

# **SCHEMATIC PATTERN FOR ENGIPIRENEURSHIP IN ENGINEERING INSTITUTION IN NIGERIA**

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## **Abstract**

The study formulated a schematic pattern for engipreneurship which is to be adopted in engineering institutions in Nigeria. The formulation comprises of proper orientation, training, seminar & workshop, cooperation with companies, workmanship, establishment of loans, monitoring inspector, proper record keeping and trainee-trainers respectively. The formulated pattern shows that if it is well adopted and integrated into engineering institution, better engineering graduates will be produced in the society which will gradually reduce unemployment in the society through the skills acquired and enhance business-related driven dynamics of the students.

**Keywords:** Engipreneurship; Institution; Engineering; schematic pattern; Nigeria.

**Citation:** Raimi, O. A. and Ayetoro, A. B. (2017). Schematic Pattern for Engipreneurship in Engineering Institution in Nigeria. *Journal of Industrial Technology*, 2(1): 21- 28.

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## **1. Introduction**

Engineering career is a profession that is very lucrative when properly annexed with a business related dynamics. The course work in most of our tertiary institutions is so loaded that it hardly gives space for well structured practical classes for the students. The broader nature of engineering career covers virtually every aspect of an active economy. But it is quite unfortunate that

majority of our tertiary institutions produces graduates who are sound in terms of academic work but are having deficiencies in entrepreneurship skills to enable them stand alone in midst of harsh or unfavourable economy situation. A lot of engineering graduates are lamenting because of no job to do due to the fact that they lack the proper skills to make them survive when there are no job coming forth.

There should be adequate provision of training and retraining of engineering students in our tertiary institution so as to make them self reliance through engipreneurship integration system.

Engipreneur is composed of two words, "Engi" and "Preneur". It is simply an engineering integration of entrepreneurial approach to engineering career to solve real life problems and challenges. Engineering is a technical field which is actually driven by business related dynamics that is yet to be fully understood by most engineering students. It is quite unfortunate that engineering students do not get any kind of practical oriented entrepreneurial education either in school or out of school. Engineering students in our tertiary institution focuses on degree earning and gain the licensing requirements either through Nigerian Society of Engineers [NSE] or Council for the Regulation of Engineering in Nigeria [COREN] which is basically technical knowledge and nothing else without business and entrepreneurship skills which in turn make them to be employees of labour at the long run.

## 2. Literature Review

A lot of researchers have investigated on one study or the other as regards entrepreneurship with evidence of various cases.

Izedonmi and Okafor (2010) examined the effect of entrepreneurial education on students' entrepreneurial intentions. The study sought to determine whether such intention usually give rise to entrepreneurial start-up among students. The findings revealed that student's exposure to entrepreneurship education has a

positive influence on the students' entrepreneurial intentions.

Ekpoh and Edet (2011) explored on the impact of entrepreneurship education on career intentions among students drawn from two universities in Akwa-Ibom and Cross River States of Nigeria. The findings highlighted that exposure to entrepreneurship education influences career intentions of tertiary school students.

Babatunde and Durowaiye (2014) examined the impact of entrepreneurship education on entrepreneurial intentions among Nigerian undergraduates. The study found that exposure to entrepreneurship education influences students' intentions of becoming self-employed. It was also discovered from the findings that most students were not very confident about their intentions due to fear of capital, failure, and lack of experience in business management.

Pardie and Akoto (2015) conducted a study to assess the entrepreneurship course and its effect on the entrepreneurial intentions of students of Cape Coast Polytechnic. The study showed that majority of the students affirmed that the objectives of the entrepreneurship course in the polytechnic were essentially to expose them to concepts in entrepreneurship and also to create awareness about entrepreneurship and its values.

Olorundare and Kayode (2014) examined the nature and concept of entrepreneurship education and its application for graduates of Nigerian universities. The study came up with a model of how public and private partnership can be enhanced through entrepreneurship education in Nigerian universities towards national transformation.

Onuma (2016) investigated exposure of undergraduates' students to entrepreneurial education for post-graduation job creation ability. The findings showed a significant relationship in their formulated hypotheses which implies that entrepreneurial education is relevant to students with regard to equipping them with skills for post-graduation job creation ability rather than job seekers.

Undiyaundeye and Otu (2015) advocated the adoption of re-positioning the economic development and entrepreneurial drive for job creation, wealth creation and global competitiveness of Nigerian youths and graduates. The study identified challenges like inadequate funding, lack of training personnel and men availability of equipment as issues facing entrepreneurship education.

Amos *et al.*, (2015) tried to ascertain whether there is significant relationship between perceived educational supports and entrepreneurial intention of university students. The study found that entrepreneurial educational support has significant relationship with the entrepreneurial intention of university students.

Iro-doro and Iro-doro (2015) sought to establish the extent to which self-efficacy correlates with entrepreneurial intention among students in tertiary institutions in Ogun State, Nigeria. The results of the findings revealed that self-efficacy determine entrepreneurial intention of students in tertiary institution.

Mohammed *et al.*, (2014) sought to find out how effective the entrepreneurship education helps students attending a course leading to award of Nigeria Certificate Education [NCE] to become self-reliant by way of

incubating their own business start-up through new skills and knowledge. The findings revealed that the students have no intention to be self-employed and that the colleges have adequate but no befitting programs to prepare students for entrepreneurship after graduation.

Garba *et al.*, (2014) examined students' entrepreneurial intentions in school of management studies in Kano State Polytechnic, Nigeria. The results showed that perceived desirability has statistically significant relationship with entrepreneurial intention while the perceived feasibility has no significant relationship with entrepreneurial intention.

Ekpe and Mat (2012) examined the moderating effect of social environment on the relationship between entrepreneurial orientation and entrepreneurial intentions of undergraduate female students of Nigerian universities. The results of the findings indicated that entrepreneurial orientation had significant positive influence on entrepreneurial intention among female business students in Nigeria and that social environment moderated the relationship between entrepreneurial orientation and entrepreneurial intentions among the students. However, it is against this background and literature review that the study will formulate a pattern for entrepreneurship adoption in engineering institution in Nigeria.

### **3. Formulated Pattern for Entrepreneurship in Engineering Institution**

**Proper Orientation:** At an early career of every engineering student in the tertiary institution, there should be adequate and proper orientation of the

students to entrepreneurship education. Learning to become an entrepreneur is not just about acquiring knowledge and skills to be an engineer and entrepreneur; it's also about taking the steering wheel as a young career and potential challenge-solving engineer. The engineering students should know that the typical engineering career path does give engineers any choice but to be employees and rely on someone else for their livelihood.

Freiling and Schelhowe (2014) in their research study showed that entrepreneurial orientation in its broader conceptualization positively influences the performance of an individual in both explorative and exploitative dimensions matter.

#### ***Training, Seminar and Workshop:***

Entrepreneurship academy should be established in most of our engineering institution that will solemnly take responsibility of training, organizing seminars and workshops for students. The entrepreneurship academy should provide the solution to the challenge. Engineers will be trained and coached by successful entrepreneurs and experienced experts so that they can control their future career and become principals, partners and company owners. Adejimiola and Olufunmilayo (2009) revealed the need for training, seminar and workshops for entrepreneurship education.

#### ***Cooperation with Companies:***

The student industrial work experience scheme (SIWES) and student work experience programme (SWEP) should be adequately controlled by departmental coordinator of engineering institution by liaising with skills and business driven

company to enable engineering students to carry out the programme. This will really assist a lot in a greater way because it will not create avenue for students to do the programme in a place of less skill and for financial gain. Lacka (2012) showed that the knowledge flow and the awareness of new solutions in enterprises take place through intermediary commercialization paths.

#### ***Workmanship:***

Between six (6) months and a year workmanship should be organized for graduating engineers before the compulsory national youth service scheme (NYSC) so as for them to develop their life vision, set clear goals to accomplish the vision and have a confident and realistic mindset. This will assist a lot by positively contributing to the economy through innovation skills and business-related dynamics. O'Gorman (2015) in the research study of entrepreneurship in Ireland, argued that industrial development is imperative for the practice of entrepreneurship or policy relating to entrepreneurship.

#### ***Establishment of Loans:***

There should be provision of special loans from the government to graduate engineers who completed the workmanship successfully so as for them to set up their own enterprise as to thoroughly exercise, create and impact the knowledge they have acquired into the business. Dzisi (2014) revealed finance as a key constraint that impedes young individual's from establishing a successful business in a developing country.

**Monitoring Inspector:** There should be institutional monitoring inspector that will adequately monitor the graduate engineers so as to ensure that the loans they have received do not go elsewhere apart from the purpose it is meant for.

**Proper Record Keeping:** There should be adequate and proper record keeping of the trained engineers who are doing excellently well in their chosen enterprises because it will assist in strengthening the continuous smooth running of the programme against any forms of collapse. Ilemona

(2011) revealed that proper record keeping enhances growth and survival of an enterprise.

**Trainee-Trainers:** Every trained engineering graduate in the scheme should see themselves as a metamorphosis of the scheme in giving back through voluntary training to future career engineering students who were once like them when they were still students in the institution. Idrus *et al.*, (2014) showed that education and training are crucial for the development and creation of entrepreneurs.

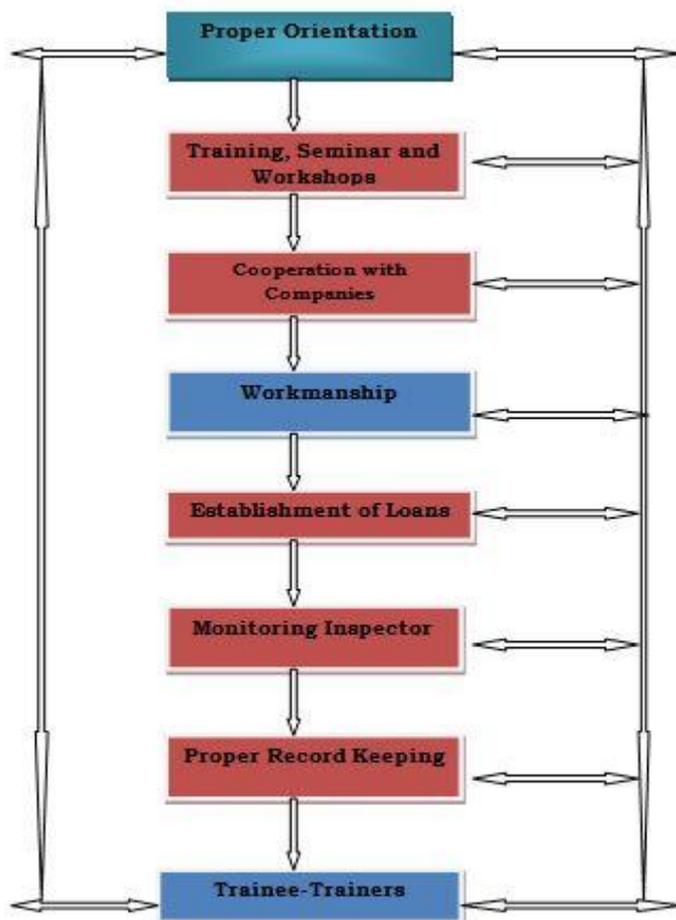


Figure 1: Schematic Pattern of Entrepreneurship for Engineering Institution (A Pattern Developed by the Authors)

#### 4. Conclusion

Having thoroughly reviewed, observed and formulated a pattern for entrepreneurship in engineering institution in Nigeria, engineering students should not only see engineering as a technical field but also as business-related driven dynamics. Our institution should ensure that all possible effort are made to integrate entrepreneurial approach to engineering students so as to have better graduates in the society which in turn reduces unemployment in the country through proper acquired skills.

#### Conflict of Interest

The authors, O.A. Raimi and A.B. Ayetoro declare that there is no conflict of interest regarding the publication of this article: "Schematic Pattern for Entrepreneurship in Engineering Institution in Nigeria".

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