

# TITLE: PROMOTING THE CULTURE OF INNOVATION AND ENTREPRENEURSHIP WITHIN THE UNIVERSITY ECOSYSTEM THROUGH A UNIVERSITY-BASED CO-CREATION HUB

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## 1. Abstract:

Innovation and entrepreneurship are considered one of the most powerful driving forces for economic and social progress in our era. As a result, building a unique entrepreneurial ecosystem and transforming it into an “innovative and Entrepreneurial University” have become goals for many colleges and universities.

Innovation and Entrepreneurship are very important in Universities because they play an important role to increase entrepreneurial graduates of higher education. Global awareness of the importance of the role of entrepreneurship and innovation in the university ecosystem is in line with the growing awareness of higher education institutions, and universities, to walk the entrepreneurial path. This study aims to form an entrepreneurial university model using a systems approach, where the university should not carry its own burden in carrying out the responsibilities of a third mission to help accelerate community development.

Going by the society we have found ourselves, we observed that there is a huge gap between the school curriculum and the marketplace demand. Most graduates in the marketplace are deficient in relevant knowledge, skills, and attitudes needed to solve critical problems in the workplace.

The rate and rapidity at which the African youth population has been growing are enormous and this has also been very challenging. On one side, it is enormous because if well harnessed, it could become a potential for improved African economy, production, and growth. To this end, youths could be considered Africa’s greatest asset. On the other hand, it is challenging as the resultant restiveness constitutes a threat in our universities, and unemployment fosters banditry and militancy.

In all advanced economies, Higher Education Institutions (HEI) are expected to play a vital role in encouraging innovation, entrepreneurship, and structural change. The expanding population shares the economic importance of knowledge-intensive active ties, digital transformation sweeping across all organizational borders of the globe, and the need to quickly forge efficient and innovative solutions to address pressing societal challenges, that is the demand to contribute more to innovation and to economic and societal change.

The world economic forum estimates that 15 to 20 million young people will join the African workforce every year for the next two decades. By 2030, Africa will be home to more than a quarter of the world’s population under 25, who will make up 60% of the continent’s total population. By then, 15% of the world’s working-age population will be in Africa, and the continent’s urbanized population will exceed 700 million (more than 50%).

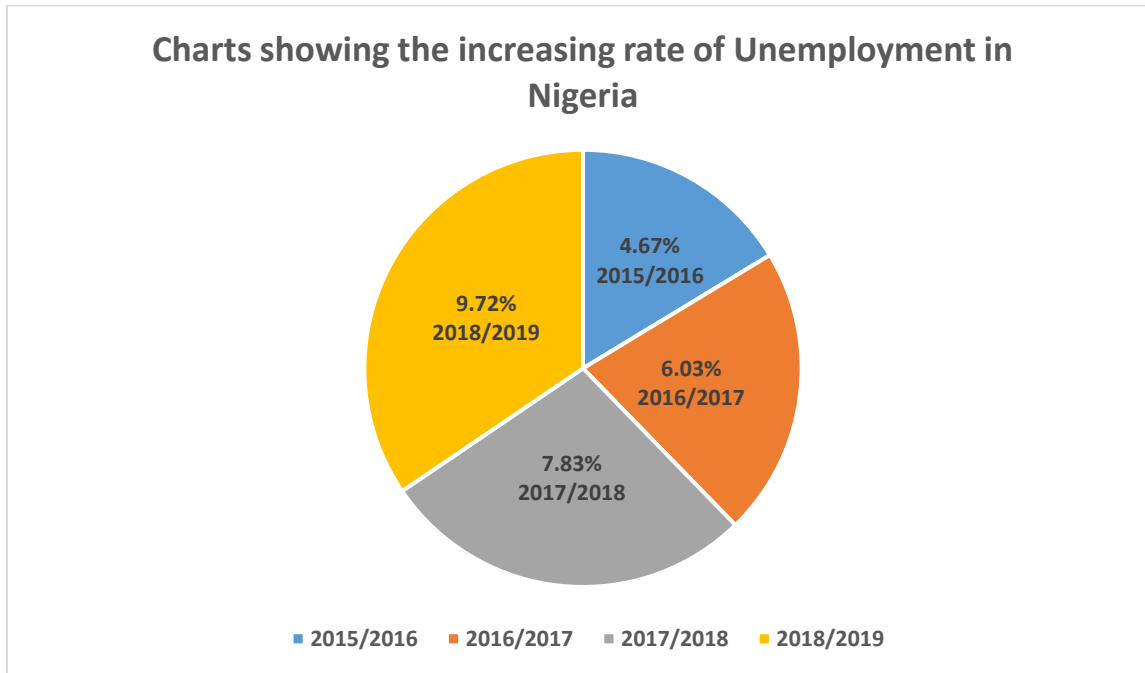
Universities must continue to develop their educational programs, so that graduated students are able to meet and deal with the modern societal needs.

Our society needs competent youth who take initiative, adapt quickly to new situations and solve complex challenges in a digital and sustainable economy. The ability to make use of new and future technologies will be an important competitive advantage and crucial for success in a world of globally competitive markets.

## 2. INTRODUCTION

The percentage of the unemployed in the age group of 15 to 24 years (university-aged youths) as compared to the total labor force. Youth unemployment rates are often higher than overall unemployment rates, which is true in Nigeria as well.

The Nigeria unemployment rate as recorded by the National Bureau of statistics between the years 2015 and 2016 was 4.67%, between 2016 and 2017 another 1.43% was added, and between 2017 and 2018 unemployment rate increased by another 1.89%, between 2018 and 2019 the situation got worse by another 1.89% added to the situation.



University Innovation Hub (U-CoHUB) is a university-fit ideation program designed to empower university undergraduates with skills, Mentorship, leadership, global opportunities, and technical support to become providers of solutions to social and real-life problems. The project will support creativity, entrepreneurship, and innovation and provide opportunities for University Undergraduates to develop and showcase innovative ideas for social impacts.

It is expected students who passed through this program will be able to create jobs via innovative solutions or as entrepreneurs, apply theoretical knowledge learned in the classroom to solve a real-life problem, and become problem solvers.

### 3. RESEARCH METHODOLOGY

The proposed methodology for exploring the role that universities can play in promoting a culture of innovation and entrepreneurship uses the responses and viewpoints collated from students through online questionnaires. The research component of this design was undertaken using a survey, for which questionnaires were distributed online to students to elicit their responses and opinions about current entrepreneurship programs and activities available in their respective universities, if. Follow-up interviews were conducted as well, via focus groups discussion and meet-up. The investigation was complemented with secondary data on I&E from sources such as textbooks on innovation and entrepreneurship and medical entrepreneurship, and academic journals, databases, and web pages.

Altogether, qualitative and quantitative approaches were deployed in collecting and analyzing data especially research conducted in university-industry centers. In addition, the program is aiming to increase innovation competence and improve innovation culture within the university

Although, the ongoing disruption caused by COVID-19 challenged us to use innovative means to undertake the investigative phase and achieve outcomes as originally intended. We turned the challenge into an advantage, which translated to additional gains, including reaching a wider range of stakeholders within a short timescale.

## **Objectives**

This questionnaire was designed to:

- (i) Determine the inherent skills and skills of interest among students;
- (ii) Identify the needs for and requirements of I&E within the university curriculum;
- (iii) Help us understand the factors that influence entrepreneurial passion and awareness of university students (undergraduate and postgraduate), as part of the efforts to address the challenges associated with youth development and employability.

The research study describes the phenomena of innovation and entrepreneurship (I&E), outlines activities on how to support innovation to thrive within the university ecosystem, provides the reader with essential knowledge and a short overview of the current situations in the African university's education system as it concerns curriculum and structured support system towards the nurturing of innovation among university students and the academia.

Innovation and Entrepreneurship education should cultivate in students the necessary knowledge, ability, and psychological qualities required for undertaking entrepreneurial activities. Innovation and Entrepreneurship Education refers to an educational system that equips the learners with innovative and entrepreneurial abilities via the development of entrepreneurial and innovative awareness, I&E thinking, and I&E skillsets, of which the objective is to make students in colleges and universities behave like innovators and entrepreneurs and to equip them with the knowledge, skills, and personalities needed for their future careers through cultivating an innovative and entrepreneurial mind, attaining entrepreneurial knowledge, and experiencing the innovative and entrepreneurial process.

Increasing awareness and understanding of the process involving in initiating and managing a new business enterprise, Encouraging initiatives among individuals, Educational systems that develop learners' innovative and entrepreneurial abilities, making students in colleges and universities behave like innovators and entrepreneurs and equip themselves with the knowledge, skills and personalities needed for their future careers, Developing entrepreneurial attitudes and skills, promoting vocational and social skills, and enabling youth to contribute to their community's economic development.

The overall aim is to help us understand the factors that influence entrepreneurial passion and awareness of university students (undergraduate and postgraduate), as part of the efforts to address the challenges associated with youth development and employability

### **3.1. RESEARCH STRATEGIES**

A cross-sectional study design and multi-stage sampling method were used. The study participants gave informed consent/assent.

### **3.2. Samples:**

The required sample size was calculated using the Leslie Kish formula for single proportions as 300 respondents (100 respondents from each of the three participating institutions). A response rate of 70% (0.7) was envisaged and the margin of error was set at 5%. Thus, a minimum sample size of 195 was estimated from the 300 questionnaires administered.

### **3.3. Sampling technique:**

Multi-stage sampling method was used to select eligible respondents over one month (November 2021). The number of respondents per university was proportionate to their population.

### 3.4. Measures

Needs and requirements for I&E within the university curriculum: Fifty questions positively phrased assessed each respondent's belief/support towards the need for I&E within the university curriculum; the response to each question was rated using the Likert scale, ranging from 'strongly agreed' (5 points) to 'agree' (4 points) to 'moderate' (3 points) to 'disagree' (2 points) and finally to 'strongly disagree' (1 point).

### 3.5. Statistical Analysis

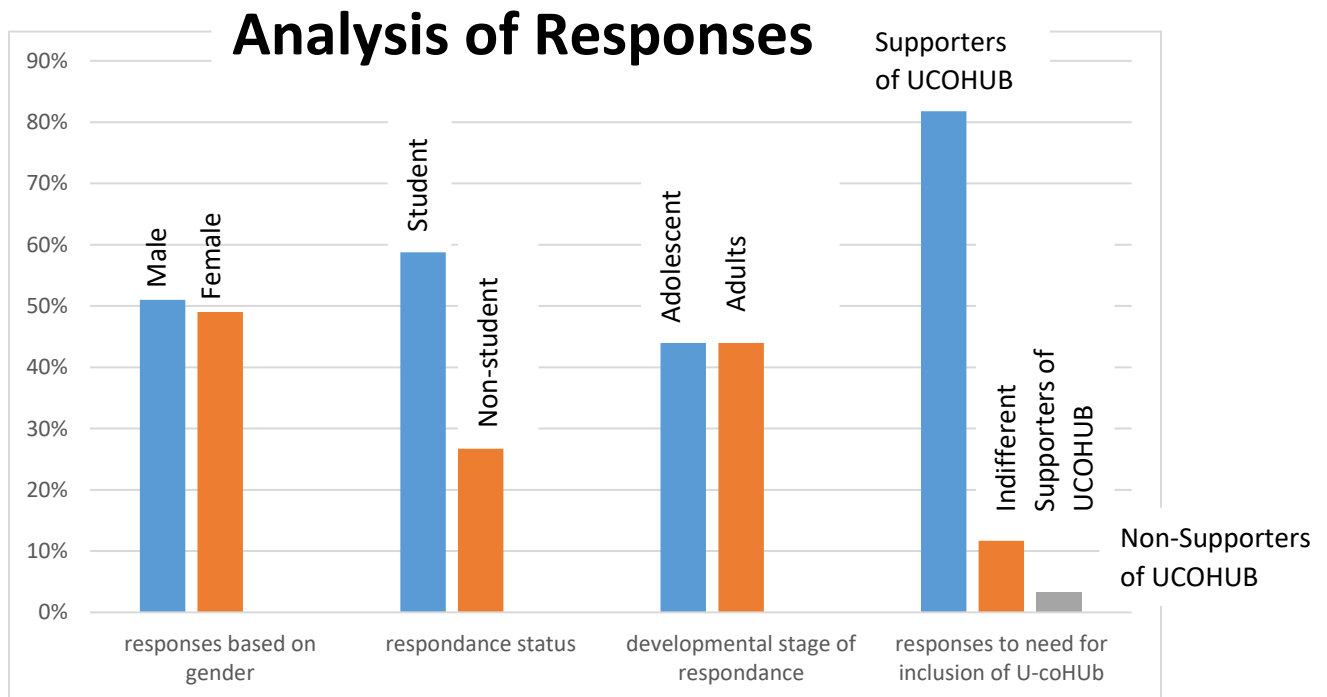
Data were analyzed using SPSS (Version 21.0) and presented using tables and charts. The Chi-square test was used to compare categorical variables and statistical significance was set at  $p < 0.05$ .

## 4. Results

A survey was conducted with qualitative observations and in situ interviews with users in the space. The survey statistics are shown in the Appendix. The focus of the questions was to assess student perception of the space by academic year, major, and gender.

The response rate was about 73% (220 out of 300 questionnaires). Almost half (49.4%) of the respondents (students) were early adolescents, 51.0% were male and 49.0% were female. More than half (58.2%) were in their final year. 85% of them supported the need for inclusion of I&E in the university curriculum, while 11.7% were indifferent.

The demographic usage of respondents is shown in the Figures below



## 5. Conclusion

In this study, different students were explored, an online questionnaire survey was conducted to collect the data, and the questionnaires based on the entrepreneurship and cultural diversity education of students were designed. This research content is based on the reality of innovation and entrepreneurship education in colleges and universities, and the investigation content is comprehensive. The concept of Innovation and the entrepreneurial university in the direction of the university in the future is considered the most appropriate in responding to the demands of market changes and adapting to the environment with potential like today.

To create an innovation and entrepreneurship university-based ecosystem, Students indicate that universities can help nurture a culture of innovation and entrepreneurship through entrepreneurship education, providing support infrastructure and resources. It has been noted that Innovation and entrepreneurship play an important role in the education curriculum in Universities, innovation and Entrepreneurship education that can foster innovation and use technological advances is a global trend today and an analysis of the state of Universities notes gaps in innovation and entrepreneurship that translate to opportunities for universities to contribute to establishing the desired culture and ecosystem.

The gap analysis undertaken helps generate an initiative model that prescribes strategic alignment between university activities in innovation and entrepreneurship and local and national economic goals.

While the findings suggest that the makerspace does not yet shelter a nurturing learning community of innovation and entrepreneurship University graduates represent a huge potential for stimulating innovation and entrepreneurship by directly establishing their own firms or through their employment. Preparing these students for careers in increasingly innovative working environments and helping them to acquire skills enhancing their entrepreneurial abilities, is one of the tasks for Universities that only recently are being fully recognized and our findings underscore a clear and urgent need to embed I&E training within the university curriculum in the Nigerian educational system if successful This can lead to the emergence of a university ecosystem that will, in time, support legitimate peripheral participation and a culture of innovation and entrepreneurship in design.

## 6. Biography:

1. McKelvey, M., & Zaring, O. (2018). Co-delivery of social innovations: Exploring the university's role in academic engagement with society. *Industry and Innovation*, Vol. 25, issue 6 pp. 594-611.
2. What is a tech innovation hub anyway? Available online at <http://cii.oii.ox.ac.uk/2014/09/16/what-is-a-tech-innovation-hub-anyway/>, checked on 1/4/2016.
3. Spinelli, S.; Timmons, J. A. (2009): *New venture creation. Entrepreneurship for the 21st century*. 8. ed., internet. ed. Boston: McGraw-Hill Irwin.
4. Phills Jr, J. A., Deiglmeir, K., & Miller D. T. (2008). *Rediscovering Social Innovation*. *Stanford Social Innovation Review*. [https://ssir.org/articles/entry/rediscovering\\_social\\_innovation](https://ssir.org/articles/entry/rediscovering_social_innovation).
5. Windrum, P., & Koch. P. M. (2008). *Innovation in Public Sector Services*. Edward Elgar, Cheltenham.
6. Indigo Trust (Ed.) (2015): *Capturing Learning from Tech Innovation Hubs across Africa*. With assistance of L. Treisman. Available online at <https://indigotrust.org.uk/2015/09/23/what-makes-a-good-tech-innovation-hub-we-ask-the-experts/>, checked on 7/1/2016.
7. Firestone, R.; Kelly, T. (2016): *How Tech Hubs are helping to Drive Economic Growth in Africa*. Background Paper for the World Development Report 2016: Digital Dividends. Edited by World Bank. Available online at <http://documents.worldbank.org/curated/en/626981468195850883/pdf/102957-WP-Box394845B-PUBLIC-WDR16-BP-How-Tech-Hubs-are-helping-to-Drive-Economic-Growth-in-Africa-Kelly-Firestone.pdf>, checked on 8/18/2016.
8. United Nations Children's Fund (UNICEF) (Ed.) (2012): *Innovation Labs. A Do-It-Yourself Guide*. UNICEF. Available online at [http://www.unicef.org/videoaudio/PDFs/Innovation\\_Labs\\_A\\_Do-It-Yourself\\_Guide.pdf](http://www.unicef.org/videoaudio/PDFs/Innovation_Labs_A_Do-It-Yourself_Guide.pdf), checked on 5/29/2016.
9. De Bastion, G. (2013): *Technology Hubs. Creating space for change: Africa's technology innovation hubs*. Edited by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. Bonn. Available online at [https://10innovations.alumniportal.com/fileadmin/10innovations/dokumente/GIZ10innovations-01\\_Technology-Hubs-Brochure.pdf](https://10innovations.alumniportal.com/fileadmin/10innovations/dokumente/GIZ10innovations-01_Technology-Hubs-Brochure.pdf), checked on 3/15/2016.
10. *University Innovation & Entrepreneurship Ecosystem for Engineering Education: A Multi-case Study of Entrepreneurship Education in China*, Prof. Wei Zhang, Zhejiang University
11. *Higher Education in Innovation Ecosystems*, Yuzhuo Cai 1 , Jinyuan Ma 2,\* and Qiongqiong Chen
12. *Universities, innovation and entrepreneurship, criteria and examples of good practice*, Prof Jay Mitra, Sujun Zhang
13. Haugh, H. *New Strategies for a Sustainable Society: The Growing Contribution of Social Entrepreneurship*. *Bus. Ethics Q.* 2007, 17, 743–749. [CrossRef]
14. Surie, G.; Groen, A. *The importance of social entrepreneurship in national systems of innovation—An introduction*. *Technol. Forecast. Soc. Chang.* 2017, 121, 181–183. [CrossRef]
15. Alzubi, Y. *Knowledge transfer for sustainability: The role of knowledge enablers in the construction industries in Jordan*. *World J. Sci. Technol. Sustain. Dev.* 2018, 15, 325–337. [CrossRef]
16. Cho, J.; Chan, K.S. *Building Trust-Based Sustainable Networks*. *IEEE Technol. Soc. Mag.* 2013, 32, 32–38.[CrossRef]
17. Nicholls, A. *Social Entrepreneurship: New Models of Sustainable Social Change*; OUP Oxford: Oxford, UK, 2008.
18. Gao,W.; Ding, X.; Chen, R.; Min,W. *An Empirical Study of the Role of Higher Education in Building a Green Economy*. *Sustainability* 2019, 11, 6823. [CrossRef]

## 7. ABSTRACT KEYWORDS:

**Ecosystem** – An ecosystem is a community or group of living organisms that live in and interact with each other in a specific environment.

**University Ecosystem** – University Ecosystem is the process of how we organize universities and conduct ourselves within them.

**Innovation** - *Innovation* can refer to something new, such as an invention, or the practice of developing and introducing new things.

**Entrepreneurship** - *Entrepreneurship* is the ability and readiness to develop, organize and run a business enterprise, along with any of its uncertainties to make a profit.

**Youths unemployment** - Youth unemployment is the situation of young people who are looking for a job, but cannot find a job, with the age range being defined by the United Nations as 15–24 years old.

**Employability skills** - Employability skills are the core skills and traits needed in nearly every job. These are the general skills that make someone desirable to an organization.

**Building a culture of innovation** - An innovation culture is an organizational culture that values and supports innovation so that people can make innovation happen.

**University-based innovation hub (U-CoHUB)**- University-based University--CoHub) is the basis of just many activities, especially if it offers research facilities for several other universities and institutions.

**Job creation and employment**- Job creation and employment is the provision of new opportunities for paid employment, especially for those who are unemployed.

**Inherent skills**- Inherent skills are essential qualities learned that are learned by a person or thing.

**Social innovators**- A Social innovator is defined as a person who novels a solution to a social problem that is more effective, efficient, and sustainable.

**Problem solvers**- Problem solvers are people who act or find solutions to a problem.

**University undergraduates and post-graduates**- University undergraduates are students reading for a postsecondary degree and University postgraduates are students who are reading for a postgraduate degree such as a master's degree.

**Solving critical problems in the workplace**- Problem-solving and critical thinking refers to the ability to use knowledge, facts, and data to effectively solve problems.

**Building resilience**- Building resilience is the ability to adapt well to adversity, trauma, tragedy, threats, or even significant sources of stress

**Entrepreneurship passion**- Entrepreneurial passion is a motivational construct characterized by positive emotional arousal, internal drive, and engagement with personally meaningful work that is important to the self-identity of the entrepreneur.

**Change and development**- Change focuses on moving from the current status to a planned better future status. **Development** focuses on one specific area of change and facilitates it.

**Economic development**- Economic development is the creation of wealth from which community benefits are realized.

**Digital Innovation-** Digital innovation is the application of digital technology to improve different aspects and processes of the business drive growth and increase overall efficiency.

**Medical Innovation** – Medical innovations are developments, simple or complex, that lead to improvements in health outcomes and patient experiences.

**Innovative solution-** an innovative idea is the transformation of the way people think and, thus, shifts how the entire market operates as a result.

**Innovation and entrepreneurship-** Entrepreneurship innovation is the process of making something new or improved that better serves a business.

**University education system-** university education system means the totality of general and specialized knowledge and skills that enable a university graduate to solve problems that he encounters in industry or to perform scientific research or pedagogical work within the area of specialized knowledge that he or she has acquired.

**Entrepreneurial passion-**entrepreneurial passion means the conscious accessible intense positive feelings experienced by engagement in entrepreneurial activities associated with roles that are meaningful and salient to the self-identity of the entrepreneur.

**Entrepreneurship University:** Entrepreneurship University is defined as a university that has the capacity to innovate, recognize and create opportunities, as well as working as a team, taking risks and responding challenges.

**Entrepreneurship path:** Entrepreneurship path is the process of setting up a business

**Entrepreneurship skills and attitude:** Entrepreneurship skills and attitude are behavioral traits that help an entrepreneur to grow and succeed in business

**Entrepreneurship abilities:** Entrepreneurship abilities are developed skills used to start and build your own successful business

**Marketplace demand:** Marketplace demand is the total quantity demanded across all consumers in a market for a given food

**Infrastructure and resources:** Infrastructure is the system of public works of a country, state and region and resources is a source of supply or support.