A Brief Report

by

Tuhafeni Angula

on the

10 Academy Fellowship 2017

which took place in

Ghana

at

Ashesi University College

from

03-28 July 2017

Abstract

This brief report gives a highlight of the pilot programme of the 10 Academy fellowship which took place in Ghana at Ashesi University College during July 2017. More information about the programme can be found on the official website of 10 Academy: http://10academy.org/.

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1. Introduction to 10 Academy

10 Academy is an intensive post-graduate programme which will identify, train and launch high potential young African university graduates (10 Academy Fellows) into careers where they have the opportunity to have extraordinarily large (10x) impact. The inaugural 10 Academy program started on the 3rd of July 2017 at Ashesi University, Ghana, with 22 participants from 15 countries across Africa. 10 Academy is a project of Infinite Potentials Consulting (IPC) in partnership with Ashesi University, and is a non-profit initiative.

Infinite Potentials Consulting is a professional services consulting firm which partners with leading organizations in the corporate, civil-society and governmental sectors in Africa and works with them to realize their potential. Their core team and experts network has over 75 years of experience in Africa and around the world. IPC delivers international-class consulting services in Africa using Africa's brightest talent. IPC was founded by Arun Sharma in 2013 to build on his extensive global experience including work in the education, enterprise development, entrepreneurship, social enterprise and IT sectors. He holds Bachelor's and Master's degrees in Electrical Engineering from the University of Waterloo (Canada) and a Master's in Sustainable Development from the University of Cambridge (UK). Figure 1 shows a picture of Arun Sharma during an introduction of the 10 Academy fellowship to the participants.
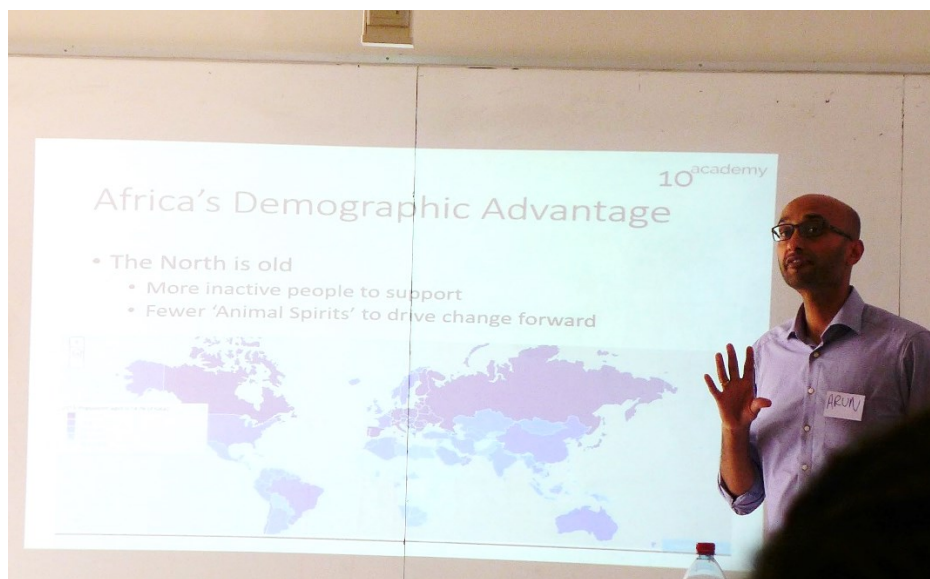

Figure 1: Arun Sharma.

2. Week One: Problem Identification

2.1. General Overview

The initiating week of 10 Academy started by introducing fellows to African Opportunities and Career Planning and Impact. These sessions were delivered by Arun Sharma and Charlotte de Ridder, respectively.

The discussion around African Opportunities went around the following key ideas and concepts:

- Data-driven Views of Challenges and Opportunities in Africa.

- Role of Builders in Global Development.

- Africa and the 4th Industrial Revolution and Role of Young Africans.

- Role of Technology as an Accelerator.

During the Career Planning and Impact sessions, the following topics were extensively discussed:

- Reaching your Maximum Potential across your Life.

- Going from Ideas to Action.

- Taking the First Steps - Starting an Idea and Finding a Team.

At the end of these sessions the fellows grouped themselves into five teams and defined challenging African problems which had a potential to impact ten million people in ten years. It was alongside these defined problems that the fellows went through the rest of the programme.

2.2. Key Guest Speaker: Phil Clay

Professor Phillip Clay served as the Chancellor of the Massachusetts Institute of Technology (MIT) from 2001 until 2011. He is a graduate of the University of North Carolina at Chapel Hill and holds a doctorate from MIT. Professor Clay also held other leadership positions at MIT.

Professor Clay is widely known for his work in U.S. housing policy and urban development. His current interests include organizational capacity in community-based non-profits as well as the

role of anchor institutions. Growing out of his work on MIT international strategies, he is also interested in the increasing role higher education can play in national development strategies in less developed and emerging nations.

Professor Clay is Chair of the Board of The Community Builders, Inc., one of the nation's largest non-profit developers of affordable housing. He is a member on several foundations and non-profit boards, including The Kresge Foundation and The MasterCard Foundation. Professor Clay also has experience in public higher education as a member of the board of the University of North Carolina. He is a member of the board of the Aga Khan University.

3. Week Two: Prototyping

3.1. General Overview

The second week of the programme featured DK Osseo-Asare and Yabebal Fantaye, PhD as instructors. Osseo-Asare introduced the fellows to Design Thinking and Making, whilst Yabebal introduced Big Data and the field of Data Mining.

The content covered in the Design Thinking and Making touched base on:

- Introduction to Teamwork

- Introduction to Creativity

- Introduction to Design Thinking

- Problem Spaces and Problem Space Mapping

- Introduction to Analysis Frameworks

- Introduction to Ideation

- Introduction to Disney's Three Rooms, and

- Introduction to Storytelling and Pitching.

The Big Data sessions looked into:

- The Characteristics of Big Data

- Big Data Use Cases

- Big Data Infrastructure Requirements, and

- Data Mining

During this week, the fellows practically applied the exercises given during booth sessions. The fellows looked deeper into the problems defined in the first week by defining different point of views (POVs) – satellite view, helicopter view, and person view or bull's eye view. The person point of view is the lowest level at which a problem is usually understood, and this is done by getting to the level of the person who is affected. At this stage the teams starterted thinking about

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possible solutions to the problems. Concurrently, Python (an object-oriented programming language) was introduced to the fellows as a powerful tool in the field of Big Data and Data Mining through an exercise of data scrapping from Twitter.

3.2.   Key Guest Speaker: Wole Soboyejo

Wole Soboyejo, PhD is the Dean of Engineering of Worchester Polytechnic (WPI) and Former Director of the African University of Science and Technology. Prior to joining WPI, Dr. Soboyejo was a Professor in Mechanical and Aerospace Engineering at Princeton University for approximately 17 years.

He is a materials scientist whose research focuses on biomaterials and the use of nanoparticles for the detection and treatment of disease, the mechanical properties of materials, and the use of materials science to promote global development. His current projects include the use of nanomaterials for targeting and treating cancer; a shear assay technique that may be able to measure the mechanical properties of organelles in the cell; the development of low cost solar cells/light emitting devices; and sustainable approaches to providing clean water, affordable housing and education to people in the developing world.

Dr. Soboyejo has an exceptional record of achievement in engineering research and academic leadership, as well as impressive accomplishments in international development and a noteworthy track record in building global research and educational partnerships.

4. Week Three: Coding and Commercial Software Development

4.1. General Overview

On the 18th of July, the sixth Innovation Prize for Africa by the African Innovation Foundation took place in Accra with full attendance by the inaugural fellows of 10 Academy. The fellows participated in an Agricultural Workshop at the forum which focused on key topics including African Solutions for African Challenges and New Trends in Agriculture.

In addition to the event, the main focus of the week was:

- Coding and Commercial Software Development (delivered by Manny Acquah and Dr. Nathan Amanquah), and

- Artificial Intelligence and Machine Learning (by Dr. Ayorkor Korsah)

Manny Acquah introduced the fellows to Agile Methodology. A method that seeks an end to traditional methods such as the Waterfall Method. Agile Methodology helps teams execute changes incrementally and iteratively. The main aim of this course was to take the fellows through a well-structured typical week in a start-up heavily revolved around the Agile setup.

The fellows practically ran through a single cycle of an agile team which includes carrying out activities like sprint planning, execution, daily stand-ups (where each team player states what they did the day before, what they are going to do during the current day, and any problems they may be facing - i.e. blockers), sprint deliverables and sprint retrospective. The fellows were introduced to the Trello Board (see: https://trello.com/) in order to manage their projects effectively. The deliverables at the end of the sessions included building personal web pages by each fellow (see: http://2017.10academy.org/) and a software proof of concept for the team projects.

The fellows were also introduced to Deep Learning frameworks, and the integration of Deep Learning frameworks with other Machine Learning methods. The fellows were later introduced to the field of robotics through an exercise of assembling and programming a robot using Python.

4.2.   Guest Speakers: Innovation Prize for Africa

During the third week of the programme, the fellows received more than five speakers with most of them met at the Innovation Prize for Africa at Movenpick Ambassador Hotel, Accra. Among these speakers was President Nana Akufo-Addo of Ghana.

5. Week Four: Entrepreneurship and Business Management

5.1. General Overview

The final week focused on the business side of an idea. The fellows were introduced to:

- Business Planning for Projects,

- Basic Organisational Design,

- Start-up Budgeting and Finance,

- Marketing, and

- Project Management.

At the end of the course, the teams had to convert the solutions to the identified problems into full-fledged entrepreneurial opportunities. Before the teams were each given an opportunity to pitch their ideas for three minute to a panel of judges, they had to go through key startup elements following the Lean Start-up Concept. This part of the course was lead and delivered by Sena Agyepong (PhD) and Anthony Spio.

Sena Agyepong is currently a faculty member at Ashesi University College in the Business Administration Department. She has a Construction Management background and has been engaged at different points teaching and training entrepreneurs. She holds a Ph.D. in Building Technology from Kwame Nkrumah University of Science and Technology.

Anthony Spio is a Senior Lecturer and Head of the Business Administration Department at Ashesi University College. He has over 20 years of progressive and responsible business management, marketing strategy development, brand management and communication development experience in the industry. He holds an MSc. in International Marketing from the University of Strathclyde, Glasgow, Scotland.

5.2. Key Guest Speaker: Lucy Quist

Lucy Quist is the Managing Director of Airtel Ghana. Lucy is the first Ghanaian woman to lead a multi-national telecommunications company in Ghana. A passionate believer in excellence and

integrity, Lucy successfully transitioned from a core engineering background to become one of Africa's leading telecommunications business leaders.

Her vast experience in telecommunications covers both mobile and fixed telephony, and extends to value added services for consumers and enterprises. She has a proven track record of leading teams to deliver superior results. Before joining Airtel Ghana, Lucy was the Director of Vodafone Ghana's Enterprise division, Vodafone Business Solutions.

Lucy started her career in automotive engineering with Ford Motor Company working her way through design engineering, manufacturing and project management functions in the UK, Germany and Portugal. She later became a Change Manager at the Royal Bank of Scotland in London as part of the RBS-ABN AMRO Operations merger team. In 2008, Lucy joined Millicom International Cellular (Tigo), working as Head of Business Development for Africa, and as Head of Northern Sector in Ghana before becoming the Chief Marketing Officer in the Democratic Republic of Congo.

A product of Wesley Girls' High School, Lucy is passionate about tapping into human potential to deliver outstanding results. She describes herself as an engaging leader who commits her energy to developing her people. She enjoys seeing them soar! She is a Chartered Electrical and Electronic Engineer (UK) who holds a first class degree and an MBA from INSEAD.

6. Conclusion

After an extensive four-week learning experience, the inaugural fellowship of 10 Academy ended on the 28th of July 2017. During the programme, fellows were given an opportunity not only to create and forge potential life-long partnerships, but were also exposed to exceptional professionals in different fields. The fellows got a chance to work on real life African challenges and were introduced to the tools with which to face them. Briefly, each and every fellow was equipped to have a times ten (10x) impact on society.

"I have been impressed with the urgency of doing. Knowing is not enough; we must apply. Being willing is not enough; we must do."

Leonardo da Vinci, 1452 – 1519
- *Artist, Inventor and Scientist of the Italian Renaissance.*