 47 pages (Times New Roman 12-point type, single spaced) consisting 32 pages data for students and 15 for lecturers. Thematic analysis was adopted for the study and deductive coding technique. Braun & Clarke (2006, p.79) defined

thematic analysis as "a method for identifying, analyzing and reporting patterns (themes) within data. It minimally organizes and describes your data set in (rich) detail". This data analysis is theory-driven (Fereday, & Muir-Cochrane 2006). To assess the innovation entrepreneurship education introduced to the Nigeria educational system, the emerging key points in the interview transcriptions were identified, compared and categorized. Based on the categorized key points, explanations were drawn. The case study findings are summarized further in the paper.

Purposeful sample strategy was used to recruit three lecturers with over 7 years of experience teaching Entrepreneurship to participate in this study. The participants were three males between the ages of 40 and 55 yrs. As shown in Table 1, the researchers settled for only males in the sampled higher institutions because the female lecturers contacted were unavoidably absent owing to teaching and work travels. The focus group discussion (FGD) opted for in retrieving information from the students that participated in one entrepreneurship course or the other includes 28 students altogether of which 15 were female. Females are more present in the focus group discussion from the institutions sampled because the females are more willing to discuss. This conclusion is reached because after one of the researchers met with the whole class of about 40 students in those institutions and inform them about the intention of the FGD, more of the females voluntarily present themselves for discussion. Finally, the focus group respondents have their age range between 20 to 30 yrs.

As evident in Table 2, the study adopted data triangulation (Thurmond, 2001; Carter, Bryant-Lukosius, DiCenso, Blythe and Neville, 2014) by gathering data from lecturers (interview) and students (focus group).

Table 2 TRIANGULATION DATA					
Interview 1 (Lecturers)	Interview 2 (Focus Group) (Students)	Overlap			
Relative advantage of the EE for students	Relative Advantage	Yes			
Implementation satisfaction	Implementation satisfaction	Yes			
Efficiency of EE	Efficiency of EE	Yes			
Have the student try any business or enterprise?	Have the student try any business or enterprise?	Yes			
Have the students tried applying the Knowledge	Have the students tried applying the	Yes			
in the real life?	Knowledge in the real life?				
Do you own a business?	Have you try any business or enterprise	Yes			
If yes, how does it affect your teaching of EE	How do lessons learnt from EE affect the business				
Compatibility of EE with the existing curriculum		Yes			
Compatibility with teaching methodology in terms of time and effort	Compatibility with course of study	Yes			
compatibility with teaching plan and career plan	Compatibility with course of study and career plan	Yes			
Do you see EE achieving its objective as its being	Do you see EE achieving its objective as its	Yes			
taught in your institution	being taught in your institution				
Attitude of students to EE	Attitude of students to EE	Yes			
EE visibility/popularity in Institution	EE visibility/popularity in Institution	Yes			
Do you perceive the teaching of EE? Is it	Do you perceive the teaching of EE? Is it	Yes			
cumbersome or easy	cumbersome or easy				
EE topics easy or hard to understand and	EE topics easy or hard to understand and	Yes			
implement easily	implement easily				
Training acquires in teaching EE topics	Training acquires in teaching EE topics	Yes			

To assess EE in Nigerian institutions, it is important to understand lecturer's perceptions and determine their understanding of EE. Also, students' perception is needed to draw a more comprehensive picture of the EE situation as this could also validate teachers' views and whether the students have witnessed the kinds of activities and attitudes that teachers try to implement. The interview for the lecturers and focus group in the students' case with similar questions share close responses with emphasis on the relative advantage of EE in their various institutions.

#### **RESULTS**

Rogers's diffusion of innovations theory was chosen as the theoretical framework and the results are presented and discussed by means of key concepts/structures illustrated in Figure 1.

## **Compatibility**

The broad topic of the entrepreneurship education introduced across tertiary institutions in Nigeria, especially as an innovation assessed with attributes of innovation was evidenced through close readings of the interview data. The informants comprising of both lecturers and students talked about the degree of perceived consistency of EE with the existing curriculum and teachings (lecturers) and compatibility with their course of study and career plan (students) as follows (code ML1 in the citation means: M=male, L=lecturer, 1=lecturer's randomly chosen number on scale 1-3):

It is compatible and broader than existing curriculum. So, they expatiate it, they make it detailed, they make it current than the existing curriculum. They regularly update it. The curriculum is a minimum requirement; we still add our own topics to benefit the environment, the community, and the student in general. It is compatible with the teaching methodology that has been used before (ML1).

It is compatible, it has been integrated into our programme and it is one of the general courses and it has been easy. Since it is being incorporated into our programme, it has its own adequate period. It is a general course like the use of English and education at our institution, so it is compatible (ML2).

The response from the lecturers shows that EE has been introduced earlier in institutions even before government's directive that it should be taught as a compulsory course in all tertiary institutions. Especially, a lecturer in one of the sampled institutions informed that it was first introduced earlier in 2003 before the directive made by the government in 2007. He reiterated that it was later suspended before the reintroduction cut across institutions. Another lecturer said the course was generalized officially by National Board for Technical Education (NBTE) in 2008. He further said,

"EE was normally a part of the curriculum for the management students; "it is only the management student that did entrepreneurship education before it became general and when it became generalized, the institution since then has continually followed the curriculum up till today" (ML1).

The students have a mixed opinion about the compatibility of their course to EE course they offer. This may arise from the fact that they are of different departments and faculties with some doing sciences, some business-related courses, education and other various disciplines.

Some of their perspective on EE are (code FS3 means: F=female, S=student, 3=no. 3 is student's randomly chosen number in scale 1-28):

I don't see the compatibility of the course I do with EE because EE deals with some kind of business...EE is important if someone has an employment problem (MS3).

To me, it is important for my field. I think it depends on the area which one wish to focus after graduation... You can have the idea of combining things together to gather resources for self-independence (FS3).

The students' concerns depict that some perceived EE, not in line with the course they do as they see EE specifically for the business-related students. Others in business related field view EE as part of their own course work and that it is very compatible with their field of study. This is in tandem with Rogers' description of compatibility which is the degree to which an innovation (EE) is perceived as being consistent with the existing values, past experiences. However, despite that some do not really see it as compatible with their career plan, they acknowledge that it will boost their career chances and impact them with creative and transferring skills. This reflects in one of the sayings, "It is not really compatible with my career plan but practically, it will boost my career chances. (FS7)" It is sufficed to deduce from the interview data that EE is perceived to be compatible with the existing curriculum in the higher institution system of the country as evident from lecturers' assertion and some of the students perceived it as being compatible with their course and career plan.

## **Complexity**

The extent to which EE is perceived as difficult or easy to understand was discussed extensively by the interviewee. They give the impression about the complexity of EE as a teaching process, or to be understood by the students as shown thus:

Entrepreneurship education is not cumbersome, it is about passion and anything you have passion for will be easy for you and then those who are into mentoring, instruction, and facilitator of entrepreneurship have been trained and have the passion for teaching the course and that is why it is very easy and for the students, we allowed them to exercise their skills, when they exercise their skills they do it with all enthusiasm (ML3).

It is not cumbersome at all. It is just like a science student that will have to go to the laboratory, it is applicable to EE too, and we do practical's after taking them the theory. So, the course has been made easy (ML2).

Again, on the part of the FGD among the students, the business-related students view EE very easy to learn as it contains some business calculations they are used to but science students have a slightly different opinion as evident in their expression:

It is not easy while taking the theories due to business calculations but when it gets to the practical session, we find it interesting and it makes it easy for us to understand (MS7).

It is not difficult to learn at all as a business student, the business-related calculation is part of what we do. But I will say the practical class we had makes it easier and understandable (FS9).

Complexity is described according to Rogers (2003) as the degree to which an innovation is perceived as difficult to understand and use. This means that in this context, the rate at which EE is perceived as been difficult to understand by way of teaching and learning was sought. The lecturers that facilitate the teaching of the course were unanimous in their response as they resonated that they are entrenched with required skills to dispense in their field which makes it easy for them to teach the course. They also do not see the course as cumbersome or as work

load as they believe it is a must learn course to improve the students' well-being and to build a creative mindset. Varying opinions were deduced from the submissions of the learners as the beneficiaries of the course. They expressed their views in line with their field of study as accounting students stated that it is easy to learn the topics they encounter in classes because it is not strange to them and has been part of what they do before. On the other hand, chemistry students of science extraction opine that the course is not too easy for them as they see the course more suitable for business students. In addition, the reported experience from the students shows that they perceive EE as much of note-taking course that bothers them with too many materials to read and calculations which they manage to pass the course. However, they clamor for more practical sessions where they could try making a product on their own and building more of creative skills right from their various campuses.

## **Observability**

The lecturers among other issues dwell on the visibility of EE from the students' feedback and their personal observation, and then being the facilitator of the innovation in higher institutions made positive statement thus:

...they learn different skills how to network and after the production, we ask them to go and sell, they learn marketing, they know how to make the profit, how to prepare profit and loss account especially science and engineering students who are not really into the business before (ML1).

We get the report from our students on how many of them have gone into businesses at least like 5%, 10% improvement because they give us feedback. Gradually, it is achieving its objectives because we are improving every year (ML3).

The students also expressed themselves on how they observe EE course regarding the impact that has manifested in them or their colleagues because of undertaking it and its visibility to them generally. The students start by talking about the observations gathered based on their colleagues in that no student will want to miss an interesting course since the course is interesting and engaging them. Their utterances further show they observed the effect of taking the course. As a resultant effect of the course, they attest it builds their skills in making various products, which they market and in turn pay some of their bills for upkeep while in school as evident as follows:

I can say that my colleagues show a positive attitude to EE. The course builds my confidence with the skills acquired over time. I make sales from the product I made and use it for my upkeep (F4).

Rogers (2003) describe observability as the degree to which the results of an innovation are visible to others. It can be inferred from the utterances of the respondent that the attribute of observability of EE which dealt with the visibility of the effectiveness of the innovation among other people was identified as a strong factor influencing the smooth running that is, teaching and learning of EE across institutions. The fact that higher institution teachers and students see how visible the EE is can be the reason for its continuous implementation. This may mean that if it is being observed that EE has not been impactful, it might not drive the teaching and learning of the course in institutions. From the interview conducted, the teachers of EE observe the students really like the course and it enables them to display their skills. It was further stressed that they do it with enthusiasm as they learn teamwork, team building and leadership skills especially during practical class when they were grouped and amongst the team, there will be a group leader. Also, the lecturers acknowledged they observed and are getting reports from outside the school that due lesson learned from their EE class makes the students stand on their

own. The students observed the course is highly impactful as they attest that EE effect as an innovation is noticeable. They stated that they make products and sell and give an account of the profit made from those products as part of the requirement for the course completion. This process helps to equip the student's right from the school environment with transferable skills in preparation for after school life. With their observations, they conclude it is a course every institution and irrespective of their discipline must adopt due to their recognizable impact they experience.

## **Trialability**

Trialability pertains to the degree to which an innovation may be experimented with on a limited basis (Rogers, 2003). Since trialability is centered on experimentation of an innovation which is EE in this study, it can be deduced from the interviewee unanimously that they practice what they teach and have tried their hands-on business which further helps as a facilitator of EE. It is further evident from the students' response that they have one time or the other tried a business because of EE course offered. All the respondents have had to experiment the new concept which has been its driver in tertiary institutions in Nigeria. The interviewee both shared their experiences during EE teaching, learning and its application to their personal life as shown in their expression:

Yes. I am practicing what I teach. I give my students practical experience, what I have learned in the business, the challenges I have facing many times, all those experiences have been shared with them (ML1).

I used to run a business and I have learnt a whole lot of things over the years and this affect my teaching positively...due to the nature of work here as a lecturer, I don't have time to carry on so that it won't affect my primary assignment of teaching the students (ML2).

I see EE as a ladder, I have tried doing business before but it failed but due to the lesson learned in EE, I can resuscitate the business and I would do better (MS12).

As further revealed in the interview data, all the students gave a resonated response that it has been and it is still a wonderful experience as they all have tried doing business before because they must market products made during the EE practical class. This an indication that they have had because to experiment what they have been taught which translates to mean they are fully aware of the impact that can be made by having the knowledge of the course. It also revealed from the students that it has helped them to improve on the business they have been involved in before admitted into the institution.

#### **Relative Advantage**

Numerous utterances focused on the relative advantage of EE (Timmons, 1999; Chaney & Libecap, 2000; Karimi, et. al., 2010; European Commission, 2015) as the emphasis is laid on its impact to the economy globally. From their perspectives, there is a consensus that EE is all about self-employability and enhancement in job performance as relayed by the interviewee below:

It enables them to be on their own after leaving the school and even if you are working in a paid job, you will be entrepreneurial in your performance on the job because some of them have learned leadership skills while in the school, how to organize things so even if they are working they will be an entrepreneur but the focus of the government is to make them be on their own after leaving the school. Our institution is making it happen (ML1).

EE advantage is to acquire knowledge and be on their own and do business after school without relying on white collar jobs (ML2).

The course is really advantageous as it broadens the idea of people in terms of skills, business and it is just very important for every student to take EE course (FS2).

EE gives the knowledge on how to set up a business, to stand on our own and establish ourselves (FS3).

The intention of entrepreneurship education is to make life better for the students after their tertiary education experience and to prevent them from street roaming for a job. Relative advantage explains the benefits entrepreneurship education has over the existing regular courses that did not impact the ability of the graduates to establish a business start-up. Most of the students interviewed stated that EE motivates them to stand on their own and be an entrepreneur even before leaving school. Nigeria present unemployment rate is 13.9% (Nigeria Unemployment Rate, 2017) which indicates that 26.4 million Nigerians out of 190 million are jobless. Entrepreneurship education has the advantage of creating more jobs and in turn, reduces unemployment. It has a relative advantage over the existing courses because it is a practically oriented course that is efficient and productive and it has the potential to improve quality life. Entrepreneurship education has an economic advantage to the millions of graduates in Nigerians and the society. It is a path of social prestige and satisfaction to the graduates since they can have a means of livelihood from their entrepreneurial undertakings. Though relative advantage is an important factor in innovation adoption rate, its relevance is based on the specific needs of the students and their perceptions. Based on Roger's postulation, we argue in this study that if the relative advantage perception is high, it will influence the entrepreneurship education adoption, use and continuous use to be high.

### **Training**

Training refers to the methods used to give new or present employees the skills that they need to perform their jobs (Gary, 2007). The focus of training is a performance improvement, (Blanchard, Nick & Tracker, James, 2006) which are directed towards maintaining and improving current job performance (Stoner, James, Freeman & Gilbert, 2004). The training and re-training had by the lecturers are one of the highlights of the interview data as different lecturers talked about their academic training and what plays out in their institutions as follows:

I studied management from the beginning both my first degree and the higher degree is in management, entrepreneurship, and innovation (ML1).

My first degree was on Accounting, my second degree was in Business Administration and I am presently pursuing PhD in management science and during those days, I use to attend classes with masters' student on Entrepreneurship. The course I took those days is helping me now (ML2).

The school management based on the directive of the NBTE regularly sponsored our facilitators to a workshop on entrepreneurship; even recently three of us have just come back from U.S for entrepreneurship conference in Washington DC sponsored by Tertiary Education Trust Fund (TETFUND). Regularly at least twice in a year, we go for training. The training has been helpful because it exposed us to current affairs, updated information about entrepreneurship and globally (ML1).

The training the teachers of EE in tertiary institutions had were queried as to know their antecedent and the knowledge and skills acquired in which they teach the students. Their responses revealed that they had degrees in management as shown in the citations above. It was

further stated by a lecturer that his institution benefits from the government cover for training both within and outside the country which greatly impacts the training they inculcate in the students. However, another lecturer explained that they are not opportune to be meted with that same treatment in their own institution as there is no help from government or NGO's helping them with workshop or training. The students as well express their opinion on how they perceive the training they had on EE earlier in their studies since all the students involved in FGD has at least taken one EE course before. They generally show that the experience transferable skills as evident in the below statement

It is a yes for me, the training is quite good and due to the practical class involved, we produce things and marketing our products. We even advertise what we produce on this campus. I and other students mostly find the theory part difficult but the practical class compliment that for us (MS10).

The course is very interactive, that is while taking the practical and its training is effective in this school (FS11).

Students unanimously respond that the training they had is okay and sufficient for them as they can with that start a business on their own. Some of the students attest that they have started a business already due the training they had. The students mentioned that EE is effective in their various institutions, this validates the response of their lecturers when they stated the level of training and re-training they had on the subject. According to Fitzgerald (1992), training must result in a change in behavior and the students described that they had witnessed the change. As shown in Figure 1, teacher's entrepreneurship training should impact students' entrepreneurship training. The utterances from the institution's teachers show that they all have the prerequisite and some have access to training and re-training within and outside the country which prepares them to equip the students with required skills. The students as well describe the training received from their teachers as quite sufficient for them to think creatively while with the skills acquired can create a business of their own.

#### DISCUSSION

The findings indicated that those criteria employed in assessing EE are its driver in tertiary institutions in Nigeria and informs the academic community in Nigeria of the advancement of EE. It also reveals the relative advantage of EE as a potential strategy to battle unemployment and serve as a tool for social, economy and societal development. EE teachers see entrepreneurship education as compatible with existing curriculum and students especially science student perceive EE as not compatible with their course of study but relevant for their career plan. Sloep et. al. (2006) study shows that a program was unsuccessfully adopted in higher education because it does not fit well with the course component. EE is not seen to be complex by business related students' due to business calculations but the science-related student has a slightly different opinion. It is generally not perceived to be complex but students unanimously assert that it is more of note-taking and few practice sessions.

In the aspect of trialability, it shows that some students have been trying their hands-on business due to their exposure to EE and that they must at a point during the course make a product, videotaped it and sells it. The document detailing the expenses incurred and gain is being graded by the teacher which depicts trialability of EE. Both lecturers and students observe that the EE is visible in their various institutions which in line with Buddy (2006) asserted that a program was successfully adopted because of its observability. Finally, the lecturers' response shows that they had training in EE which in turn reflect in their teachings, with the information

that they even get sponsored by the government for training, workshops, and conferences in and outside the country to better improve the teaching and learning processes. This corroborates findings of Sloep et al. (2006) that found that users reported a lack of training and education on an introduced program led to its unsuccessful adoption in higher education. The study further reflects that the lecturers had training and that EE is more effective in Polytechnic than in university and NCE with these other institutions benchmarking and trying to catch up with the polytechnic. The reason behind these cannot be farfetched considering that Polytechnics are vocationally oriented institutions.

The findings of this study have both theoretical and managerial implications. Theoretically, the study infused training with the attributes of innovation to come up with a unified model of innovative entrepreneurship education. The Figure 1 model of innovative entrepreneurship education will give a deeper understanding of the relationship between the diffusion of innovations (Rogers, 2003) and training theories. There are several implications for major educational stakeholders' that is, higher institution teachers, school administrators and policy makers promoting EE. One, the result of this study should encourage educational policy makers to provide the platform for universities and NCE teachers for training and conference on EE within and outside the country as evident from a higher institution teachers' assertion that government equips them with such training. Second, it should guide the school administrators to organize workshops and seminars specifically based on training teachers that will assist teachers to develop higher professional skills in the teaching/learning process. Three, it should foster collaboration with other institutions and inform them of innovative ways of EE implementation. Fourth, it should help the lecturers to explore how and what makes EE effective in other institutions and incorporate it into their teaching practices. Fifth, it will stir government and the public tertiary institution's owners to complement innovative EE with groundbreaking information, communication and technology (ICT) tools match with internet availability. Sixth, it should motivate the management of tertiary institutions in Nigeria to collaborate with the industry for funding for EE and work practice. Seventh, it should encourage the management of higher institutions to introduce start-up lab, business incubator, and accelerator and to organize business ideas or business plan competition across the tertiary institutions in Nigeria.

However, this study is not without limitation. Three male lecturers were used among the population of lecturers teaching EE across institutions. It is impossible for the selected participant to form a complete opinion of EE implementations in the institutions. Also, their female counterpart perspective does not reflect as they were left out of the respondents. We cannot tell if they share the same view and experience with their male counterpart. This study identified the assessment of EE based on the lecturers' and students' perspectives. Thus, further studies will be helpful to identify continuous implementation of EE based on the administrators and governments' perspectives. Comparison among the tertiary institutions should be considered. The study is limited to only public tertiary institutions and it does not consider private owned institutions. EE is explored in the context of Education and not SMEs or organization which can be a future research agenda.

#### **CONCLUSION**

This study assesses the innovative entrepreneurship education in Nigerian tertiary institutions which was carried out by identifying factors that drive entrepreneurship education across institutions using six criteria of relative advantage, trialability, compatibility, observability, complexity, and training. The study shows that the teachers had training and that EE is more efficient in polytechnic than in university and NCE with these other institutions benchmarking and trying to catch up with the polytechnic. The reason behind these cannot be farfetched considering that polytechnics are vocationally oriented institutions.

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