

New model for empowering students to
solve real-world problems and build the
future

Curriculum for Startup Design Lab

Edited by

Dr Adams Adeiza,
Senior Lecturer,

Faculty of Entrepreneurship and Business,
Universiti Malaysia Kelantan

National Universities Commission - NUC

COURSE 3

Statement of Intended Outcomes

This is intended to achieve the following intended outcomes.

1. Extend on problem-solving skills and the process of identifying opportunities (from Course 2) to ideation and value creation which leads to creation of the product or service and ultimately venture creation; build on own business idea or transform family business.
2. Know the key stakeholders in target industry ecosystem, work a personal development plan and engage the mentor support system during the course and post-graduation.
3. Be able to conduct market research, competitors' analysis and understand the product innovation process for launching new or improved products and services.
4. To profile and be familiar with various sources of entrepreneurial finance in a resource-scarce developing country environment.
5. Be able to develop a credible personal and business development plan, value a business start-up, pitch the business plan for funds and successfully launch a new business or transform an existing family business.

Contents of the Curriculum

1.0. Program Description

This curriculum content is designed based on the three interrelated factors that must work together to achieve specific learning outcomes. These are (1) who is to be taught (2) what should be taught to achieve intended outcomes and (3) how should it be taught.

Rubrics	Description
Why	To produce students and graduates that solve real-world problems and build thriving businesses.
What	A campus-based start-up lab that coaches and mentors students to conceive, mobilize resources and start their own businesses.
Where	To be established in every university campus across the country
When/for Whom	<ul style="list-style-type: none"> i. Startup Design Workshops: A one-month program targeted at year 3 students. Taken during year 2 long vacation. ii. Startup Business Actions: A one-year program designed for teams of students that have proven business ideas.
Who	Program to be managed by dedicated team of staff (including volunteer practicing entrepreneurs) and facilitated by faculty members who have taken the 21 st Century Learning Design (21CLD) course and entrepreneurs from various industry.
How	<ul style="list-style-type: none"> i. Startup Design Workshops: To be delivered mainly using the 21st Century Learning Design Methodologies. ii. Startup Business Actions: Coaching, mentoring and experiential/action learning approaches.

2.0. Expected Learning Outcomes

At the end of the one-year program, participants are expected to have mastered the following skills.

S/N	Intended Outcomes
1	Problem-solving and innovative skills
2	Opportunity identification skills
3	Awareness of technology and application solutions
4	Skills for startup ideation and value creation
5	New product and/or service development skills
6	Skills for new venture creation and application of new business models
7	Skills for networking with stakeholders in target industry ecosystem
8	Leadership, personal development and self-regulation skills
9	Working with and leveraging mentoring opportunities
10	Branding and marketing skills
11	Skills for beating and staying ahead of competitors
12	Skills for securing business finance
13	Skills for developing bankable business plan
14	Skills for valuing a business start-up
15	Skills for presenting ideas and pitching a business plan
16	Skills for successfully launching and managing new businesses.

3.0. Contents, Indicative Topics and Recommended Methods of Delivery

Contents	Indicative Topics/Activities	Methods of Delivery
Startup Design Workshop 1: Problem-Solving, Opportunity Identification, Creativity, and Innovation	Understanding Problems and Problem-Solving	To be decided
	Understanding the Concept of Real-World Problems	
	Understanding Creativity and the Attitudes and Habits of Creative People (Ed De Bono 25 Creative Character Traits).	
	Innovating around Real-World Problems	
	Opportunity Identification: Understanding and Knowing Yourself – Conducting Personal SWOT Analysis	
	Opportunity Identification: Doing PESTEL Analysis – Political, Economic, Socio-Cultural, Technological, Environmental and Legal Factors	
Startup Design Workshop 2: Understanding New Value Creation. Understanding Technology Solutions	Understanding the Concept and Types of Customer Values	To be decided
	Understanding Sources of New Values: Conducting Value Chains Analysis	
	Understanding Sources of New Values: The Concept of Value Ladder	
	Understanding the Concept of Value Innovation	
	Understanding Emerging Technological Solutions and Applications. E.g., AI, AR/VR, IoTs, Data Analytics, Blockchain, Quantum Computing, Renewable Energy etc.	
	Understanding Digital Business/Marketing and E-Commerce Strategies	
Startup Design Workshop 3: Understanding Business Models and Business Model Innovation. Understanding Family Business Model	Understanding Lean Canvas	To be decided
	Understanding Business Model Canvas	
	Understanding Value Proposition Canvas	
	Understanding Customer Architype and Market Types	
	Understanding Models for Designing and Building Products and Services	
	Understanding Models for Distributing Products and Services	
	Understanding Sales and Marketing Models	To be decided
	Understanding Customer Service and Relationship Management Models	

Contents	Indicative Topics/Activities	Methods of Delivery
	Understanding Enterprise Resource Planning and Resource Management Models	
	Understanding Models for Managing Functional Areas and Line Business Activities	
	Understanding Partnership and Alliance Models	
	Understanding Different Pricing and Revenue Models	
	Understanding New Models for Structuring and Achieving Cost Efficiencies	
	Understanding New Models for Managing Human Resources	
	Understanding the 11 Attributes of Exponential Organizations	
	The Concept of Family Business	
	Understanding Important Issues in Family Business	
	Designing a Family Business for Sustainability	

The Microsoft 21st Century Learning Design (21CLD) Method

This is a research-based dynamic approach for building in students, complex skills needed for success in business and job markets of today and the future. It is a model that has found validations from different parts of the world and now being adopted by top educational institutions for preparing their students to be future and industry-ready. When applied, it helps students to develop six essential 21st Century skills as outlined below. For details, please visit the resource website here <https://education.microsoft.com/en-us/learningPath/e9a3beec>

- 1 Real-world problem-solving and innovation skills
- 2 Collaboration and shared responsibility skills
- 3 Self-regulation and leadership skills
- 4 Knowledge construction skills
- 5 ICT application and digital skills
- 6 Proficiency in skilled communication

Student Selection and Curriculum Collaterals

Our aspiration is to produce an entrepreneurship education (EEd) curriculum for tertiary institutions in Nigeria that will be adjudged by our peers to be more effective and efficient for producing entrepreneurs in a developing country environment. The current NUC mandated 6-credit unit EEd undergraduate-level program however has severe curricula and infrastructural inadequacies (Agbonlahor, 2016; Ezeani, 2018). The new thinking is for a compulsory Courses 1&2, each weighted 2 credit units, for Levels 200 and 300, broadly addressing enterprise appreciation, focused on problem solving skills and terminating in opportunity identification. Course 3, an optional 2-credit unit course in the penultimate year, is now single-mindedly devoted to building the capacity of students for venture creation/leadership. We take the view that whereas all might strive to be more enterprising, only a few will be entrepreneurs; that faced with limited resources, there are tangible benefits in selecting for students with entrepreneurial potential. What follows is a summary of steps that might be undertaken for student selection and our initial thoughts and ideas on things to consider alongside a review of Course 3 curriculum to achieve our aspiration for EEd in Nigeria.

Student Selection

The objective is to select students who have the potential for entrepreneurship and who will be able to launch and run a business of their own or provide leadership in transforming an existing family business upon completion of Course 3. The prospective student might be taking Course 3 as an optional after Courses 1&2 within the university system or is on external admission to/for the Entrepreneurship Development Center (EDC) of the university.

The student selection process might proceed as follows

1. Prospective student takes an online entrepreneurship aptitude test (a personal development plan is subsequently available to student selection team/faculty)
2. The prospective student fills out an online Course 3 application form stating three own business ideas and why/how attractive (re: passion, support system etc.)
3. The prospective student is subjected to a face-to-face interview using discussion around 1 and 2 above to assess entrepreneurial potential to launch/lead business after Course 3
4. Recommendation for admission strictly within predetermined limit of available resources at the EDC (faculty, admin and infrastructure)

Curriculum Collaterals

It is presumed that the curriculum product to be delivered to the NUC in July would be followed by testing, training of facilitators, launch/roll out, evaluation and resourcing. The Course 3 curriculum product we are proposing assumes and would benefit considerably from the following (some of these would benefit Courses 1&2 too)

1. **Leveraging technology** across the EEd value chain from student selection through curriculum design/content, instruction and assessment to student own business launch and post-graduation support. Technology as a collaboration platform and driver of reach, accessibility, affordability and scalability.
2. **The EDC** as study center for Course 3 which is to be offered as blended learning (mostly online). EDC is also community engagement platform offering admission to external students of Course 3, insourcing faculty, researching and consulting into entrepreneurship within its community and ecosystem. The EDC may also provide

faculty and admin support for teaching Courses 1&2 and EEd degree programs at undergraduate levels. EDCs might be encouraged to compete at one level (e.g., student acquisition), collaborate to compete at another level (e.g., global positioning) while seeking to specialize in area of natural (ecosystem) advantage for knowledge and practice leadership. A well-resourced EDC is a requirement for offering Course 3. Institutions that do not have an NUC-qualified EDC may not offer Course 3. The infrastructure required in an EDC will be covered under Design Experiential Methods

3. **Shared Resources** is as enabled by technology and driven by shared vision. This is an area where a NUC inspired vision may drive value from shared information, knowledge and technologies across tertiary institutions resulting in enhanced cost, quality, competitiveness and efficiencies. The more obvious areas of collaboration for Course 3 shared resources include

- a. Affiliation with global leaders in EEd
- b. Psychographic test facility for student selection
- c. Online library resources
- d. Learning materials/kits and skills center
- e. Entrepreneurial finance and mentoring support

How the shared resources may be structured for ownership, packaged and priced for cost recovery is subject of further considerations.

This course has yet to be named.

References

- Agbonlahor, A. A. (2016). Challenges of entrepreneurial education in Nigerian universities: Towards a repositioning for impact. *Journal of Educational and Social Research*, 6, 208-214. <https://doi.org/10.5901/jesr.2016.v6n1p208>
- Ezeani, E. (2018). Barriers to graduate employment and entrepreneurship in Nigeria. *Journal of Entrepreneurship in Emerging Economies*, 10(3), 428-446. <https://doi.org/10.1108/JEEE-02-2017-0009>