

# The Role of National Diploma Projects in Entrepreneurship Ecosystems for Industrialization: The Case of Federal Polytechnic Offa

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## EXECUTIVE SUMMARY

The entrepreneurship ecosystems are systems of independent actors and relations that support the creation and growth of new ventures directly or indirectly. The ultimate goal was to determine the number of National Diploma Projects that culminate into an enterprise. The study area was the Federal Polytechnic Offa, Kwara State, Nigeria. Questionnaires, interview and direct observation methods of data collection were used to collect data from past National Diploma Projects through the trainers and graduates in selected Departments for five (5) academic sessions. Descriptive statistics : the mean, median and mode were used to analyze data. Simple bar charts, pie charts with summary statistics were used to present results of the study. The proportion of National Diploma Projects that culminate into an enterprise was 50%. About 90% of the number of projects solve local problems within the study period. Also 74% of the population affirm that the research proposal template school students into entrepreneurship. However, 55 % of our respondents are of the opinion that the curriculum be reconfigured. 69% of the trainers responses were to the effect that students projects results into products and /or services. The survey results shows that National Diploma Projects culminate into enterprises. Some of the projects solve local problems. The research proposal template school students into entrepreneurship and project results into products and /or services. Also, there is need to reconfigure the research proposal template towards individual cultural heritage. Results show a strong correlation between the business graduates are engaged in and the project executed while in school. Therefore, more efforts should be geared towards improved project writing.

**Keywords:** Curriculum, Education, Projects, Enterprise

## I. INTRODUCTION

Nigerian economic sustainability is largely dependent on citizenry effort and economic prowess. The actions of Nigerians will determine what happens to the society and economy. Wealth is not an accident, it is man-made. Similar to slavery and apartheid, poverty can be removed through the actions of human beings. Invariably, development will remain a challenge unless we jointly take up the responsibility to understand the deep financial crisis rocking this nation. In 2014, before the surge in Chinese finance after the 2015 Forum on China-Africa Cooperation (FOCAC) summit, 15 African countries had IMF loans, worth a total of US\$5.39 billion. Today it's 20 countries with loans totaling US\$15.4bn. And more debt-stricken countries like Angola, Zimbabwe, Mozambique and the Republic of the Congo are knocking at the IMF's door ([Chinese investment in Africa: New model for economic development or business as usual? – DOC Research Institute \(doc-research.org\)](#)). In its 2018 Regional Economic Outlook for Sub-Saharan Africa, the IMF says public debt rose above 50% of GDP in 22 countries at the end of 2016, up from 10 countries in 2013. Debt servicing costs are becoming a burden, especially in oil-producing countries. Angola, Gabon and Nigeria are expected to absorb more than 60% of government revenues in 2017 (Sub-Saharan Africa Regional Economic Outlook: Navigating Uncertainty, 2018 ([The long term dangers of Chinese investment in Africa \(diplomaticourier.com\)](#) & [www.imf.org/en/Publications/REO/SSA/Issues/2019/04/01/sreo0419](#)). This calls for the need for development of entrepreneurial skills and innovation with a focus on local demands and supplies of skills for an improved financial system in Nigeria.

The entrepreneurship ecosystems are systems of independent actors and relations that support the creation and growth of new ventures directly or indirectly. According to Kauffman Foundation, entrepreneurial ecosystems drive local economic vibrancy and national economic growth by building fertile environments for new and growing companies to thrive. The component of an ecosystem include people, technology, capital and infrastructure. The entrepreneurship ecosystems can be influenced by the level of research and development transfer, market openness, entrepreneurship education, entrepreneurial finance, physical infrastructure, culture and social norms, government policy, legal and commercial infrastructure, leadership, media, support services and government programmes.

Entrepreneurship education is about promoting innovative skills that can be applied in practice. Knowledge of entrepreneurship education may change the behavior of students towards entrepreneurship and empower them with skills needed for establishing a robust environment with little uncertainty for innovation and growth. Students are provided with a wide-range of teaching management for entrepreneurship that helps them to establish the right value and intellectual capacity to shape their innovative perceptions (Gundry et al. 2014, Lazzolino et al. 2019, Wei et al. 2019).

Entrepreneurship education is introduced to institutions through structured programs in Nigeria. The entrepreneurship programs come in the form of curriculum (Shetta 2012), extra curriculum (Fayolle et al 2006) and social education programs (Denny et al . 2011) designed to prepare the student either to learn to understand entrepreneurship or become an entrepreneur (Hytti, 2004). Despite the focus on entrepreneurship education across the globe, researchers have questioned the effectiveness of initiatives in producing good entrepreneurs (Decramer et al 2012, Smith et al, 2006). There is a non-consensus on what exactly should be the components of a quality practice model for higher-education entrepreneurship. Also, there is a wide variety of programs and pedagogies with little uniformity in content and approach (Matlay and Carey 2007, Neck and Greene 2011, Peterman and Kennedy 2003). Thus, it becomes necessary to find out if countries are getting it right.

The National Diploma Projects are a measure of the learning process the Diplomats had passed through at the National Diploma level. It is expected that the project be a reflection of the knowledge and skills acquired during the four (4)

semesters period. The Federal Polytechnic Offa, Nigeria is a Technical and Vocational Education and Training (TVET) Centre established in 1992 following a pronouncement by the then Military President, Ibrahim Babangida at the Palace of His Royal Highness, Olofa of Offa, Oba Mustapha Olawoore Olanipekun Ariwajoye II during a state visit in 1991. The Polytechnic was established to train students to acquire scientific and technological knowledge and skills with an appropriate measure of social skills such as will imbue the graduates with national and civil consciousness, discipline, self-reliance, and entrepreneurial skills in such a way that the graduates will be able to install, operate, repair, maintain equipment and effectively participate and assist in the planning, execution and management of environmental, technological and agricultural projects and product development. Therefore, graduates are expected to be all entrepreneurs. Their entrepreneurial skills should be reflected in their National Diploma Projects and the result should be “an enterprise” needing people, capital and infrastructure to blossom.

The increasing trend in unemployment calls for a repositioning of the education curriculum at various levels of education with emphasis on entrepreneurial skills. Unemployment rate in Nigeria increased to 33.30 percent in the fourth quarter of 2020 from 27.10 percent in the second quarter of 2020 (National Bureau of Statistics, Nigeria). The unemployment rate measures the number of people actively looking for a job as a percentage of labour force. There is the need to revise existing curriculum to incorporate solutions to local problems and inform changes needed for economic development. Graduates need be trained to create products and services as research outputs. The era of keeping ideas in form of theses on book shelves should be done with particularly in Nigeria.

Consumption of research outcomes stimulate entrepreneurship, thus the questions are: do PhD or Masters or Degree or Diploma Theses and National Diploma or Higher National Projects culminate into an enterprise to solving local problems? Does the research proposal template school students into entrepreneurship? Does the academia ask the right questions to stimulate right responses geared towards an improved entrepreneurship ecosystem? Unemployment problem and correlated issues in Nigeria should be solved with a focus on utilizing entrepreneurial skills. Graduates should be helped to develop their profession, generate new businesses, initiate new products and generate new services by families, institutions, stakeholders and governments.

Apparently, only innovations will alleviate poverty, promote individual standards of living, reduce unemployment, contribute to sustainable development and promote the national human resource development agenda.

Projects are expected to produce goods and services. The results give rise to enterprises. As the enterprises multiply the economy experiences changes and development. Entrepreneurship accelerates economic growth. Entrepreneurs are important to market economies because they can act as the wheels of the economic growth of the country. By creating new products and services, they stimulate new employment, which ultimately results in the acceleration of economic development. Small businesses are important because they provide opportunities for entrepreneurs and create meaningful jobs with greater job satisfaction than positions with larger, traditional companies. They foster local economies, keeping money close to home and supporting neighborhoods and communities. Business has contributed to changes in the level of development in the country through generation of employment; direct creation of wealth and reduction of poverty by contributing to the Nigeria Gross National Product (GNP) and GDP.

Thus, PhD, Masters, Degree, Diploma Theses and National Diploma/Higher National Projects are a form of enterprise projection. The ultimate goal is to determine the number of National Diploma Projects that culminate into an enterprise. Specifically to determine if the projects solve local problems; research proposal template school students into entrepreneurship; project results into products and /or services and there is need to reconfigure the research proposal template towards individual cultural heritage.

## II. LITERATURE REVIEW

Governments and entrepreneurs can spur growth across a nation. The entrepreneurial intention of students can attract global interest. The labor market continues to offer employment opportunities to fresh graduates but these opportunities shrink on a daily basis. Entrepreneurship can be a more satisfying and rewarding career, especially with the many new venture opportunities and support provided by various government agencies and stake holders. Entrepreneurship is a source of innovation, job creation and economic growth; as such it is pivotal to attract the young and educated to become entrepreneurs. Undergraduates are the important source of nascent entrepreneurs in the future and consequently it becomes interesting to explore their

intention for opportunity entrepreneurs. Entrepreneurship can play very important role in the economic development of a country (Coviello and Munro, 1995; Hisrich et al 1996; Knight and Carusgil, 1996; Busenitz et al, 2000). New firm creation has been identified as a critical factor in driving the economy of any country (Low and MucMillan, 1988, Brower, 2000). Only a functional entrepreneurship ecosystem will make a major impact on driving an economy towards industrialization.

Looi and Khoo-Lattimore (2015) conducted a post-positivist studying hierarchical regression analysis to investigate whether family business background and gender explained largest and significant incremental variance in students' entrepreneurial intention. Results showed that entrepreneurs are more likely born. To understand entrepreneurship, it is essential to identify and understand the explanatory variables in different countries and contexts (Daana, 1997, 2001, 2014).

Two broad categories of entrepreneurship are opportunity entrepreneurship and necessity entrepreneurship. Opportunity entrepreneurship refers to starting a business to exploit a perceived unexploited or under exploited business opportunity while necessity entrepreneurship involves starting a business as the best option available for employment but not necessarily the preferred option (Acs et al 2008, Dana, 1997, Hechavania and Reynolds, 2009). Studies show that the level of entrepreneurial intention among younger generation could be lower due to increase in inter-generational mobility within business families. This is because children of business owners opt for a different career from what their parents engaged in (Wennekers et al 2002). In addition, the younger generations are much more educated and enlightened than their parents that had no other choice but to opt for necessity entrepreneurship. Looi and Khoo-Latti (2015) argue that better education will open up wider employment opportunities, provide higher return and security from employment and enhance professional ambitions rather than engaging in entrepreneurship.

On the other hand, it has been argued that all individuals should be exposed to some entrepreneurship training and development (Gibb, 2002) because entrepreneurship graduates are three times more likely to start their own business, three times more likely to be self-employed, have annual incomes of 27% higher, own 62% more assets, and are more satisfied with their jobs (Charney and Libecap, 2000).

Some scholars have proved the positive impact on a student’s perceived attractiveness and feasibility of a new venture start up while others have found positive impact on students entrepreneurial intentions. They found that those completing entrepreneurship education programs will more likely become entrepreneurs (Souitans, Zerbinati and Al-Laham, Fayolle, Gailly and Lassas-Clerc 2006, Athayde 2009, Davidson and Honig 2003). Again, Adam and Imam (2020) investigated the relationship between university entrepreneurship education and financial performance of graduate entrepreneurs. Data was collected using a five point Likert questionnaire. It was observed that university entrepreneurship education has significant positive relationship with the financial performance of graduate entrepreneurs.

Similarly, the negative effects of entrepreneurial programs have been established (Fayolle and Gailly, 2009; Von Graevenitz, Hahoff and Weber 2010). For instance, Shamsuddin et al 2020 observed the level of perception and awareness of Malaysians small medium sized enterprises in utilizing Government Business Support service. A survey was conducted for three months, the response rate was 17.4 %. It was observed that perception and general awareness has a significant effect on the utilization of Government Business Support service. Therefore, without

education potential entrepreneurs may not maximize their potentials.

### III. METHODOLOGY

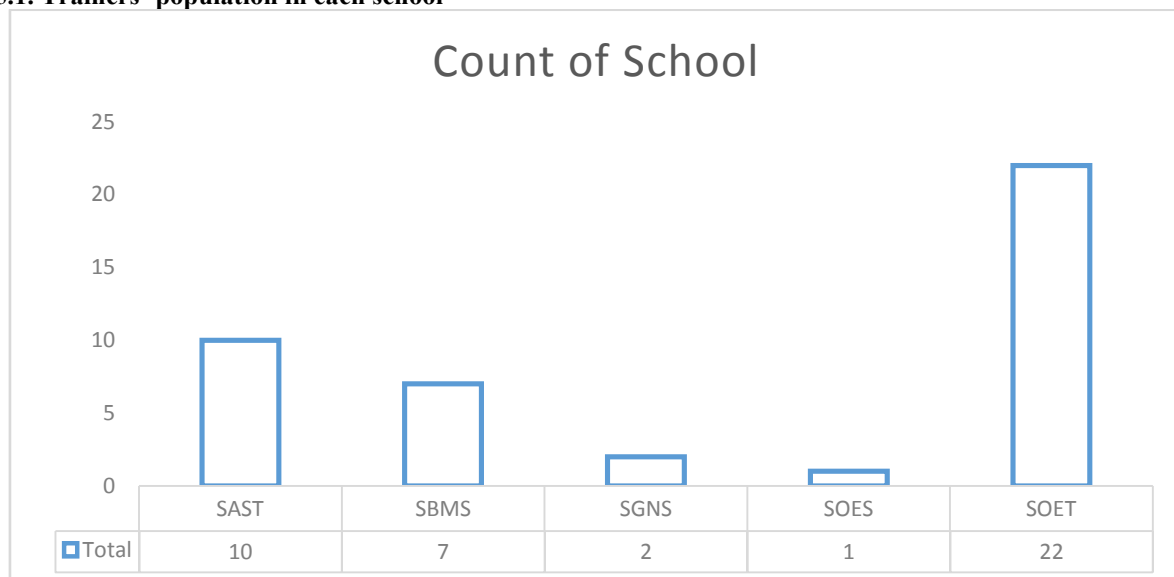
The study area is the Federal Polytechnic Offa, Kwara State, Nigeria. Questionnaires, interview and direct observation methods of data collection were used to collect data from past National Diploma Projects through the trainers and graduates in selected Departments for five (5) academic sessions. Descriptive statistics the mean, median and mode was used to analyze data. Simple bar charts, pie charts with summary statistics were used to present results of the study.

### IV. METHODS

The study area is the Federal Polytechnic Offa, Kwara State, Nigeria. Questionnaires, interview and direct observation methods of data collection were used to collect data from past National Diploma Projects and Higher National Diploma Projects through the trainers and graduates in five schools: School of Applied Sciences & Technology (SAST); School of Business & Management Studies (SBMS); School of Engineering Technology (SOET); School of Environmental Studies (SOES) and School of General Studies (SGNS). Descriptive statistics the mean, median and mode were used to analyze data. Simple bar charts, pie charts with summary statistics are used to present results of the study.

## V. STATISTICAL ANALYSIS AND RESULTS

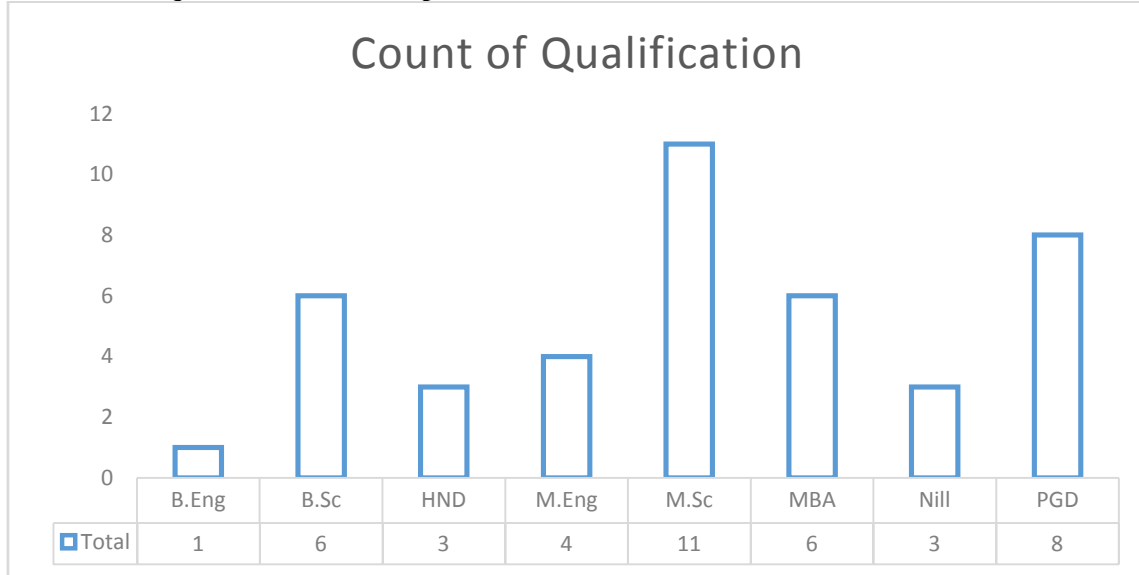
### 5.1. Trainers’ population in each school



The above graph summarizes the response from trainers' population in each school. There were 10, 7, 2, 1, 1, and 22 response from respondent from School of Applied Sciences and

Technology, School of Business Management Studies, School of General Studies, School of Environmental Studies and School of Engineering Technology respectively.

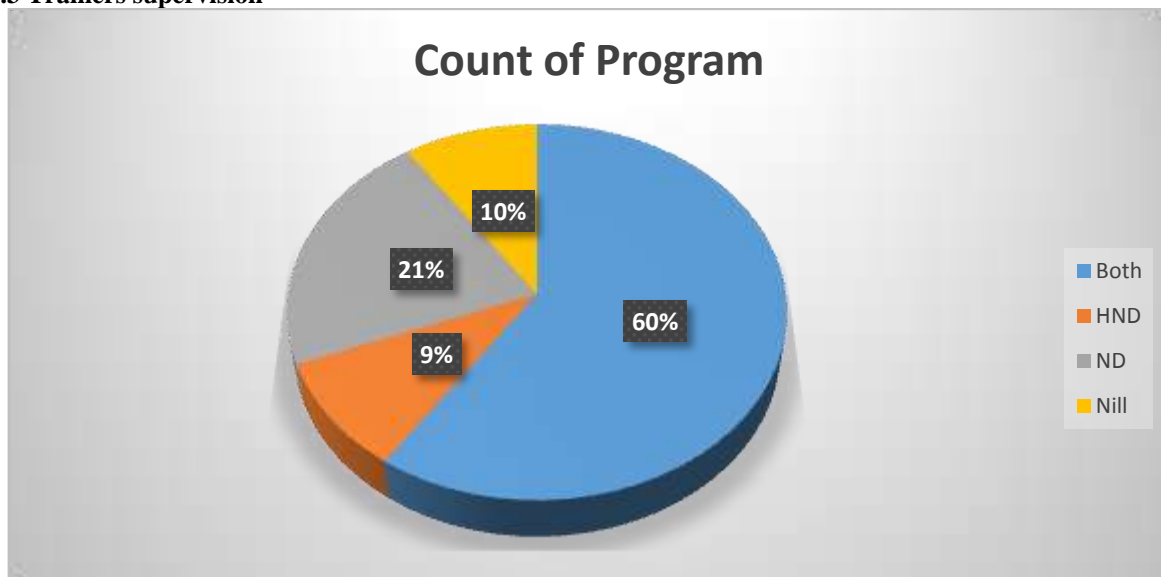
**5.2 Educational qualification of the respondent**



The above graph summarizes the educational qualification of the respondent. There were 1, 6, 3, 4, 11, 6, 3, and 8 responses for B.Eng.,

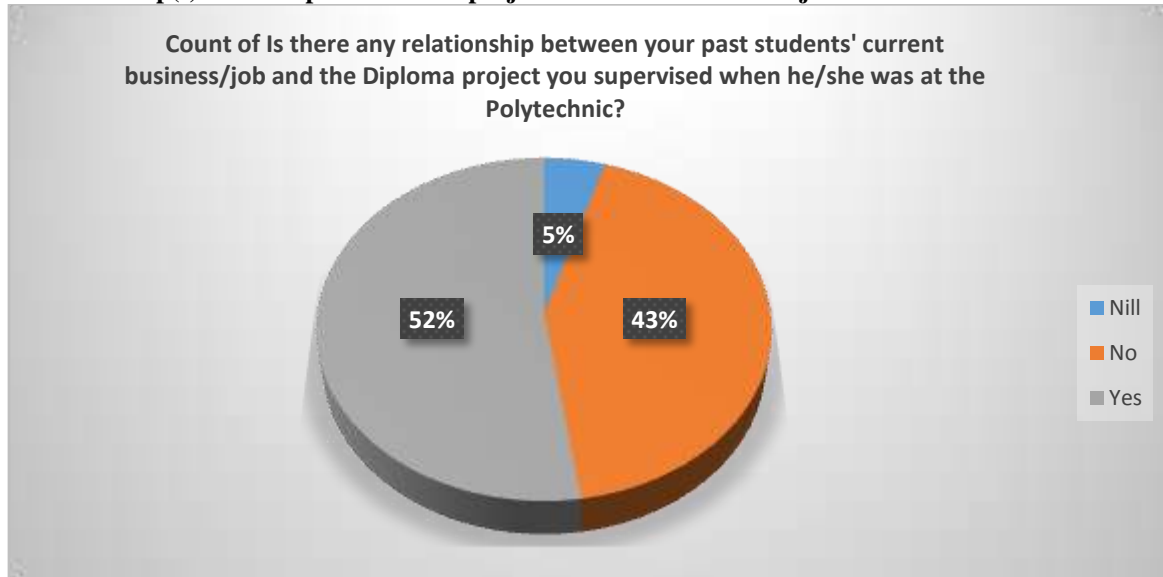
B.Sc., HND, M.Eng., M.Sc., MBA, no response and PGD qualification respectively.

**5.3 Trainers supervision**



The survey statistics show that 60%, 9%, 21% and 10% of the trainers supervised both HND and ND students, HND students, ND students and no response respectively.

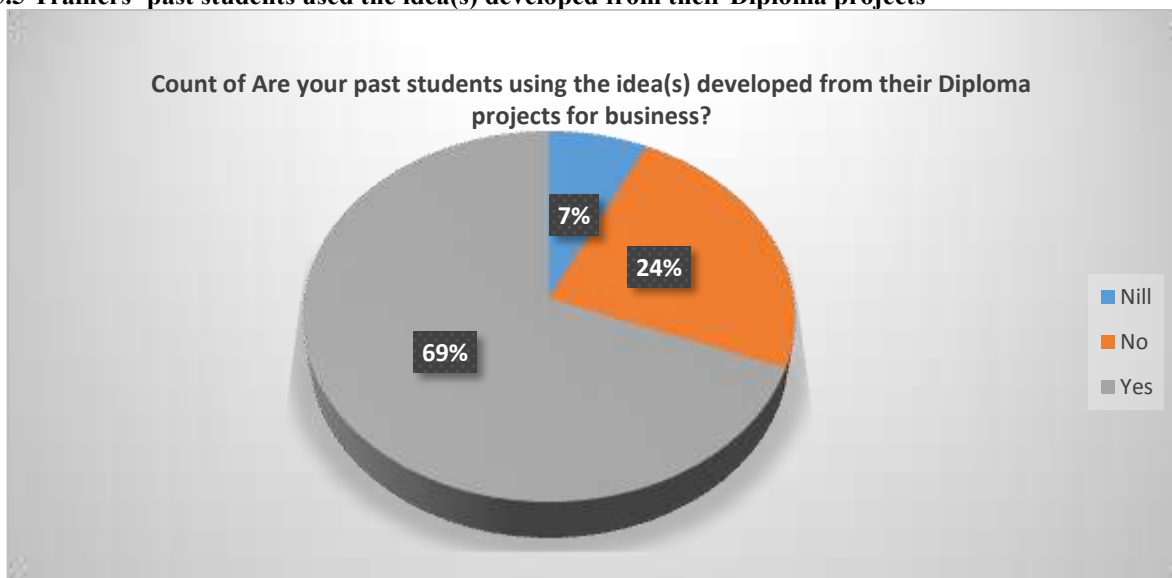
#### 5.4 Relationship(s) between past students' project and current business/job



52% of the trainers says there is/are relationship(s) between their past students' current business/job and the Diploma project supervised

when he/she was at the Polytechnic while 43% of the respondent refute the claim and 5% of the population have no response.

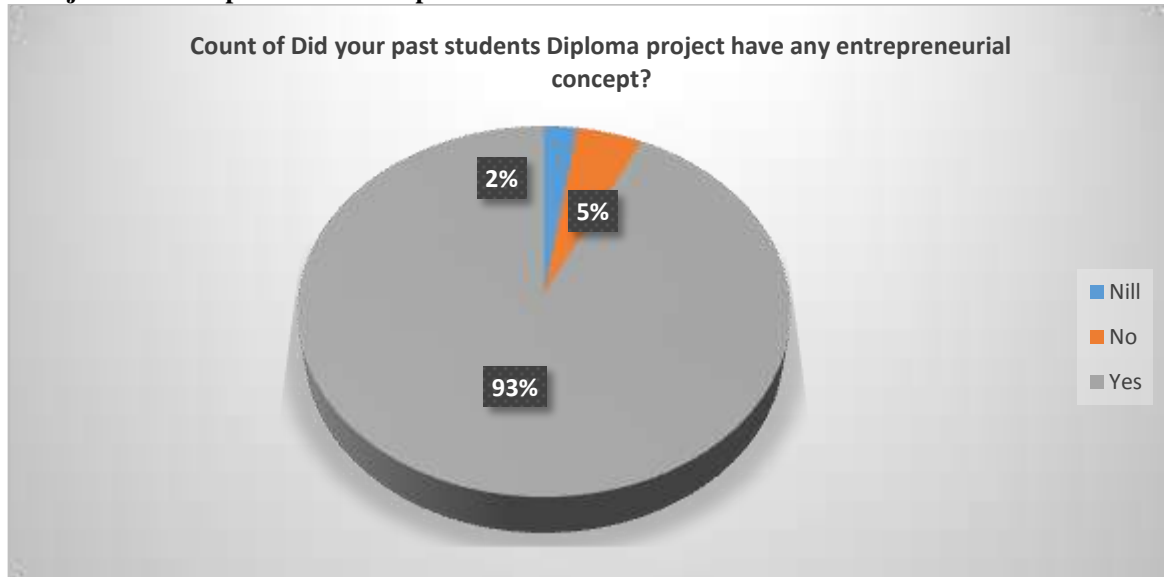
#### 5.5 Trainers' past students used the idea(s) developed from their Diploma projects



69% of trainers' past students used the idea(s) developed from their Diploma projects for business, while 24% do not and 7% have no response to the claim.

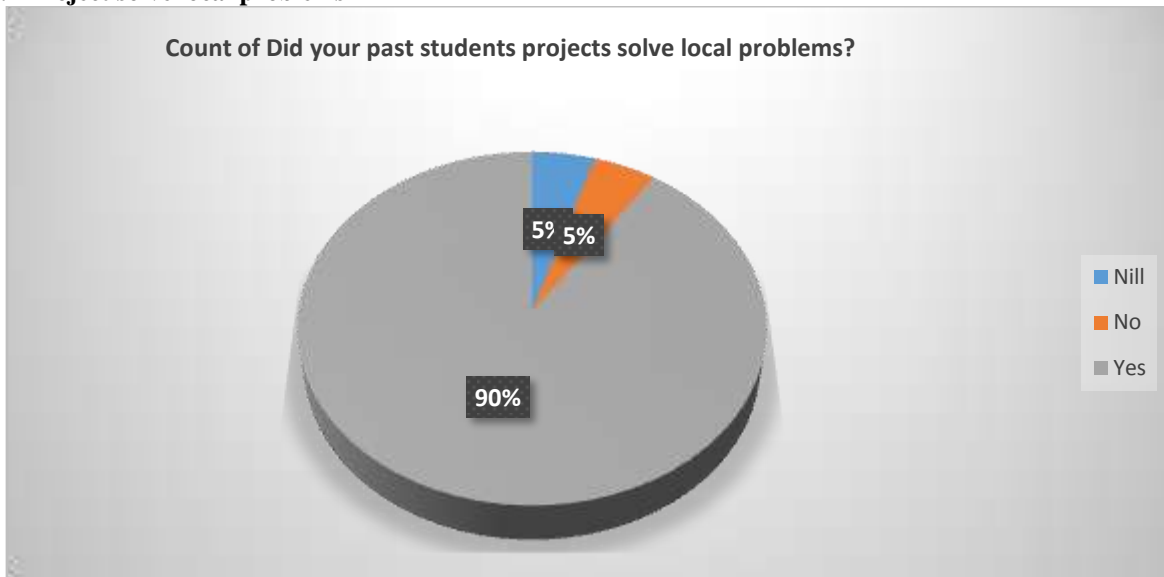


### 5.6 Project and entrepreneurial concept



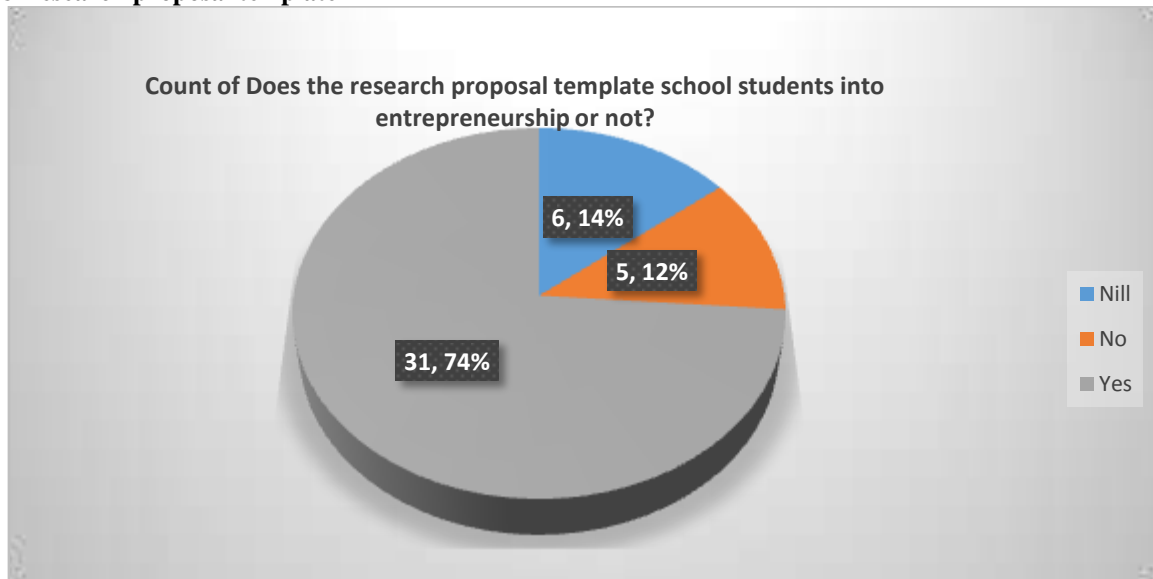
It is 93% evident to say that past students Diploma project have entrepreneurial concept. One of which is fishery

### 5.7 Project solve local problems



It is sufficient to say that past students project solve local problems with 90% data evidence. One of the local problems solved by the past student project is food preservation.

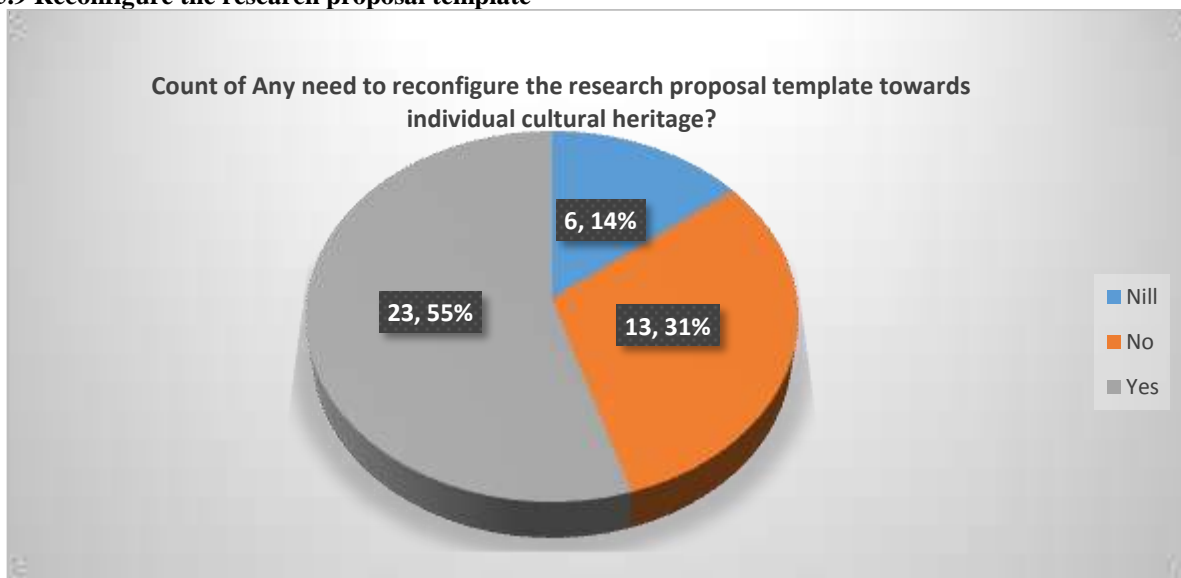
### 5.8 Research proposal template



We can say that the research proposal template school students into entrepreneurship since 74% accept the claim while 12% refute the

claim and 14% have no response. In the exact word of a respondent; “with this they can use the skills acquired to start on their own”.

### 5.9 Reconfigure the research proposal template

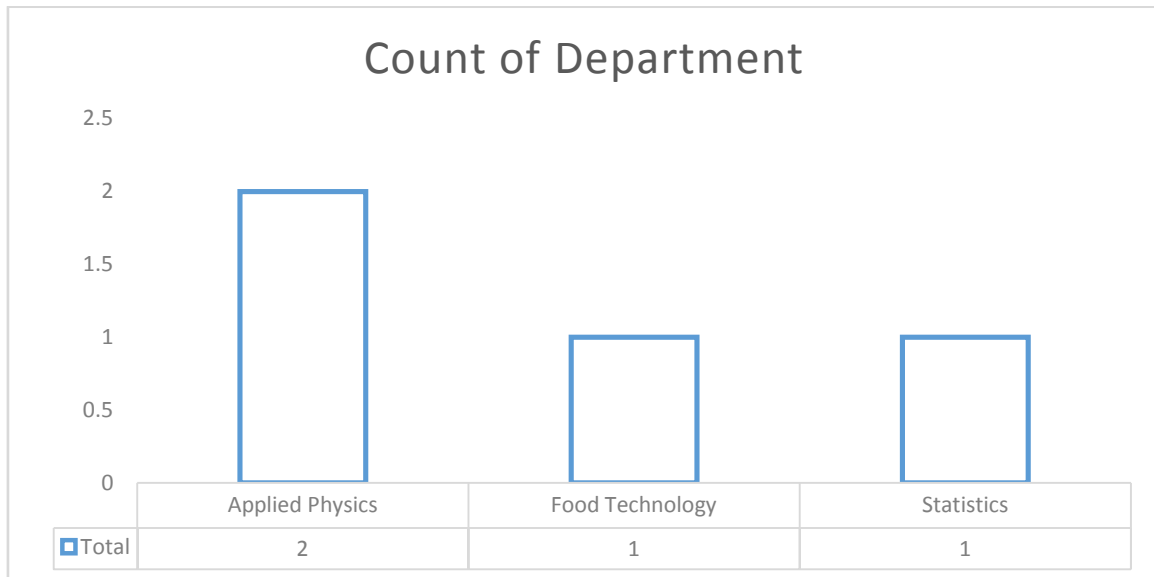


55% of the respondent are of the opinion that there is a need to reconfigure the research proposal template towards individual cultural heritage while 31% negate the claim and 14% have no response. Even though a claim that “education should reflect local ideas and contribution” was raised by a respondent.

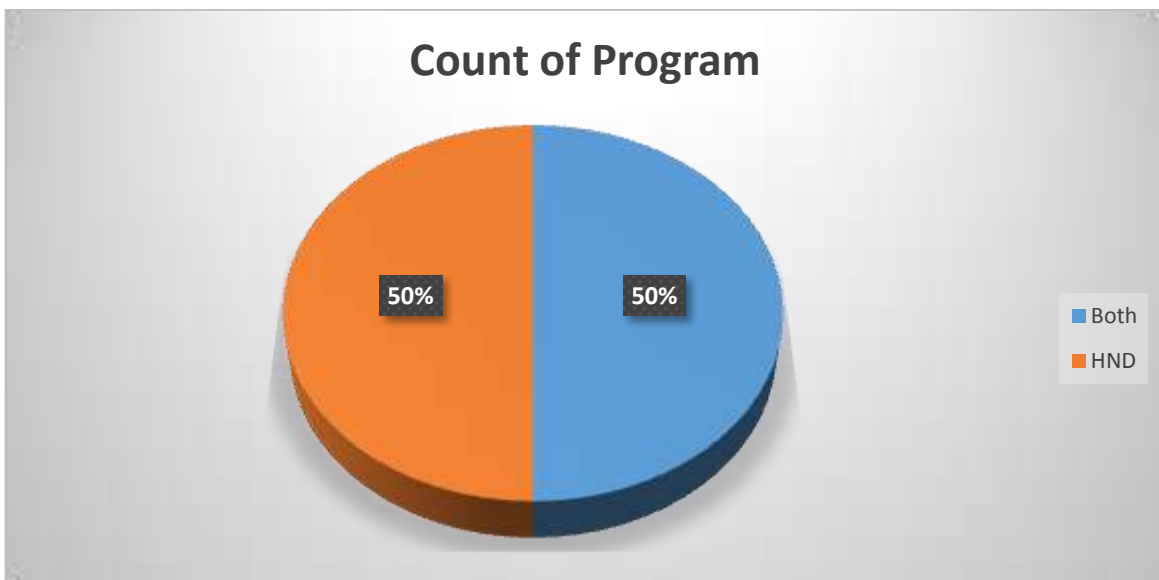
### 5.10 Graduate population

There was a limitation in getting adequate response for respondent. There were few graduate ready to attend to the questionnaires served.





The above graph summarizes the response from the graduate population in each department. There were 2, 1, and 1 response from respondent from Applied Physics, Food Technology and Statistics department respectively.



There was 50% response each from student who graduate from both HND and ND and likewise only HND.

### 5.11 Enterprise that has to do with their Diploma project



50% of the respondent do have enterprise that has to do with their Diploma project while the other 50% do not.

There was a 100% response to the fact that there is a relationship between their current business/job and the Diploma project you did at the Polytechnic of which is training of students in cake and snacks making

The occupation of the respondent is lecturing.

There was a 100% claim that their Diploma project have entrepreneurship concept. A respondent said and I quote “the Diploma project gives room for self-employment”.

### VI. DISCUSSION, CONCLUSION AND RECOMMENDATION

The survey results shows that National Diploma Projects culminate into enterprises. Some of the projects solve local problems. The research proposal template school students into entrepreneurship and project results into products and /or services. Also, there is need to reconfigure the research proposal template towards individual cultural heritage. Results show a strong correlation between the business graduates are engaged in and the project executed while in school. Therefore, more efforts should geared towards improved project writing.

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