

Entrepreneurship Innovation a Solution to Global Technological Challenges

(Lessons from the NIMechE Innovation Challenge)
(GCRF AFRICA CATALYST PROJECT)

By

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Introduction

- I consider myself privileged to have been asked to share my thoughts with you on the topic “**Entrepreneurship Innovation a Solution to Global Technological Challenges**”. There is no better time to look into it than now. In recent times, I have garnered some vital experience in this area that I believe you would find very useful. I am a..
- **Mechanical Engineer**
- **Entrepreneur**
 - Tony Elumelu Foundation Alumni
 - The Hilary Clinton’s Initiative
 - Vital Voices GROW Fellow
 - World Bank Women X / Enterprise Development Centre Alumni
 - French Development Agency : Social and Business Inclusive Fellow
- **Equity and Empowerment Advocate**
 - Rise Up for Girls - Gender Equity Initiative fellow powered by Cummins Inc. USA
- **Young African Leader**
 - President Obama Young African Leader Initiative



welcomes you to

NIC

NIMechE Innovation Challenge 2.0

“Bridging The Gap Between Engineering Education And Practice”

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WHY NIMechE Innovation Challenge



LET'S LOOK AT SOME FACTS

- Nigeria's Population > **180 million**
- Youth Population of Nigeria > **72 million**
- **75%** of Nigerian Youths are unemployed *CBN
- Over **30 million** Youth are unemployed in Nigeria
- A little >**52%** of Nigerian Youths are literates.

By **2030**, Nigeria is estimated to be one of the countries in the world with bountiful supply of young workers and by 2050 she is estimated to have the highest number of poor persons.

'This means, YOUTH more than OIL could be Nigeria's assets in the following decades, depending on how this demographic reality is managed'... Business Day Newspaper

Nigeria faces talent crisis

World Economic Forum report



Nigeria is not equipping its largely youthful population with the necessary skills to enable them create value in the global economy, the latest Global Human Capital Report by the World Economic Forum (WEF) has shown.....Businessdayonline.com Sept 15 2017



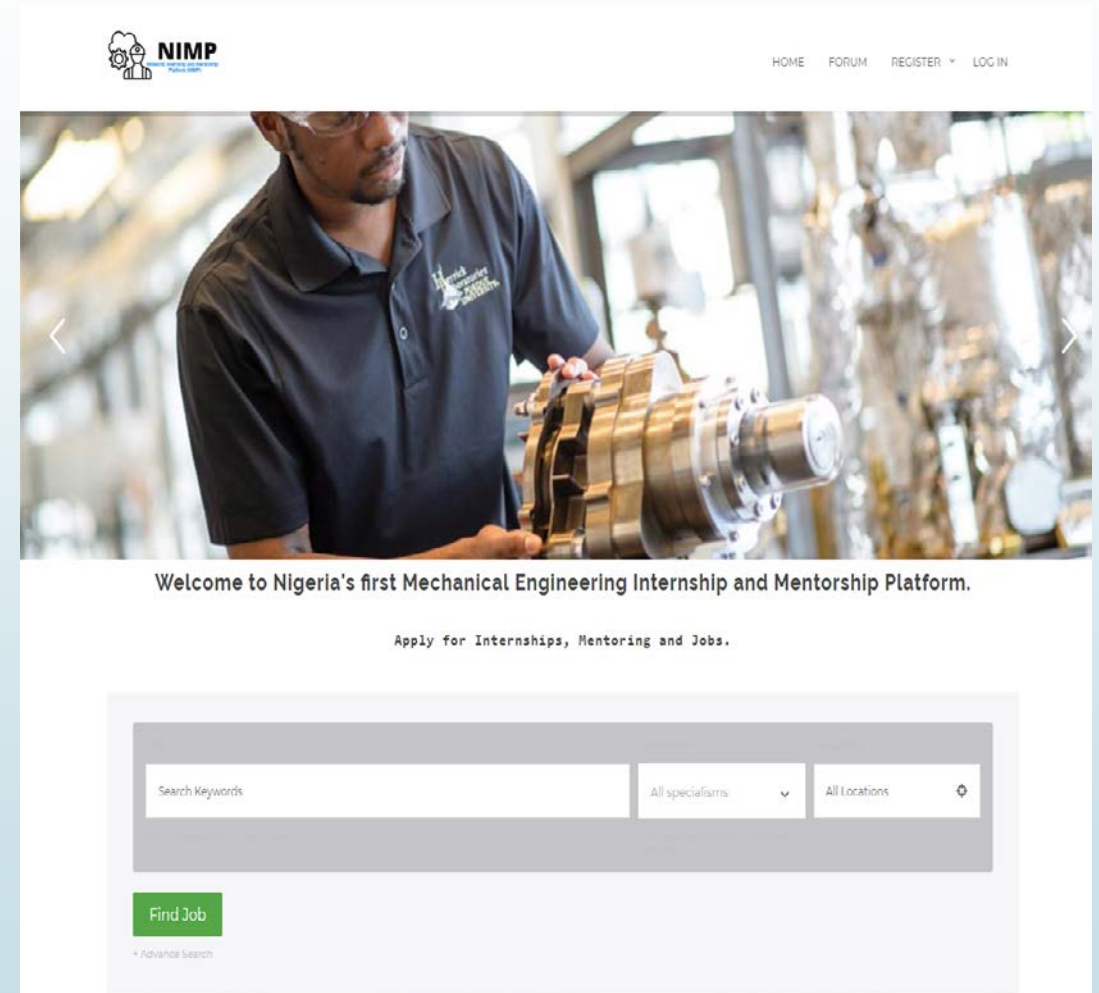
A Nation in Dire Need for Technological Innovations

- There is no doubt that our world is changing fast, faster than we can even imagine. In spite of this, there are myriads of socio problems across the globe that requires new technology to resolve. Technological innovations are the result of innovative ideas put to practical use and this process in itself is complex and requires some support systems that are not evenly available across the globe. This is the unfortunate situation in Nigeria today.
- The fact that there exist clear disparities in technological innovations between my nation and other advance societies is no longer news. This disparity fuels poverty and depravity in most low income and perpetuate a system of inequality across the nation.
- Except positive actions are taken, the situation is not about to change. In need of a solution, the NIMechE Innovation Challenge was born

NIMechE Journey So Far.....

Our goal was to implement a broad-based approach to technological innovation leveraging on an entrepreneurship model. We achieved this through the following components:

- Internship Boot Camp
- NIMechE Innovation Challenge amongst Mechanical Engineering students in Nigeria and Ghana
- Industrial Attachment/Experience
- Mentorship(using the nimp.com.ng – Nigeria's first mechanical engineering internship and mentorship platform providing direct access to mechanical engineering opportunities across Nigeria and Ghana)



Capacity Building Boot Camp

- Engineering development(Fabrication, Welding, Engineering Design)
- Entrepreneurship
- Corporate Skills(Leadership, code of ethics)

Technical,innovative,collaborative and enterprise skills necessary to become successful leaders in Engineering.





NIMechE Innovation Challenge

The NIMechE Innovation Challenge has the following objectives:

- to develop the potential and capacity of the mechanical engineering sector to deliver solutions to commercial, economic and agricultural problems in Nigeria
- Aid in job, enterprise and opportunity creation for Nigerian youths
- Make visible contributions to national development while collaborating effectively with other actors in the commercial, agricultural and marketing communities.
- Provide guidance and mentorship for talented youths to hone their innovative skills
- Set a standard for similar national competitions
- Identify discoveries and innovations for current problems in Nigeria
- Encourage cross-sector collaborations in the engineering communities
- Establish a strong relationship with other sectors of the economy like manufacturing, marketing and agriculture and leverage on the solutions proffered for deployment all over the nation
- Promote a renewed relationship between professionals and a sense of shared objectives
- Strengthen national/international collaborations and corporation among stakeholders for engineering development in Nigeria
- Improve the perception of the engineering industry in Nigeria at home and abroad.

Promoting Engineering Innovation (Testimonies from Participants)

Participating Students Share their Experiences



When I first got the information that I would be representing my school for the NIMechE Innovation challenge 2017, it didn't take long to discover that I'd be following in the footsteps of giants. Then I had to form a group of 3 comprising of Abdul-Raheem Abdul-

Sobur Temitope, Ezeali Joshua idume and I. We named the team SPAGRO LASU, Then we registered for the challenge the registration was easy and fast. At the symposium which took place on Tuesday March 17, 2017 at NIMechE Office at Ebute Metta, of all the schools that participated we were selected as one of the participating schools to proceed to the next phase. We were assisted financially to produce the prototype of our designs and after some weeks, the prototype were called for and a proper presentation was made and we came 4th due to the fact that we were unable to complete our project because it fell within our exam period.

It is nonetheless a great opportunity for me to have participated in the challenge all thanks to God. I will like to say a very big thank you to NIMechE for the great opportunity given to me to awaken my innovativeness

Abdul-Azeez Olumide
Team Spagro
Lagos State University .



The NIMechE Innovation Challenge 2017 was splendid and experience fulfilling for me. I had to put my education to work. As the Group Leader for Tea Success, I was charged with the responsibility of providing a good innovative project. I learnt how to efficiently multitask i.e combining

leadership, school work and being actively involved in carrying out the team's design. I am grateful for the opportunity.

Onabanjo Olawale
Team Success
Olabisi Onabanjo University.





Initially, when I heard about the NIMechE Innovation Challenge (NIC), I was a bit indifferent, I had only little idea of what the program was going to consist of. Incidentally, I had been talking with some of my colleagues about starting something – building a machine that could turn into a business after we finished from the University as that would be a splendid way to use our Engineering knowledge to solve societal problems, so we applied. After some deliberation, we came up with a project that we considered feasible and fit for the competition, we called it the 'Okele Maker' or Okele™. A machine that would be chic and efficient that one can just place on the kitchen shelf and use to make our traditional morsel foods 'okele' (eba, amala, semolina, pounded yam, etc.).

During the course of the program we gained a lot of useful knowledge on fabrication, design and manufacturing of machines with a lot of support, financially and intellectually from the Nigerian Institute of Mechanical Engineers and our team supervisors – Engr. Tihamiyu and Dr. Adeyemo. We participated in hands-on trainings on welding, milling and other important manufacturing processes. These trainings were as educating as they were enlightening and I believe everybody that participated had their horizons broadened.

NIC is a program every engineering student should have a chance to partake in, to explore beyond the basic theoretical engineering knowledge we've acquired in school. I would like to end with this short quote “Solving the world's most pressing challenges is not just the right thing to do, it is also good for business.” - Ahmad Ashkar (CEO of Hult Prize)

**Olalekan Oluwapelumi –
Team Belkats –University of Lagos.**





Entrepreneurship Innovation Birthing Social Transformation Through Technology

- By developing solutions in agriculture, health care, education and renewable energy mechanical engineering students who participated in the project were able to establish a strong link between entrepreneurship innovation and several problems in these sectors. The experience made them better aware and equipped on their role in attempting viable solutions to our national challenges.
- For instance Innovations in agriculture targeted food preservation and storage, mechanization, processing and hygiene, these solutions would promote better opportunities for farmers to earn more from their effort and keep the citizens healthy.
- Solutions were developed with a commercialization goal in mind, thus it was vital to expose the students to bodies and agencies involved in innovation management, technology acquisition and transfer and patents. The students could also establish the importance of starting a production process that will in turn generate employment opportunities for other citizens a vital index for economic growth in Nigeria as well as other nations.
- This way of thinking is not only applicable to the Nigerian context but to other society as well.

Industrial Attachment Experience

Acquiring practical skills is vital in becoming a successful entrepreneur, innovator and engineer. It was thus imperative that industrial attachment was a major theme in the project.

Leveraging on technology using the internet, we established a system that allows companies recruit interns from across the nation as well as provide reports and feedback during the actual internship. This innovative system will make it possible for students to acquire the necessary field experience to become better prepared to handle the challenges we face as a nation.



Mentorship

The role of mentors as a catalyst for growth cannot be over-emphasized. Making mentorship opportunities available for students aids knowledge transfer, births new ideas and help bridge the generational gap.

Using the nimp.ng, we have established a virtual mentorship platform, that allows mentors and mentees connect on a virtual space, providing them with all the benefits of a mentorship engagement.



NIC ACHIEVING THE SDG





THANK YOU



Reference

- <https://www.vanguardngr.com/2017/01/30-million-youths-unemployed-nigeria-nbri/>