

# Developing an Apprenticeship Model of Entrepreneurship Education in an African Context

**Omotosho Ademola<sup>a</sup>, Bongani Gamede<sup>b</sup>, Chinaza Uleanya<sup>c</sup>,** <sup>a,b,c</sup>Department of Social Science Education, University of Zululand, South Africa, Email: <sup>a</sup>rufusademola1@gmail.com, <sup>b</sup>gamedeb@unizulu.ac.za, <sup>c</sup>chinazauleanya@yahoo.com

The purpose of this study is to present a prospective entrepreneurship training model. The Afrocentric model is expected to train student entrepreneurs in an apprenticeship way. This will stimulate the production of entrepreneurs which is not being achieved by the current methods in the two selected rural universities in South Africa and Nigeria. Quantitative and qualitative methods were adopted. Questionnaires and semi-structured interviews were used for data collection. Random and convenient sampling respectively were used to select 544 students: 256 from South Africa and 288 from Nigeria who responded to questionnaires, and 16 academics, 8 from each nation who were interviewed. The study analyses the current approaches in use, identifying inherent weaknesses and the gaps that need to be filled. Through literature reviews and case studies, it provides a model that integrates apprenticeship learning into entrepreneurship education. The views of both students and lecturers show that the efficacy of entrepreneurial training programs in the two selected universities was unsatisfactory. A model that focuses on the development of entrepreneurs in an apprenticeship way is therefore designed and recommended. The student-centered model draws inspiration from best practices around the world in the field of entrepreneurship training.

**Key words:** *Entrepreneurship education, experiential learning, apprenticeship, undergraduate, university students, skills acquisition model, South Africa and Nigeria.*

## 1. Introduction

Entrepreneurship education is a powerful tool for enhancing the skills and competencies of students. Moreover, with the advent of the fourth industrial revolution, a variety of competencies such as creativity, innovation, and agility are required for start-ups (Cooper, 2004). Therefore, most institutions currently provide entrepreneurial training programmes with the belief that the knowledge and skills needed to become an entrepreneur can be taught and the proportion of policy support toward entrepreneurship education has been increasing in many countries around the world (O'Connor, 2013). In addition, interest and investment in entrepreneurship education are increasing in all degree programmes from elementary schools to universities in order to increase entrepreneurial thinking. This implies that entrepreneurial education has become important in tandem with the demand of students seeking business education that can provide the necessary skills to succeed in an increasingly diverse and complex management environment.

Therefore, stimulating students in higher education institutions to develop real interest in entrepreneurship has positive effects on society as a whole. In addition, at the university level, entrepreneurial training encourages business research and increases the level of knowledge of enterprise creation, both as a research and as a professional field. In turn, this will lead to effective policy-making and improved corporate programming at all levels of education. Thus, universities gradually follow the principle that all students need to be sensitised to acquire specific skills before encouraging them to get involved in entrepreneurial projects (Lackeus, 2015). Based on the foregoing, it is obvious that entrepreneurship education is essential for everyone and not just for business owners.

The current state of developing nations such as South Africa and Nigeria shows that unemployment has given rise to increased rural-urban migration for job opportunities. Most African nations have similar economic conditions whereby the government is heavily depended upon as the sole provider of the means of production and livelihood. Moreover, youth restiveness, coupled with the prevalence of criminality alongside high poverty levels have resulted in declining living standards. The unemployment rate in South Africa rose to 27.6% in the first quarter of 2019 from 27.1% in the previous period, this might perhaps be attributed to skill shortage as employers struggle to find the right candidates due to lack of skills and educational qualifications. The response to this is often long and expensive training programmes focused on skills and qualifications (Youth Employment Accelerator, 2019).

Botha (2006) emphasises the fact that most programmes pay high attention to knowledge aspects but are weak on the skills and attitudinal aspects that are crucial to the success of any potential or start-up entrepreneur. In addition, lecturing as a teaching method needs to be changed because the approach often reveals more about the teacher than the subject being

taught, the problem becomes more acute in a field where qualified staff is limited, as is the case in South Africa (Driver et al., 2001).

For both the rural and urban economies, apprenticeship is a vital training system which is predicated on a training agreement between an apprentice and a mentor or trainer. In this agreement which may be unwritten or written, the master or mentor accepts to train the apprentice in the relevant competencies of his or her trade, spanning a substantial time period between one and four years. On the other hand, the apprentice or trainee accepts and devotes to contributing productively to the progress of the trade, profession or enterprise. Training is incorporated into the production process in which trainees learn by working with the experienced mentor or master of the craft. Informal apprenticeship systems are widespread in many countries and are considered the most important source of skills training in Africa and South Asia.

As stated by ILO (2011), informal apprenticeship is a socially accepted practise for transmitting skills from one generation to the next. Hence, at their workplaces, apprentices not only learn relevant technical skills but are also introduced to business culture and a business network (ILO, 2011). Familiarity with these environments increases their chances of employment once the apprenticeship is complete (ILO, 2010). Generally, the knowledge of these surrounding influences enhances opportunities for jobs and employment at the completion of the training.

## **2. Literature Review**

### Entrepreneurship Training Models and Programmes

Despite increased research in the fields of entrepreneurial training. Jennings and Hawley (1996), state that many initiatives assigned to train entrepreneurship do not actually respond to the real needs of entrepreneurs. The following models and programmes have been adjudged as successful entrepreneurship training models around the world.

#### **2.1 Babson College Entrepreneurship Training Model**

Babson College is a leading entrepreneurial educational college and a world-famous school of entrepreneurial studies. Babson has been known as a founding member of the renowned Global Entrepreneurship Monitor Report since it first came into being in 1919 for its international importance in entrepreneurship education. The institution played an important role in the field of entrepreneurial training Babson stresses a combination of tradition and innovation, focusing on the development of practical skills of students, while allowing students to continuously explore business education and practise. Another student's model was a unique set of courses and teaching methods. (Katz, 1999). This implies that Babson's curriculum system is designed for students, mainly focuses on cultivating entrepreneurial spirit and skills, training business management, financial and operational capacity through courses and activities. In addition, the

college provides abundant entrepreneurial practice and support projects for students to experience the entrepreneurial scene and environment, enhancing their entrepreneurial skills and achieving business goals.

## **2.2 Stanford University Model**

Stanford University is a College of Engineering that previously conducted entrepreneurship education in the United States. Stanford is committed to practical application-oriented and school-based cooperation, supporting the concept of practical training and the principle of apprenticeship adjacent to Silicon Valley. Stanford University has empowered many entrepreneurs in technology and has formed a unique model for the education of entrepreneurs (Zhang & Gao, 2006). This implies that Stanford University integrates professional knowledge and technology to carry technology entrepreneurship courses to cultivate ability and skills, promote the transformation of knowledge and technological achievements. Thus, Stanford involves putting entrepreneurship education into practical curriculum design, establishes technology entrepreneurship practice and supports activities for engineering students.

## **2.3 Cambridge University Model**

The development of entrepreneurial education in the field of sciences is intimately linked to Cambridge University. The entrepreneurial courses comprise of computer, biotechnical, physical chemistry and other areas of sciences different from commerce professions. Cambridge insists on the development of entrepreneurship education and creates a cultural environment which supports entrepreneurship, fights for targets and tolerates start-up failures and it gradually creates a good business environment. With regard to the problems faced by education in the field of sciences, Cambridge conducts flexible entrepreneurial training in order to foster knowledge and ability to find potential markets (Fretschner, 2013). This implies that Cambridge University combines the courses with practice to enhance innovation ability and creativity. Cambridge provides educators and student entrepreneurs with all the necessary support they need to achieve their full potentials.

## **2.4 Entrepreneurial Performance Model (E/P)**

The entrepreneurial performance, according to Ladzani and Van Vuuren (2002), is based upon the creation of a new business or using the possibility to grow the business idea. In its theory of career choice, Holland (1985), states that workplace interactions and personality can influence career performance. He argues specifically that a greater degree of harmony between the characteristics of personality and work environment leads to a better performance in this role (Van Vuuren, 1997). Thus, entrepreneurial performance goes hand in hand with entrepreneurial achievement or results with regard to the realising of set entrepreneurial goals. Hence, the model significantly improves small business performance, provided that there is

some minimal support from the economic infrastructure in the form of available loans, market opportunities and the labour force.

## **2.5 A Student-Centered Entrepreneurship Development Training Model (ASCEND)**

ASCEND uses the "apprenticeship model" to implement several components which improve its effectiveness over and above traditional programmes. ASCEND's emphasis on leading students is a distinctive feature. A second key feature of ASCEND is that the entire process is being experienced by students. The focus on group work and on peer support is a third important feature of ASCEND. The fourth feature is competition, which the majority of the trainees therein vote in favour of, in addition, the trainees are continually stimulated to come up with suggestions required to enhance the effectiveness of the model. (Gillian, 2017). Thus, this is important for underrepresented minority students who might have fewer role models and less peer support. The science-based apprenticeship training model allows students to take the lead in running their projects. The initiatives identified as successful by the evaluation can be replicated at other institutions, especially in the two universities selected for the current study.

## **2.6 Cogswell College Immersion Experience**

This programme offers an immersive environment to introduce students to a successful business community. An immersion experience enables students to enjoy the expository experience in the field of entrepreneurial training. The idea is to give students the entrepreneurial experience and give them insights into the full extent and depth of business life. This experience may not necessarily create entrepreneurs after the programme has been finished, but instead to give students real examples into the entrepreneurial world. An individual student may have to decide whether they have intrinsic intention to start a new venture or not. The student's experience and intellectual understanding of entrepreneurship can indeed be left within their reach as a fundamental component of this best education practice (Mennecke, Hassall and Triplett, 2008). Hence, this experience may not compulsory create entrepreneurs after the programme has been finished, but instead to give students real examples into the entrepreneurial world. An individual student may have to decide whether they have intrinsic intention to start a new venture or not. The initiative bridges the gap between students and successful entrepreneurs.

## **2.7 Young Minds Programme**

The Young Minds Program is organised by the University of Stellenbosch, which is considered the most entrepreneurial university in Africa. The initiative helps students and graduates to create a professional career. This fascinating and practical course will help students identify their directions and life objectives, undertake a career in business management, use entrepreneurship to create opportunities and wealth for themselves and others. It is not just

intended for students but also for those who have finished their studies and young graduates who want to build their own enterprises. (DeWet Schoeman, 2017). Based on the foregoing, the Young Minds programme introduces participants into the world of entrepreneurship both in theory and practice. It also deals with the development of entrepreneurial thought, and how to identify opportunities and capitalise on them in a way that creates prosperity for oneself, it also comprises the basic principles and skills needed to establish a small to medium enterprise and manage it. The learning process is emphasised through a process of coaching.

## **2.8 Kauzi Youth Entrepreneurship Market Place**

In the course of a series of personal consultations, young people were given practical knowledge and skills to show potential investors and the general public their businesses and social ideas. The project fosters entrepreneurship and initiative among the disadvantaged. The "Kauzi" Foundation organised Youth Enterprise Market Place promotes entrepreneurial initiatives among disadvantaged individuals. From 2010 through 2015, the project was completed and people with disabilities who sought Kauzi's support were assisted to incubate their new ventures (Kauzi, 2017). Thus, it is clear from the foregoing that the foundation encouraged initiative and entrepreneurship among disadvantaged people. Based on the foregoing, the aforementioned project is targeted to the most vulnerable segment of Bulgarian youths, students took part in an idea exchange market and had the possibility to present their ideas to potential investors, banks and media among others.

## **2.9 Sofia University Social Entrepreneurship Programme**

This class prepares students for the real world of business and builds on examples of successful social entrepreneurs in Bulgaria, Kenya, South Africa and the United States of America. The course is open to young people that are interested in social enterprise. The class prepares students for the real business world and is based in Bulgaria, Kenya, South Africa and the United States of America (Todorev, 2011). Students are gaining hands-on expertise and knowledge in construction, fundraising and social enterprise management. Case studies in Bulgaria and around the world are discussed, which enhances knowledge of the protocols, challenges and goals of different business development stages which include: design, commencement and running of successful business initiatives with a social factor (Todorev, 2011). Thus, the programme provides analyses of different business structures, resource management methods, team building and good practices to achieve sustainability of the enterprise. The course prepares the students for the real business world and is based on examples of successful social enterprises in various nations of the world.

## **2.1.0 Texas University Business Investment Competition**

This is a competition in which students generate ideas that can lead to business plans which are eligible for cash awards. Competition on business investment is a practice in which an entrepreneurial community challenges students to create entrepreneurial ideas and work towards their development in a business model, strategy and space. Support is provided throughout the process and is successively augmented based on competitors' accomplishments (Cohen, 2006). Thus, the competitions are designed to foster the process of launching a business by accentuating the ideation process and the development of realistic business plans. The actual competition event can either involve the submission of documents or the presentation of a business plan pitch to a panel of reviewers.

### **2.1.1 Temple University Business Plan Competition**

In Temple University Business Plan Competition, students write start-up business plans and then academics, businesses and financiers evaluate those plans. Students can generate a traditional business plan and submit it for consideration in a business plan competition. The contest will both stimulate the development of actionable business plans and bring meaningful rewards. There is a wide range of competitions for business plans, some for underrepresented business groups. The idea is to provide feedback and rewards to great ideas and to encourage entrepreneurs that are hosted by incubators, universities, chambers of commerce and finance groups (Plumly, 2017). Typically, this is a self-directed effort of planning and development by a student or a small team of students. The annual competition provided by the Innovation & Entrepreneurship Institute at Temple University is focused on the innovative products, technologies, and services of the start-up idea than the plan itself.

### **2.1.2 Cambridge Entrepreneurial Mentoring Programme**

A one-on-one relationship between a mentor and a student that learns entrepreneurship is developed and encouraged. This is based on the fact that business offers a unique set of challenges that most desirable entrepreneurs either cannot foresee or cannot handle. For many other reasons, mentoring provides a key best practice for entrepreneurial training. However, it is often challenging for some students to find qualified entrepreneurial mentors. An entrepreneurial mentoring programme aims at providing knowledge, guidance and support structures required to upstage competition in the world of business (Etzkowitz, & Zhou, 2017). This suggests that Cambridge mentoring programme addresses a set of challenges that most student entrepreneurs are neither able to foresee nor equipped to deal with, the relationship is encouraged to continue until as the enterprise grows from small to medium size and possibly beyond. The institution provides mentorship that encompasses the full entrepreneurial lifecycle.





### **2.1.3 Paris Entrepreneurial Innovation Challenge**

Entrepreneurial innovation challenge is organised for undergraduates on a yearly basis. The goal of these challenges is to provide the students with the opportunity to develop their innovation, creative and teamwork skills. Every year, a team of participating school students present problems currently facing real ventures via an online platform and addresses them. Above all, the practical cases represent real problems of businesses (Greenberg, McKone-Sweet & Wilson, 2011). Thus, the innovation challenge grants students opportunities to develop their skills for innovation, creativity and teamwork, the innovation challenge stimulates teamwork, skills development and exposure to entrepreneurial-minded individuals from far and wide.

### **2.1.4 Teacher-Entrepreneur Speed Dates**

Teacher-enterprise speed dates is a Yes-Satakunta event, an enterprise-friendly branch of the Finland network. The objective of this initiative is to introduce and increase mutual understanding of teachers and entrepreneurs. In 2010, it began entrepreneurial training at the grassroots' level in the region of Santakunta. The training takes place in an informal and friendly environment, it encourages participants to acquire ideas and relevant entrepreneurial counsel. As the name of the event suggests, the speed dates last only four minutes, this is a very short exchange. The event helps teachers and entrepreneurs make the first step towards getting to know one another. About 70 teachers and entrepreneurs participate annually (Al-thani, 2019). This means that a gap between trainers and entrepreneurs is being bridged.

## **3. Methodology**

The study adopted the use of both quantitative and qualitative methods for data collection. Kumar (2019) and Creswell (2014) opine that quantitative and qualitative methods can be adopted for data collection in a single study. This is to ensure generalisation of findings following the quantitative data as many respondents are usually involved. Qualitative data, on the other hand, ensures the collection of in-depth information. Purposive sampling was used to select the institutions considering features such as their locations, sources of funding, faculties, courses, population, amongst others. Random sampling was used to select 544 students: 256 from the selected South African rural university and 288 from Nigeria.

Random sampling was used in order to give all students who qualify to partake in the study equal opportunity to do so. Meanwhile, convenient sampling was used to select 16 academic staff members. This was due to their time schedule, and interest to partake in the study. Questionnaires were administered to the randomly selected undergraduate students, while semi-structured interviews were conducted for the 16 selected academic staff members. All respondents were briefed and made to complete the informed consent form before taking part



in the study. This was for ethical reasons. The collected quantitative data were analysed using Statistical Package for the Social Science (SPSS), while the qualitative data were coded and analysed thematically. Below is the table of distribution which gives brief demography of participants in the study.

#### 4. Findings and Discussions

**Table 1: Statistics Showing Proposed Model to Enhance Enterprising Skills amongst Students**

Statements	Nations	Frequency (%)
Re-orientation of students on entrepreneurship education	SA Percentage	33 (13.2%)
	NG Percentage	18 (6.8%)
Harmonisation of entrepreneurship and mentorship programme	SA Percentage	167 (65.2%)
	NG Percentage	128 (44.5%)
Establishment of students entrepreneurial networks	SA Percentage	36 (14.4%)
	NG Percentage	11 (3.8%)
Curriculum based and non-curricular entrepreneurship training	SA Percentage	206 (80.5%)
	NG Percentage	15 (5.2%)
University support scheme for student-entrepreneurs	SA Percentage	35 (14.0%)
	NG Percentage	03 (1.2%)
Encourage team-based projects	SA Percentage	24 (9.6%)
	NG Percentage	13 (5.2%)
Establish links between the university market and private sector	SA Percentage	145 (56.6%)
	NG Percentage	15 (6.0%)
Setting up trade fairs on entrepreneurship day	SA Percentage	12 (4.8%)
	NG Percentage	00 (0.0%)
Workshops and conferences should be held to stir entrepreneurial interest in students	SA Percentage	24 (31.3%)
	NG Percentage	09 (3.6%)
Employment of entrepreneurially-inclined lecturers	SA Percentage	01 (2.7%)
	NG Percentage	31 (12.4%)
Setting up functional entrepreneurship development centres	SA Percentage	10 (25.6%)
	NG Percentage	54 (21.6%)
Promotion of thorough practical training	SA Percentage	01 (5.1%)
	NG Percentage	12 (4.8%)

Readjustment of timetable to cater for independent entrepreneurship and academic classes	SA Percentage	00 (0%)
	NG Percentage	23 (9.2%)

**Table 2: Summary of quantitative findings on model required to enhance entrepreneurial skills acquisition among students**

Entrepreneurship skills acquisition model	Country	N	Frequency	Percentage
Establishment of young entrepreneurship network	SA	256	108	42.2%
	NG	288	51	17.7%
	Total	544		
Access to mentors for business consultation	SA	256	218	85.2%
	NG	288	172	59.7%
	Total	544		
Strong university-industry relationship	SA	256	209	81.6%
	NG	288	34	11.8%
	Total	544		
Making use of laboratories or business incubators	SA	256	47	18.4%
	NG	288	105	36.4%
	Total	544		
Entrepreneurship education that is designed both in curricular and non-curricular activities	SA	256	240	93.8%
	NG	288	17	5.9%
	Total	544		

Table 2 indicates that almost all the South African respondents recommended ‘entrepreneurship education model that is designed both in curricular and non-curricular activities’ (SA= 93.8%), meanwhile, only few of the Nigerian respondents (NG = 5.9%) subscribed to that idea, perhaps this could be attributed to the fact that non-curricular method of teaching entrepreneurship already exists in their domain. The majority of respondents from the two selected universities also recommended ‘access to mentors for business consultation’ (SA= 85.2%), (NG = 59.7%). In terms of ‘university-industry relationship’, the majority of South African respondents recommended that ‘strong university-industry relationship’ is imperative however, only few of their Nigerian counterparts subscribed to the idea (SA= 81.6%), (NG = 11.8%). The table also shows that a modest number of respondents recommended ‘establishment of young entrepreneurship network’ (42.2%), (NG = 17.7%) and ‘making use of laboratories or business incubators’ (18.4%), (NG = 36.4%).

This finding suggests that almost all of the South African respondents agreed that entrepreneurship education model that is designed both in curricular and non-curricular



activities is needed in their domain (SA= 93.8%), while the majority of their Nigerian counterparts also agreed that access to mentors for business consultation is a necessity in their own institution (59.7%).

This finding corroborates the work of Iredale (2010), who asserts that entrepreneurship education demands experiential learning styles, creative problem solving and learning by doing to arouse the interest of the students. On the contrary, Mwasalwiba (2010), however opines that experiential methods are costly and may not be in conformity with the university curricula: students would rather be stimulated to learn from one another, debate and exchange ideas, make self-discovery, get involved in informal and flexible learning atmosphere, learn from their mistakes by solving problems.

Subsequently, Anthea (2016), also subscribes to the view that various alternative approaches can be used in addition to traditional teaching methods to stimulate entrepreneurial education and to develop student's skills. In terms of access to mentors as recommended by the Nigerian respondents, this finding concurs with the studies conducted by Ehrich and Hansford (2002), who submit that despite the inadequacies and scarcity of mentors, mentoring still appears to offer far-reaching benefits for mentors and mentees, it provides both personal and emotional support as well as career development and satisfaction. It provides opportunities to develop skills, access to new ideas and personal growth.

On the contrary, Clutterbuck (2011), noted that some mentors sometimes do not possess the necessary qualities needed for a successful mentor-mentee relationship. Clutterbuck (2011), refers to this type as value-less mentor. One that does not take time to mentor; deflects mentees focus during mentoring sessions, and may have an alternative agenda.

**Figure 1: Comparative analysis of students' entrepreneurial status**

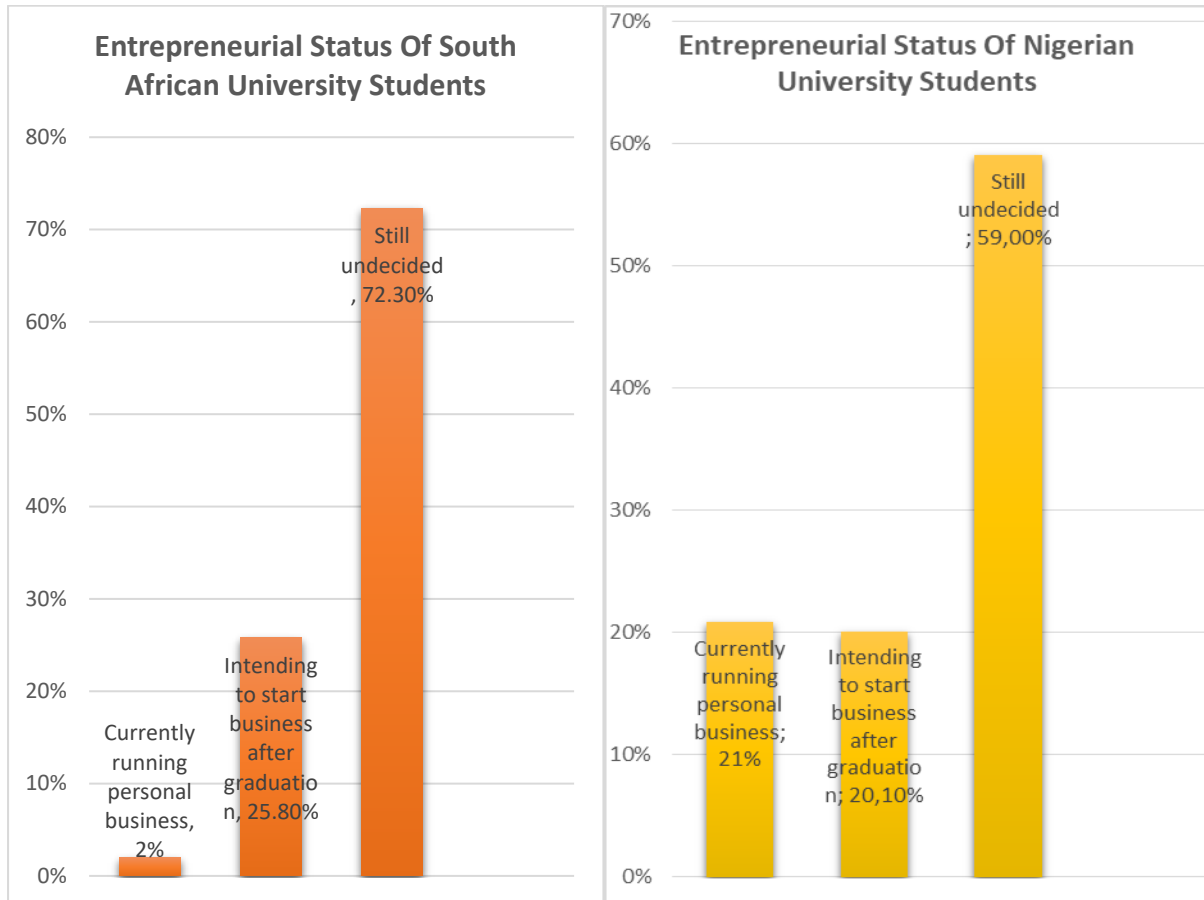


Figure 1 shows that 2% of the South African students are currently running their personal businesses, while 21% of their counterparts in Nigeria are currently running their own businesses. Hence, the scarcity of entrepreneurial students in the South African university may be partly due to lack of experiential approach to entrepreneurial training in the system. This finding also affirms the fact that the hands-on approach to entrepreneurial training in the Nigerian university is characterised by a low participation rate.

## 6. Presentation of Qualitative Data

The data retrieved from interviews conducted with lecturers in the selected universities in the two countries is presented in tabular form. The responses are presented in the tables below:

### Theme: Recommended entrepreneurial skills acquisition model

A functional entrepreneurial skills acquisition model is required for a vibrant entrepreneurial ecosystem to be established in higher education institutions. Responses of South African lecturers in the selected institution on appropriate entrepreneurial skills acquisition model are presented below:

SA L1: *'Provide funding for any student with a sound business plan'*.

SA L2: *'Practical demonstration of business models that require students to start their own businesses and present them as part of the module content'*.

SA L3: *'Give more realistic models where students can both combine entrepreneurial and still excelling in their academics. In addition, more opportunities and supports should be giving to students to build up themselves as entrepreneur before graduating so that they can compete in the labour market'*.

Responses from lecturers in the selected Nigerian rural university on appropriate entrepreneurial skills acquisition model are presented below:

Nig. L3: *'Harmonisation of the module with theoretical skills and summit on entrepreneurial skills acquisition in line with the best practices'*.

Nig. L6: *'Both theoretical and practical teaching and learning are required'*.

Nig. L1: *'Practical and making funds available to establish'*

Nig. L8: *'Modern technological devices should be involved in acquisition of practical knowledge'*.

Nig. L4: *'Standardisation of existing training model and incorporation of practical demonstration of entrepreneurship'*.

Responses from the interviewed lecturers in the selected institutions suggest that entrepreneurial skills acquisition models in the two institutions are being constrained with several challenges questioning the effectiveness of the models.

This finding correlates with the view of Gibb (2007), who opines that entrepreneurship in the education system will demand a reexamination and questioning of many existing education and industry models which claim to be entrepreneurial and are not. Based on the foregoing, apprenticeship approach to entrepreneurship training is required to enhance the quality of entrepreneurship training in the selected universities.

### **Theme: How Entrepreneurship is taught in the university**

Responses from South African interviewees on the ways in which entrepreneurship is taught in their institutions are presented below:

SA L8: Not much is being done to help students acquire skills, no specific model towards experiential learning.

SA L2: I think some students try new things. Those who are in business administration do provide services and products.

SA L4: Lack of practical ways or hands-on-training to aid what the students are being taught.

SA L6: lack of realistic models where students can combine their main studies and entrepreneurial activities and still excel in their academics.

SA L3: The model in this university is all about theoretical concepts with very little practical application.

Responses from Nigerian interviewees on the ways in which entrepreneurship is taught in their institutions are presented below:

Nig. L4: To some extent, experiential entrepreneurial learning is the basis of skills acquisition model in the university, but not many students are interested.

Nig. L2: They have divided the students into groups. Namely; fish farming group, horticultural group, rice growing group among others.

Nig. L3: Students are involved in fishing, tree planting and other self-owned businesses.

Nig. L7: Professional tutors and experienced trainers are available to pilot various skills acquisition programmes.

Responses from the interviewed lecturers in the selected institutions suggest that entrepreneurial skills acquisition strategies in the two institutions are still in their experimental stages. There are live entrepreneurial projects being undertaken by Nigerian students. However, this hands-on-programme is characterised by low participation rate, the reason for the low level of participation could be partly due to the fact that social and institutional supports are lacking. Therefore, few students that are entrepreneurially inclined may have to struggle for resources needed to carry on.

### **Theme: Teaching strategies-related factors**

Learning can be enhanced or disrupted based on the strategy adopted by lecturers. Learning entails organised sets of activities which are predicated on the instructional strategies adopted by lecturers. Therefore, instructional strategies are to be treated as important. Adopted instructional strategies determine the pattern which class activities will take and how students will comprehend.

Below are responses from South African interviewees on teaching strategy-related factors.

SA L6: Lecture method is prevalent, moreover, the institution itself teaches undergraduates to be employees, so lecturers cannot do much to change the status quo.

SA L2: The approach to teaching entrepreneurship in this university is too abstract, this makes it difficult to achieve the aim of training, which is production of entrepreneurs.

SA L5: In most faculties, teaching of entrepreneurship is done to enable students to acquire certificates for employment purposes.

SA L8: The method of teaching in this university promotes mentality of learning entrepreneurship in order to become employees.

---

Responses of Nigerian interviewees on teaching strategy-related factors.

Nig. L1: Most of the training sessions are done within the classroom setting.

Nig. L4: Efforts are being made to ensure that teaching methods are geared towards production of future entrepreneurs, however, the objective is still far from being achieved.

Nig. L7: Lecturers and tutors of entrepreneurship are experienced entrepreneurs. However, their method of training still needs to be reviewed to meet global standard.

Nig. L6: Teaching approaches that foster skills acquisition are being incorporated into the system. But what is the essence of acquiring skills when there is no financial support to start the business.

The responses of the interviewees from the two countries show that the ultimate goal of producing entrepreneurs from the two selected institutions is still far from being achieved. The teaching methods needs to be reviewed, the existing teaching approaches are not robust to produce the desired result. Teaching strategies that ensure optimal combination of theory and practice have to be established.

### **Theme: Infrastructure-related factors**

Adequacy of learning infrastructure and skills acquisition centres is required for purposeful entrepreneurial ecosystem to thrive in higher education institutions. Responses of South African lecturers in the selected institution on infrastructure-related factors are presented below:

SA L5: The University still needs to provide facilities to support entrepreneurial-minded students.

SA L7: Incubation and skill acquisition centres are not available.

SA L3: Skills development facilities are not available in the university.

Responses from lecturers in the selected Nigerian rural university on infrastructure-related factors are presented below:

Nig. L4: The available skills acquisition centres lack the basic facilities required for effective entrepreneurial training to take place.

Nig. L3: Lack of basic infrastructural facilities and learning materials.

Nig. L1: Materials needed for training by lecturers are not available.

The responses of lecturers from the two universities suggest that the quality of infrastructure put in place is poor. This finding is in line with work of Maina (2014), who states that the lack of infrastructure and infrastructural failures results in high transaction costs which makes delivery of university entrepreneurship education very expensive and inefficient. This implies that the learning facility is critical in ensuring quality entrepreneurship education. However, while students in the selected Nigerian university seem to have been able to devise ways of



coping with infrastructure-related challenges, their counterparts in the selected South African university are yet to counter such challenges.

### **Theme: Effectiveness of Entrepreneurship Education in the institutions**

Entrepreneurship education is effective when it is able to influence students' level of competence positively. Responses of South African lecturers in the selected institution on effect of entrepreneurship education on students' entrepreneurial skills are presented below:

SA L3: *'Very little effect.....not satisfactory'*

SA L4: *'I don't know'*

SA L5: *'Curriculum not good enough, all theories'*

SA L6: *'Poor'*

SA L8: *'Much may have been done with the upgrading of the entrepreneurship curriculum by the department of Higher Education but very few entrepreneurs are produced'*.

Responses from lecturers in the selected Nigerian university on appropriate entrepreneurial skills acquisition model are presented below:

NG L1: *'Entrepreneurship education in the university is a bit effective'*.

NG L2: *'The outcome of EE is still poor, mainly because of students' laziness and poor administration of training'*.

NG L3: *'Averagely, the curriculum needs to be reviewed to meet up with global standard'*.

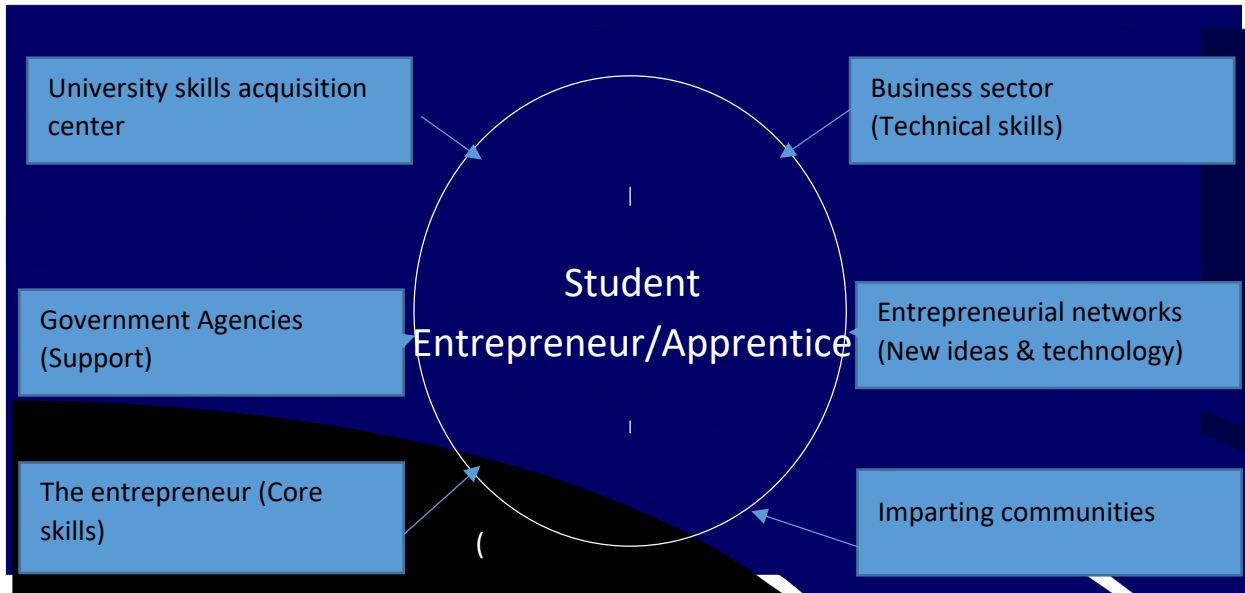
NG L6: *'The university entrepreneurship training is nothing to write home about'*.

Responses from the interviewed lecturers in the selected institutions suggest that effect of entrepreneurship education on students' entrepreneurial skills in the institution is insignificant. This finding correlates with the view of Tran and Zaninotto (2010), who found that the majority of undergraduate university students still lack the critical and entrepreneurial skills required to upstage competition in the job market. The implication of this is that students need to be stimulated to become entrepreneurial first before sensitising them to create their own ventures, the idea of encouraging students to embark on entrepreneurial journey without the required skills is equivalent to putting a cart before the horse.

### **The proposed model of entrepreneurship education and discussion**

An effort to create student entrepreneurs and small business owners is the reason for the prospective model. This is important in South Africa and Nigeria, where there are critical shortages of student entrepreneurs. The current research findings suggest that the respondents generally consider entrepreneurship as desirable when they perceive that there are people they can rely on for support or any form of assistance they would need to overcome obstacles and fear of failure in the process of starting a business. The aforementioned signifies a need for

apprenticeship approach to a entrepreneurship education programme. The model does not seek to include a syllabus on what to teach but provides a way to incorporate and deliver what most entrepreneurship academics believe must be learned. The model is tailored to the needs of students in the two universities selected for this study.



**Figure 2: The proposed model of entrepreneurship education**

In contrast to providing paper-based entrepreneurship education, as submitted in South Africa by Van Vuuren (1997), Van Vuuren and Nieman (1999), and Pretorius et al. (2005) this model focuses on the development of entrepreneurs in an apprenticeship way. Effective apprenticeship programs inculcate appropriate skills, habits and competences in the apprentice which is necessary for self-employment (Ezenwakwelu, 2019).

It can be challenging to know where to start for a beginner who wants to enter into the entrepreneurial scene. There is nothing new about an apprenticeship; it is the oldest type of education. Since the dawn of skilled work that is difficult to learn, such as pottery, blacksmithing, music, or any other art, apprenticeships have been an excellent way to pass on talent and enable both the apprentice and the instructor to continue to improve their skills. The model would require the active participation of the following:

- Involvement of the institution of higher education
- Government involvement
- The private sector involvement
- Community involvement

The model will require implementation and testing, like any other. In the future implementation of the model, a number of challenges could arise. A curriculum needs to



be developed around the proposed model and such a curriculum may have its own issues, such as content and time allocations. To decide what to bring into the model and what to remove, frequent monitoring and assessment of progress are crucial.

#### **4. Conclusion and Recommendation**

An apprenticeship approach to entrepreneurial training has been proven as a successful model of skills-based learning around the world. The researcher believes that the successful implementation of the proposed model would help boost the quality of entrepreneurial training in rural universities, especially in universities with similar features with the two institutions adopted for this study. The implementation can begin with giving experiential orientations with some elements of apprenticeship to students, giving those that are entrepreneurially inclined among them the assurance that they are not alone and that there is adequate support systems put in place to help them carry on. A certain level of flexibilities is required in order to modify the framework based on students' needs in some particular contexts. Thereafter, proper monitoring measures can be put in place to ascertain the effectiveness of the model.

## REFERENCES

- Anthea. P., 2016. Entrepreneurial education in a tertiary context: A perspective of the University of South Africa. *International Review of Research in Open and Distributed Learning*, 17(4), pp.21-35.
- Botha, M. (2006), “Measuring the effectiveness of the woman entrepreneurship programme training intervention, on potential, start up and established women entrepreneur in South Africa”, unpublished PhD Thesis, University of Pretoria, available at: <http://upetd.um.co.za/thesis/available/erd-11152006-154856> (Accessed 25 January, 2020).28, 546–563.
- Clutterbuck, D., 2011. *Coaching the team at work*. Nicholas Brealey International. [https://scholar.google.com/scholar?cluster=16046589450897433448&hl=en&as\\_sdt=0,5](https://scholar.google.com/scholar?cluster=16046589450897433448&hl=en&as_sdt=0,5) (Accessed; January 19, 2020).
- Cohen, B., Smith, B. and Mitchell, R., 2008. Toward a sustainable conceptualization of dependent variables in entrepreneurship research. *Business Strategy and the Environment*, 17(2), pp.107-119.
- Cooper, S.; Bottomley, C.; Gordon, J. 2004, Stepping out of the classroom learning approach to entrepreneurship education. *Ind. High. Educ.* (1)8, pp.11–22.
- Creswell, J.W., 2014. The selection of a research approach. *Research design: Qualitative, quantitative, and mixed methods approaches*. <https://scholar.google.com/scholar?q=related:2s3V63xuUncJ:scholar.google.com/&scioq=Creswell>. (Accessed; January 20, 2020).
- Driver, A., Wood, E., Segal, N. and Herrington, M. (2001), Global Entrepreneurship Monitor: South African Executive Report, available at: [www.gemconsortium.org/document/download/1204207433925/GEM%202001%20South Africa%20report.pdf](http://www.gemconsortium.org/document/download/1204207433925/GEM%202001%20South%20Africa%20report.pdf) (accessed 22 January, 2020).
- Etzkowitz, H. and Zhou, C., 2017. *The triple helix: University–industry–government innovation and entrepreneurship*. <https://books.google.com/books?hl=en&lr=&id=2Cs2D=> (Accessed; December 12, 2019).
- Ezenwakwelu, C.A., Egbosionu, N.A. and Okwo, H.U., 2019. Apprenticeship Training Effects on Entrepreneurship Development in Developing Economies. *Academy of Entrepreneurship Journal*, 25(1), pp.1-21.
- Fretschner, M. and Weber, S., 2013. Measuring and understanding the effects of entrepreneurial awareness education. *Journal of small business management*, 51(3), pp.410-428.
- Gibb, A., 2007. Creating the entrepreneurial university: do we need a wholly different model of entrepreneurship. *Handbook of research in entrepreneurship education*, 3(5), pp.67-103.



- Greenberg, D., McKone-Sweet, K. and Wilson, H.J., 2011. *The new entrepreneurial leader: Developing leaders who shape social and economic opportunity*. Berrett-Koehler Publishers. South Africa. 1(2), pp.305-310.
- Hansford, B., and Ehrich, L.C., 2002. Business mentoring: help or hindrance? *Mentoring and tutoring*. <https://www.tandfonline.com/doi/abs/10.1080/1361126022000002428> [Accessed: 6 April, 2020].
- International Labour Office (ILO) (2010). A skilled workforce for strong sustainable and balanced growth. A G20 Training Strategy, (ILO) Geneva.
- International Labour Office (ILO) (2011). Upgrading informal apprenticeship: A resource guide for Africa. ILO: Geneva.
- Iredale, N., 2010. Enterprise education as pedagogy. *Education+ training*. <https://www.emerald.com/insight/content/doi/10.1108/00400911011017654/full/html> (Accessed; 7 February, 2019).
- Jennings, P. and Hawley, D., 1996. Designing effective training programmes. <https://eprints.soton.ac.uk/36793/> (Accessed; 5 February, 2020).
- Katz, J.A., Safranski, S.R. and Khan, O., 1999. Virtual Instant Global Entrepreneurship. *Journal of International Entrepreneurship*, 1(1), pp.43-57.
- Kauzi, G.Y., 2017. *Forecasts and the impact of macroeconomic policies: A computable general equilibrium study for Papua New Guinea* (Doctoral dissertation, Monash University). <https://bridges.monash.edu/articles/thesis/5441080> (Accessed; 24 July, 2020).
- Kumar, R., 2019. Research methodology: A step-by-step guide for beginners. Sage. <https://books.google.com/books?hl=en&lr=&id=J2J7DwAAQBAJ&oi=fnd&pg> [Accessed: 7 January 2020).
- Lackeus, M. and Middleton, K.W., 2015. Venture creation programs: bridging entrepreneurship education and technology transfer. <https://www.emerald.com/insight/content//ET-02-2013-0013/full/html> (Accessed; 9 February, 2020).
- Ladzani, W.M. and Van Vuuren, J.J., 2002. Entrepreneurship training for emerging SMEs in South Africa. *Journal of small business management*, 40(2), pp.154-161.
- Maina, S., 2014. The role of entrepreneurship education on job creation among youths in Nigeria. *International Letters of Social and Humanistic Sciences*, 2(4), pp.87-96.
- Mennecke, B., Hassall, L.M. and Triplett, J., 2008. The mean business of Second Life: Teaching entrepreneurship, technology and e-commerce in immersive environments. *Journal of Online Learning and Teaching*, 4(3), pp.339-348.
- Mwasalwiba, E.S., 2010. Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators. *Education+ training*. <https://www.emerald.com/insight/content/doi/10.1108/004009> (Accessed: 6 February 2019).
- O'Connor, A. A 2013. Conceptual framework for entrepreneurship education policy: Meeting government and economic purpose. *J. Bus. Ventur.* 2013,



- Plumly Jr, 2008. Developing entrepreneurial competencies: A student business. *Journal of Entrepreneurship Education*, 1(1), pp.17.
- Pretorius, M., Nieman, G. and Van Vuuren, J., 2005. Critical evaluation of two models for entrepreneurial education. *International Journal of Educational Management*. 4(2), pp.42-57
- Tran, H.T. and Zaninotto, E., 2010. Product diversification, corporate entrepreneurship, and firm performance: The case of Vietnamese firms. In *Proceeding of European Association for Research in Industrial Economics (EARIE) Conference*. 2(3), pp.22-45.
- Todorov, K. eds., 2011. *European entrepreneurship in the globalizing economy*. Edward Elgar Publishing. <https://books.google.com/books?hl=en&lr=&id=8LGgEJVklRwC&oi=fnd&todorev> (Accessed; December 12, 2019).
- Van Vuuren, J.J, 1997. Entrepreneurship education and training: a prospective content model. *Unpublished paper, University of Pretoria*. <https://scholar.google.com/scholar?q=related:h9pTFy4PEp8J>: (Accessed: 9 June 2020).
- Van Vuuren, J.J. and Nieman, G.H., 1999, June. Entrepreneurship education and training: A model for syllabi/curriculum development. In *44th ICSB World Conference Proceedings*. 5(4), pp.76-88.
- Youth Employment Accelerator, 2019. "Harambee, Youth Employment Accelerator, winner in NGO's category". *Mail & Guardian*. Mail & Guardian Online. Retrieved 26 February 2020. [https://link.springer.com/chapter/10.1007/978-3-319-94974-1\\_28](https://link.springer.com/chapter/10.1007/978-3-319-94974-1_28)
- Zhang, B., Shan, S., Chen, X. and Gao, W., 2006. Histogram of Gabor phase patterns: A novel object representation approach for face recognition. *IEEE Transactions on Image processing*, 16(1), pp.57-68.