

## Apprenticeship Method in Entrepreneurship Education: A Case of Tertiary Institutions in South -South Nigeria

**Nwaukwa, Veronica Ezioma**

Department of Technology and Vocational Education,  
Faculty of Education, Nnamdi Azikiwe University,  
Awka, Anambra State, Nigeria.

&

**Ushie, Patience Undelishima**

Department of Vocational Education,  
University of Calabar

### **Abstract**

*The study was set to determine the use of apprenticeship method in the teaching of entrepreneurship education in tertiary institutions in South-South Nigeria. The objective of the study was to assess the effectiveness of the apprenticeship method as a method of teaching entrepreneurship education in tertiary institutions in South-South Nigeria. A survey research design was adopted; questionnaire was used to sample opinions from 684 lecturers selected by stratified random sampling from a total population of 13,607 lecturers. The results of the study were presented using tables and frequencies. Analysis of variance was used in analyzing the hypothesis. The findings indicate that apprenticeship method was effective in teaching entrepreneurship education in tertiary institutions in South-South Nigeria. Based on the findings of the study, the study proffers that government should adequately fund entrepreneurship education development centres in tertiary institutions to facilitate skills acquisition using the apprenticeship method which will help graduates become self-employed rather than job seekers.*

**Keywords:** Entrepreneurship, Education, Apprenticeship, Tertiary Institution, Nigeria

### **Introduction**

Entrepreneurship is the whole process or activities of an entrepreneur. An entrepreneur on the other hand is someone who runs a private enterprise, enjoying the profits and bears the financial and other risks. According to Shane (2011) entrepreneurship is defined as an act of being an entrepreneur. The word 'entrepreneur' is derived from French word 'enter`enure' and it means enterpriser. An entrepreneur is defined simply as "someone who runs a business at own financial risk" (Jean-Baptiste, 2014). Entrepreneurship can be conceptualized as the discovery of opportunities and the subsequent creation of new economic activity, often via the creation of a new organization (Reynolds, 2005). Hornby (2006) defined entrepreneurship as the ability to organize a business undertaking and assume the risks for the sake of profit. Entrepreneurship is a term used broadly in connection with the innovative modern industrial business leader. Entrepreneurship education includes activities aimed at fostering entrepreneurial mind-set, attitudes and skills, and covering a range of aspects such as idea generation, start-up, growth and innovation (Fayolle & Gailly, 2008).

The objectives of entrepreneurship education could be classified into three namely; creating awareness, stimulating innovation and behavioural change toward effective handling of situations. (Fayolle, 2005). A common goal of lecturers of entrepreneurship education is to make lecture presentation lively, interesting, and unforgettable. Every lecturer seeks to convey to the student basic information, ideas, knowledge and skills at the shortest possible time and

in accordance with the principles of learning. For this reason, new methods and approaches are continuously being sought to overcome the limitations of verbal communications. Current developments in research and technology have given rise to the adoption of new methods of teaching which have the potential to be efficient in meeting today's learning needs (Udoetuk, 2006). Udoetuk (2006) further affirmed that the aim of teaching is to effect changes in the learners which can only come as a result of effective teaching and learning through the adoption of suitable teaching methods.

According to Fiet (2010), lecturers rely on traditional methods such as lecture, role play, demonstration and case study, because they can be easily accomplished, and also because they require less investment. Other methods used, but not as common as the traditional methods, include: business/computer or game simulations, video and filming, role models or guest speakers, business plan creation, project works. Also used are games and competitions, setting of real small business ventures, workshops, presentations and study visits. The last category of methods are termed "active" and are said to be more appropriate for nurturing entrepreneurial attributes among participants (Mwasalwiba, 2010). It is the opinion of most authors that traditional methods are less effective in encouraging entrepreneurial attributes because they make students become dormant participants (Kiadese, 2007; Friesen & Jardine, 2009; Miller, 2013).

Apprenticeship method of teaching like demonstration method requires lecturer and student involvement in teaching/learning in a repeated form. At each level of cognitive apprenticeship teaching model (scaffolding and modeling), both the lecturer and students evaluate the learning process and at the end, there is total evaluation which determines the overall performance. In this type of learning the lecturer must assess the activities that the students can perform independently and what they must learn to complete the task. Alternative model of teaching associated with apprenticeship has the following sequence of components: A meaningful task is identified; the lecturer makes sure the student knows exactly what the learning target looks like (for example: via modeling, visual supports, and so on); the lecturer invites the learner to participate as a collaborator as much as possible (without demanding performance – that is, working as a team to ensure that the learning task is completed successfully); the student acts independently only when fully ready to do so.

This study is based on the Behaviourist Learning Theory: which was propounded by E. A. Skinner in 1976. The theory holds that learning is a system of behavioural responses to environmental stimuli. The traditional behaviourist teaching approach is focused on fact-based learning to transfer knowledge from the lecturer as an expert to the student as novice. Learners are tested by measuring outcomes or behaviours on specific tasks and the learners' responses are positively or negatively reinforced to enhance motivation.

Hence, behaviourists assume, on one hand, that the learner is essentially passive because they respond to specific stimuli by reinforcement and, on the other hand, that teaching is the transmission of content knowledge, usually using methods such as question-answer frameworks and reviews of material. The best way to describe how learning takes place in this approach is learning about entrepreneurship which means learning entrepreneurship content, theories and models (Hindle, 2007).

The aim of educating about entrepreneurship is to have students obtain a general understanding of entrepreneurship as a phenomenon rather than training students to cultivate opportunity discovery skills (Wilson, 2011). In this teaching approach knowledge is seen as an accumulation of data, facts, and content about entrepreneurship and this type of knowledge concurs with the behaviourist theory based on the acquisition of information such as hard facts of entrepreneurship and business market. Entrepreneur by knowledge as content knowledge is

objective, fact-based, and is often behaviourist in nature because this kind of knowledge does not produce the entrepreneurial skills and abilities that the students need. Behaviourist learning involves learning to make associations not the idea of transforming experiences in which you can foster skills (Gibb, 2010).

### **Review of Related Literature**

This method brings to fore teachers and students involvement in teaching/learning in a cyclical form. At each level of cognitive apprenticeship teaching model (scaffolding and modeling), both the teacher and students evaluate the learning process and at the end, there is total evaluation which determines the overall performance. Scaffolding as a teaching method originates from Byrnes' socio-cultural theory and his concept of the Zone of Proximal Development (ZPD). The Zone of Proximal Development is the distance between what the learners can do by themselves and the next learning that they can be helped to achieve with competent assistance (Raymond, 2008). The scaffolding teaching method provides individualized support based on scaffolds or supports to facilitate the learner's ZPD (Chang, Sung, & Sung, 2010). In scaffolding teaching a more knowledgeable person scaffolds or supports to facilitate the learner's development. The scaffolds facilitate a student's ability to build on prior knowledge and internalize new information. The activities provided in scaffolding teaching are just beyond the level of what the learner can do alone (Olson & Prath, 2008). The more capable the scaffold is, the better, so that the learner can accomplish (with assistance) the tasks that he or she could otherwise not complete, thus helping the learner through the ZPD (Bransford, Brown & Cocking, 2008).

Modeling as a teaching method shows how a process unfolds and tells reasons why it happens that way. Collins (1991) cited two kinds of modeling: modeling of processes observed in the world and modeling of expert performance, including covert cognitive processes. Computers can be used to aid in the modeling of these processes. Collins stressed the importance of integrating both the demonstration and the explanation during teaching. Learners need access to explanations as they observe details of the modeled performance. Computers are particularly good at modeling covert processes that otherwise would be difficult to observe. Collins suggests that truly modeling competent performance including the false starts, dead ends, and back up methods, can help learners more quickly adopt the tacit forms of knowledge alluded to above in the section on content. Teachers in this way are seen as "intelligent novices" (Bransford, et al., 2008). By seeing both process modeling and accompanying explanations, students can develop "conditionalized" knowledge, that is, knowledge about when and where knowledge should be used to solve a variety of problems.

### **Statement of the Problem**

In Nigeria, unemployment of graduates has become a serious problem. The scourge which has often caused problems for government of industrialized nations such as United State of America is now assuming enormous dimension in Nigeria. The rate or level of unemployment in Nigeria is enormous and so glaring that one can hardly see any family without unemployed youths. Graduate unemployment in our country is cumulative as institutions turn out graduates annually. The rate at which young people are leaving school and seeking employment continuously outpaces the capacity of the economy to provide employment opportunities. Presently entrepreneurship education is taught as a course in all tertiary institutions in the country as a means of providing meaningful training for youths to make them creative, innovative and self reliant. It is quite disturbing that the realization of the noble objectives of entrepreneurship education still remains a dismal failure. Hence this study is imperative as it sheds more light on the use of apprenticeship method for teaching entrepreneurship education

by practicing tertiary institution lecturers which will facilitate the goals attainment (UNDP, 2006).

### **Purpose of the Study**

The purpose of this study was to determine methods considered effective for teaching entrepreneurship education by lecturers in tertiary institutions in south-south Nigeria. This study was limited to apprenticeship method of teaching entrepreneurship education. Specifically, the study determined

### **Research Question**

1. What are the components of entrepreneurship education in tertiary institutions in South-South Nigeria?

### **Null Hypothesis**

The null hypothesis was tested at 0.05 level of significance:

1. Lecturers do not differ significantly in their mean ratings on how effective they consider apprenticeship method for teaching entrepreneurship education based on years of experience (0-5; 6-10; above 10 years).

### **Methodology**

The research was carried out using survey research design. Since the study involves collection of opinions of tertiary institution lecturers in south-south Nigeria. This method was considered effective for teaching entrepreneurship education. This study was conducted in South South Nigeria which is made up of six states namely; Akwa Ibom, Bayelsa, Cross River, Delta, Edo and Rivers state. The zone lies roughly between latitude  $4^{\circ} 10' 38''$  to latitude  $7^{\circ} 46' 27''$  North and longitude  $4^{\circ} 44' 20''$  to longitude  $9^{\circ} 46' 28''$  East. The area is bordered by the Atlantic Ocean around Akwa Ibom and Rivers state and the Republic of Cameroun around Cross River state. It also shares boundary with the South-West zone, South-East zone and the North-Central zone. It extends over about 70,000km<sup>2</sup> and constitutes about 7.5% of Nigeria's land mass.

### **Population of the Study**

The population of this study consisted of all 13,607 lecturers in all the public tertiary institutions in the study area. The population of lecturers was gotten from the staff list of the schools involved in the study.

### **Sample and Sampling Technique**

A sample size of 684 was selected using stratified random sampling technique. The stratification was based on institution type and ownership. Five percent of the population was selected from the universities, polytechnics and colleges of education using simple random sampling technique where each subject was selected from a list/stratum of the total population of lecturers in the tertiary institutions in the zone at a five percent level. The tertiary institutions were categorized into three levels, that is universities, polytechnics and colleges of education. The teaching experience of the lecturers involved were also grouped into three, that is 0-5 years, 6-10 years and above 10 years. The five percent level was used to get a reasonable cross sectional sample population since all the lecturers in the tertiary institutions (13,607 lecturers) cannot be used for the study.

### **Instrument for Data Collection**

A structured questionnaire developed by the researcher and titled “Questionnaire on Effective Methods for Teaching Entrepreneurship Education (QEMTEE)” was used for data collection.

### **Validation of the Instrument**

The instrument (**QEMTEE**) was validated by three experts; one from the Department of Technology and Vocational Education, Nnamdi Azikiwe University, Awka and two from the Department of Measurement and Evaluation, University of Uyo. The research topic, purpose of the study, research questions, hypotheses and the instrument were given to the experts who were requested to critically examine the instrument for relevance of content, suitability of instructions and clarity of statements. They made very useful suggestions such as modifying the title of the instrument, rearranging some sections and cancelling some items. Their inputs were reflected in the final copy of the instrument.

### **Method of Data Collection**

The researcher administered 684 copies of the instrument with the aid of two research assistants in the tertiary institutions covered in the study. The research assistants were adequately briefed on what to do. The copies of the instrument were accompanied with a letter introducing the researcher/research assistants and the purpose of the study. A period of one week was set aside for the respondents to complete the questionnaire, thereafter, the researcher and the research assistants retrieved the completed copies from the respondents. To ensure a high response rate, the researcher and research assistants reminded the respondents through telephone calls to complete and return the questionnaires. At the end, about 94% retrieval was made since only 643 copies of the instrument were retrieved and used for the analysis.

### **Method of Data Analysis**

Data in respect of the research question were analyzed using mean and standard deviation to answer research questions and determine the homogeneity or otherwise of the respondents views. Decision on the items and the research questions were based on the items and cluster means based on the real limits of numbers below:

Responses	Values	Real limit
Very Effective	5	4.50 – 5.00
Effective	4	3.50 – 4.49
Moderately Effective	3	2.50 – 3.49
Ineffective	2	1.50 – 2.49
Very ineffective	1	1.00 – 1.49

Inferential statistics of one way analysis of variance (ANOVA) was used to test the null hypotheses at 0.05 level of significance. A null hypothesis was accepted where the calculated F-value was less than the F-critical value and rejected where the calculated F-value was equal or greater than the F-critical value.

### **Results**

Here, the data collected from the field study were analyzed and the summaries presented in Tables 1 and 2 to highlight the findings. The presentation started with the tables and opinions on apprenticeship method and the null hypotheses.

**Table 1** Respondents’ Mean Rating and Standard Deviation on Effectiveness of Apprenticeship Method for Teaching Entrepreneurship Education (N=643)

S/N	Components of Entrepreneurship education	Mean	SD	Remarks
1	Qualities of successful entrepreneurs	3.41	1.38	ME
2	Creativity and innovation	3.81	1.11	E
3	Developing self confidence	3.23	1.73	ME
4	Acquiring communication skills	2.92	1.66	ME
5	Developing ICT skills for e-commerce	2.80	1.89	ME
6	Tracks to self reliance	3.98	.92	E
7	Funds sourcing for business start up	2.40	1.23	IN
8	Becoming a job creator	4.00	1.59	E
9	Causes of business failure	3.00	1.77	ME
10	Customer retention	2.70	1.39	ME
11	Marketing skills	3.20	1.74	ME
	<b>Cluster mean</b>	<b>3.22</b>		<b>ME</b>

Table 1 shows that the respondents considered apprenticeship method moderately effective for teaching entrepreneurship education with a cluster mean of 3.22. Standard deviation for all the items is within the same range showing that the respondents are homogenous in their views.

**Testing of hypothesis**

**Null Hypothesis :** Lecturers do not differ significantly in their mean ratings on how effective they consider apprenticeship method for teaching entrepreneurship education based on experience (0-5; 6-10; above 10 years).

**Table 2:** ANOVA Summary on Influence of Experience on how Effective Respondents Consider Apprenticeship Method for Teaching Entrepreneurship Education

Source	Sum of Squares	Df	Mean Square	F	Sig.
TeachingExperience	354.190	2	177.095	.466	.560
Error	243224.32	640	380.038		
<b>Total</b>	<b>243578.51</b>	<b>642</b>			

The results in Table 2 indicates that the calculated F-value of .466 is less than the F-critical value of .560. This means that the respondents do not differ significantly in their mean ratings on how effective they consider apprenticeship method for teaching entrepreneurship education based on experience. Therefore, the null hypothesis was accepted.

## **Findings of the Study**

Tertiary institution lecturers in South-South Nigeria considered apprenticeship method moderately effective for teaching entrepreneurship education as experience did not significantly influence their opinions.

## **Discussion of Finding**

### **Use of Apprenticeship Method in Teaching Entrepreneurship Education**

Findings of this study showed that apprenticeship method for teaching entrepreneurship education was considered to be moderately effective by the respondents. This method brings to fore teachers and students involvement in teaching/learning in a repeated form. At each level of cognitive apprenticeship both the teacher and students evaluate the learning process and at the end, there is total evaluation which determines the overall performance. The findings are related to the findings of Ricco (2015) whose research was to study the teaching-learning methods used in entrepreneurship education courses in Brazil with particular reference to apprenticeship and guided inquiry methods. Findings of the study showed that although teaching resources are available, less than 25% of the interviewees used any resources other than blackboard and overhead projector. The study showed that a total of 72% of the respondents would like to use different teaching methods other than lecture method if the resources were readily available. However, some barriers were appointed such as lack of time, working conditions and compensation. The study relates with the present study in methods of teaching entrepreneurship education. There is also similarity in the design and population of the study. The study by Ricco differs with the present study in the number of methods investigated. While Ricco investigated only two teaching methods, the present study investigates five teaching methods. There is also dissimilarity in the area of the two studies.

The findings are in line with Hogan & Pressley (2009) who opined that learning tasks, such as technical skills, communication skills and time management skills involves more physical skills and processes which could be learnt through apprenticeship. A task can be imitated simply by observing another person demonstrating how skills can be acquired. The findings are also in line with Collins (2011) who maintained that apprenticeship involves showing the trainee how a process unfolds and giving reasons why it happens that way.

## **Conclusion**

In view of the findings of the study, it was concluded that the use of apprenticeship method in teaching entrepreneurship education will yield greater dividends even though other methods still have their place. Apprenticeship method is significant because it instills the ability to work from observation.

## **Implication of the Study**

Findings of the study have implication for entrepreneurship education in tertiary institutions since the course has been made mandatory for all categories of students. The implication is that lecturers need to consistently adopt methods that are considered effective for teaching the course in order to achieve the objectives.

## **Recommendations**

Based on the finding of the study, it is recommended that

1. The apprenticeship method should be taught in tertiary institutions on a more serious scale by the introduction of models and programs which enable students to practice what they have learnt and increase entrepreneurship mindset in students.
2. Lecturers must be trained and retrained on better and effective methods of using the apprenticeship method in lecturing. This will ensure that the lecturers are on a higher pedestal to give out knowledge to the students.

## References

- Chang, K., Sung, L. & Sung, V. (2010). The effect of concept mapping to enhance text comprehension and summarization. *The Journal of Experiential Education*, 71(1), 5-23.
- Collins, A. (1991). Cognitive apprenticeship and instructional technology. In: Idol, L. and Jones, B. F. (Eds.), *Educational values and cognitive instruction: Implication for reform*. Hinsdale, New Jersey: Lawrence Erlbaum Associates.
- Collins, D. (2011). *Improving Workplace Learning*. London: Routledge.
- Bransford, J., Brown, A. & Cocking, R. (2008). *How people learn: Brain, mind, experience and school*. Washington DC: National Academy Press.
- Fayolle, C. (2005). *Taxonomy of educational objectives: The classification of educational goals*. New York, NY: David McKay Company.
- Fayolle, A. & Gailly, B. (2008). From craft to science. *Journal of European Industrial Training*, 32, 569–593
- Fiet, J.O. (2010). The Pedagogical side of Entrepreneurship Theory. *Journal of Business Venturing*, 16, 101-117
- Hindle, K. (2007). *Handbook of research in entrepreneurship education*. Chetelham: Edward Elgar Publishing, pp. 437-440.
- Hogan, M., & Pressley, T. (2009). Use of guided inquiry as an active learning technique in engineering. *Proceedings of the 2009 Research in Engineering Education Symposium*, Palm Cove, Queensland, Australia.
- Hornby, A. S. (2006). *Oxford advanced learner's dictionary of current English*. New York: Oxford University Press.
- Jean-Baptiste, I. (2014). *One economics, many recipes: Globalization, institutions and economic growth*. Princeton, NJ: Princeton University Press.
- Kiadese, T. (2007). The development and evaluation of experiential learning workshops for 4-H volunteers. *Journal of Extension Education*, 45(1), 129-138.
- Miller, G. A. (2013). Business lecturers' perception of the nature of entrepreneurship. *International Journal of Entrepreneurial Behaviour and Research*, 12(3), 165-88.
- Mwasalwiba, E. D. (2010). Entrepreneurship Education: Known Worlds and New Frontiers. *Journal of Small Business Management*, 49(2), 55-70.

- Olson, J. & Prath, J. (2008). *The instructional cycle: Teaching children and adolescence with special needs*. Upper Saddle River, New Jersey. Prentice Hall Inc.
- Raymond, E. (2008). *Cognitive characteristics: Learners with mild disabilities*. Needham Heights, M.A.: Allyn and Bacon Publishers, p. 109.
- Reynolds, F. O. (2005). Exploring alternative approaches in high-level entrepreneurship education: Creation micro mechanisms for endogenous regional growth. *Journal of Entrepreneurship and Regional Development*, 12, 25-47.
- Ricco, E. L. (2015). Teaching/learning methods in entrepreneurship education - an empirical research in the Brazilian scenario. *Journal of Effective Learning*, 6(1), 20-29.
- Shane, O. (2011). Exploring the entrepreneurial mind-set of students: Implication for improvement of entrepreneurial learning at university. *The Journal of International Social Research*, 2(8), 340-345.
- Skinner, A. (1976). *Behaviourist learning theory*. London: Prathall publishers; p.380.
- Udoetuk, M. (2006). Implicated and called upon: Challenging an educated position of self, others, knowledge and knowing as things to acquire. *Theories and Practices*, 3(1), 26-36.
- UNDP (2006). *UNDP evaluation guide*. Abuja: Totan Publishers.
- Wilson, O. (2011). Records management in Nigerian Universities. *Data Management in Schools and Other Issues*, 2(3), 40 – 56.