

BUILDING INCLUSIVE ENTREPRENEURSHIP SKILL DEVELOPMENT IN EDUCATIONAL TECHNOLOGY: A PANACEA TO FITTING GRADUATES INTO 21ST CENTURY GLOBAL WORKFORCE

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Abstract

Inclusive and entrepreneurship development in Educational Technology programme has become a veritable tool to equip our graduates with entrepreneurial skills. This is in order to enable them fit into the 21 century global system workforce. The program targets graduates who need Entrepreneurship development using educational technology (EduTech) to acquire a range of skills essential for success in today's rapidly changing economy which include digital literacy, online marketing, data analysis, web development and creative problem-solving. The study adopted descriptive survey research design. The population of the study is 102 subjects. The population comprised 82 Final-Year students of Faculty of Vocational and Technical Education, University of Nigeria Nsukka and 20 lecturers in the Faculty of Vocational and Technical Education, University of Nigeria Nsukka Enugu State. Due to the manageable size of the population, there was no sampling as the entire population was used for the study. A 25 item questionnaire was developed to obtain data for the study. A 5-point Likert scale was used to develop the questionnaire. The scale for the questionnaire was Strongly Agree (SA) - 5, Agree (A) - 4, Undecided (UD) - 3, Disagree (D) - 2 and Strongly Disagree (SD) - 1. The questionnaire was face validated by three experts from the Faculty of Vocational and Technical Education, University of Nigeria, Nsukka. The mean and standard deviation were used to answer the research questions, while the Cronbach alpha was used to determine internal consistency of the instrument. A reliability coefficient of 0.85 was obtained for the instrument. Arithmetic mean of 3.50 was used to interpret the analyzed data. An item with a mean of 3.50 and above was accepted, while items having their mean below 3.50 were rejected while t-test was used for testing the null hypothesis at probability of 0.05 level of significance and relevant degree of freedom. The findings of this study showed that entrepreneurship education has significant effects on graduates in EduTech fitting into the global 21 century workforce. The study recommends that Ministry of Education should create an inclusive environment that supports the development of entrepreneurial skills that connect the graduates with relevant resources and networks in promoting entrepreneurship skill development in educational technology.

Keywords: Education, Entrepreneurship, Inclusive Skills, Technology.

Introduction

In the 21st-century global workforce, entrepreneurship skills are increasingly becoming essential for graduates to succeed in their careers. The ability to innovate, create, and solve problems is highly valued by employers across different industries. As a result, it has become necessary for educational institutions to develop and nurture entrepreneurship skills in their students. According to Jardim, (2021), cognitive and technical skills are not sufficient to face the professional challenges of the current digital and global world. This is because cognitive and technical skills alone do not enable the development of proactive

attitudes (Chu, Liu, and Fang, 2021). Traditional education is supposed to prepare students to enter the labour market. However, many students who finish higher education and other technical and professional courses, experience great employability difficulties due to the lack of personal, social, and professional skills (Curran, 2017). So, professionals need, in addition to traditional skills, a set of skills that allow them to be successful. Unleashing entrepreneurship potential requires a coherent, multi-sectoral, and long-term approach to enhance the role of entrepreneurship in

economic, financial, social, and environmental sustainability.

One of the key success factors for inclusive entrepreneurship (skills) education is the effective development of the entrepreneurial ecosystem, in which multiple stakeholders play a role in facilitating entrepreneurship. It is a system of mutually beneficial and self-sustaining relationships involving institutions, people, and processes that work together to create entrepreneurial ventures (Niño-Benavides, & Cortés, 2018). It includes businesses (large and small firms, as well as entrepreneurs), policymakers (at international, national, regional, and local levels), and formal (primary, secondary, and higher education) and informal educational institutions (Kamran, Afzal, & Rafiq, 2022). The different stakeholders are involved in a series of symbiotic actions which include awareness and outreach, the development of human capital and critical talent, public-private-partnerships, multiple sources of innovation, intellectual property, and funding. In a dynamic and growth-generating entrepreneurial ecosystem, there is a high degree of interaction and coordination among these key elements (United Nations Conference on Trade and Development, 2011). According to Aude and Gabarret (2017), entrepreneurial skills should center around attitudes (soft skills), such as persistence, networking, and self-confidence on the one hand and enabling skills (hard skills) on the other hand, including basic start-up knowledge, business planning, financial literacy, and managerial skills. Effective entrepreneurship education policies and programs focus on developing these entrepreneurial competencies and skills, which are transferable and beneficial in many work contexts.

The aim of entrepreneurship skill development is not only to strengthen the capacity and desire of more individuals to start their enterprises but also to develop an entrepreneurial culture in society. The ability to innovate, create, and solve problems is highly valued by employers across different industries. As a result, educational institutions must develop and nurture entrepreneurship skills in their students. The purpose of building inclusive entrepreneurship skills development in educational technology in schools is to equip students with the skills and knowledge they need to be successful entrepreneurs in a rapidly changing economy (Morioka, Evans, & Carvalho, 2016). Inclusive entrepreneurship According to Asongu, Orim, and Nting, (2019) refers to the practice of ensuring that all individuals, regardless of their background, have access to the resources and opportunities they need to start and grow successful businesses. According to Bhullar and Aggarwal, (2022),

entrepreneurial education has become a buzzword among higher education institutes. Developing innovative pedagogies to boost the effectiveness of entrepreneurship education has become a big challenge.

In addition to providing technical skills training, inclusive entrepreneurship development skills in educational technology can also help students develop a growth mindset, build confidence and resilience, and learn to work collaboratively and adapt to change. These skills are important not only for entrepreneurship but also for success in any career or life pursuit. Timothy and Edwin (2021) opined that research shows that, at the heart of the Corona virus pandemic, student interest in entrepreneurship education spiked and that trend continued till today. Mirvis, (2020) also stated that crisis indeed fuels entrepreneurship; in March 2020, demand for entrepreneurship education was up 66 percent. This was a strong indication that, during times of great crisis, students perceive new business creation as a catalyst for helping them find opportunities. Higher education has experienced its transformation over the past year. Universities have been forced to shift quickly to digital learning so that students could continue their education online during the pandemic. The authors quoted Vincenzo Esposito Vinzi, dean and president of ESSEC Business School in France, as saying that "Students realize that creating their businesses or joining young and agile companies can provide significant opportunities to shape the world and solve environmental and social problems. (Timothy & Edwin, 2021)

In its resolution on entrepreneurship for sustainable development, the UN General Assembly recognized the important contribution entrepreneurship makes to sustainable development by creating jobs, driving economic growth and innovation, improving social conditions, and addressing social and environmental challenges in the context of the 2030 Agenda for Sustainable Development (United Nation General Assembly UNGA, 2020). Moreover, entrepreneurship education should be inclusive, accessible, and relevant to students from diverse backgrounds, cultures, and communities. Building inclusive entrepreneurship skill development in educational technology can help to achieve this goal by supplying access to educational resources and tools that can support a diverse range of learners. Educational technology can also ease personalized learning experiences that cater for individual student needs and learning styles provide the source

Furthermore, inclusive entrepreneurship skill development in educational technology can enhance students' readiness for the 21st-century global workforce. It can equip students with the skills and knowledge needed to thrive in a rapidly changing job market that demands creativity, critical thinking, problem-solving, communication, and collaboration. On the part of the government, a lot needs to be addressed. Entrepreneurship strategies should leverage emerging business models that are inclusive, climate-resilient, gender-responsive, and circular, incentivize social innovation and environmental preservation and protection and facilitate formalization (Strawhacker, Lee, & Bers, 2018). In addition, measures should be put in place to accelerate regulatory reforms to support recovery, strengthen resilience, end discrimination, and promote environmental sustainability. While there has been significant progress in business-friendly reforms, further reforms are needed to end discrimination among entrepreneurs based on gender, age, and ethnic background, among others. Policy reforms should incentivize the creation of green and circular enterprises that preserve and protect the environment. A focus on the informal sector, women, and youth need to be mainstreamed. United Nations General Assembly UNGA, (2020) also stated the need to promote inclusive digitalization as digital technologies have substantially changed how the global economy operates and redefined access to markets, finance, and technology. The purpose of this study is to: evaluate the importance of inculcating inclusive entrepreneurship skills for graduating students and to also evaluate strategies aimed at adopting the inclusive entrepreneurship education for graduating students in tertiary institutions in Nigeria.

Research Questions

The following research questions guided the study:

1. What is the importance of inculcating inclusive entrepreneurship skills for graduating students in tertiary institutions in Nigeria?
2. What strategies can be adopted to inculcate inclusive entrepreneurship education for graduating students in tertiary institutions in Nigeria?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

H₀₁ There is no significant mean difference between the responses of graduates and stakeholders on the importance of inculcating inclusive entrepreneurship

skills for graduating students in tertiary institutions in Nigeria.

H₀₂ There is no significant mean difference between the responses of graduates and stakeholders on strategies that can be adopted to inculcate inclusive entrepreneurship education for graduating students in tertiary institutions in Nigeria.

Research Methodology

A descriptive survey research design was adopted for the study. It was conducted in Nsukka Urban area of Enugu State, Nigeria. The population of the study is 102 subjects. The population comprised 82 Final-Year students of Faculty of Vocational and Technical Education, University of Nigeria Nsukka and 20 lecturers in the Faculty of Vocational and Technical Education, University of Nigeria Nsukka Enugu State. Due to the manageable size of the population, there was no sampling as the entire population was used for the study. A 25 item questionnaire was developed to obtain data for the study. A 5-point Likert scale was used to develop the questionnaire. The scale for the questionnaire was Strongly Agree (SA) - 5, Agree (A) - 4, Undecided (UD) - 3, Disagree (D) - 2 and Strongly Disagree (SD) - 1. The questionnaire was face validated by three experts from the Faculty of Vocational and Technical Education, University of Nigeria, Nsukka. Their suggestions and recommendation were integrated into the final copy of the questionnaire. The questionnaire was administered to the 102 respondents.

The mean and standard deviation were used to answer the research questions, while the Cronbach alpha was used to determine internal consistency of the instrument. A reliability coefficient of 0.85 was obtained for the instrument. Arithmetic mean of 3.50 was used to interpret the analyzed data. An item with a mean of 3.50 and above was accepted, while items having their mean below 3.50 were rejected while t-test was used for testing the null hypothesis at probability of 0.05 level of significance and relevant degree of freedom.

Results

Data collected for the study are presented in Table 1 – 2

Table 1: Respondent's mean responses and t-test analysis on the importance of inculcating inclusive entrepreneurship skills for graduating students in tertiary institutions in Nigeria. N=102

s/n	Items	Grand mean		Lecturers		Students		t-cal	t-tab	Decision
		GX	X1	SD1	X2	SD2				
1	Inclusive entrepreneurship development skills can create economic opportunities for students from diverse backgrounds.	3.29	3.34	.64	3.23	1.17	0.42	1.96		
2	Inclusive entrepreneurship development skills can help inequipping students with the skills and knowledge they need to start and grow successful businesses	3.46	3.64	.86	3.27	1.16	1.53	1.96		
3	Inclusive entrepreneurship development skillscan help in reducing income inequality and promote economic growth in their communities.	3.47	3.80	.87	3.13	1.09	2.90	1.96		
4	Inclusive entrepreneurship development skills can be a path to social mobility, allowing individuals to create wealth and improve their social status.	3.25	3.48	.59	3.01	1.20	1.93	1.96		
5	By promoting inclusive entrepreneurship development skills, schools can help students from all backgrounds achieve their full potential and create a better future for themselves and their families.	3.37	3.60		3.14	1.39	1.62	1.96		
6	By promoting inclusive entrepreneurship development skills, schools can foster a culture of innovation and creativity among students.	3.80	3.64	.57	3.96	1.26	-1.25	1.96		
7	Inclusive entrepreneurship development skills can help inencouraging graduates to think outside the box and develop novel solutions to old problems.	3.51	3.56	.58	3.46	1.30	0.38	1.96		
8	It can help prepare students for the future of work and ensure that they have the skills and knowledge they need to succeed in a rapidly changing economy.	3.29	3.40	.58	3.17	1.35	0.84	1.96		
9	Inclusive entrepreneurship development skills can allow individuals from diverse backgrounds to create businesses that reflect their values and experiences.	3.33	3.40	.58	3.26	1.24	0.57	1.96		
10	By promoting inclusive entrepreneurship development skills, schools can help create a more diverse and inclusive economy and society.	3.32	3.76	.52	3.88	1.22	3.53	1.96		

Source: Research Data

Note: GX = Grand Mean, X mean, SD = Standard deviation, t-cal = t-calculated, t-tab = table value, Df = degree of freedom.

Table 1 above shows grand mean of the items were above 3.50. This means that the respondents were aware of the importance of inculcating inclusive entrepreneurship skills for graduating students in tertiary institutions in Nigeria. The result of the hypothesis revealed that there is no significant

difference by respondents except in items 3 and 10 which have t-cal greater than the t-tab value.

Table II: Respondents mean responses and t-test analysis on the strategies that can be adopted to inculcate inclusive entrepreneurship education for graduating students in tertiary institutions in Nigeria.

N=102

s/n	Items	Grand mean	Lecturers		Students		t-cal	t-tab	Decision
		GX	X1	SD1	X2	SD2			
1	There should be a Curriculum review so as to adopt Inclusive entrepreneurship development skills into the school curriculum.	3.53	3.88	1.01	3.97	1.29	-0.35	1.96	
2	Educational monitoring agencies like NUC, NBTE should strictly monitor the Inclusive entrepreneurship development Curriculum implementation.	3.98	3.28	0.74	3.68	1.12	2.60	1.96	
3	The government and private school owners should ensure qualified Teacher's recruitment, evaluation and assessment.	3.54	3.24	0.72	3.84	1.26	1.51	1.96	
4	The government and other stakeholders should ensure adequate Funding, facilities and resources provision for smooth Inclusive entrepreneurship development implementation.	3.55	3.56	0.65	3.34	1.13	0.80	1.96	
5	The government and other stakeholders should ensure Instructional process supervision of Inclusive entrepreneurship development skills implementation.	3.58	3.56	0.79	3.59	1.29	-0.12	1.96	

Table 2 above shows that the respondents agreed that all the 5 items are the strategies that can be adopted to inculcate inclusive entrepreneurship education for graduating students in tertiary institutions in Nigeria. This is because all the mean score for both lecturers and students was above 3.50. The result of the hypothesis revealed that there is no significant difference by respondents except in item 2 which have t-cal greater than the t-tab value.

Discussion of the Study

The results from table 1 shows that the importance of inculcating inclusive entrepreneurship skills for graduating students include: inclusive entrepreneurship development skills can foster a culture of innovation and creativity among students and that inclusive entrepreneurship development skills can help in encouraging graduates to think outside the box and develop novel solutions to old problems. The result of this study is in line with the result of Viriri, and Makurumidze, (2014) who found a significant relationship between inclusive education and the empowerment of school graduates. When students are made to study under one common environment, there is

a serious need for competition among diverse group of people, there is room for learning and sharing of ideas and there is room for self emancipation. The special need children can freely loose them from self delusion, mixing freely with their peers, not minding their physical, mental and social deficiencies. This study is also in line with Adara and Onyemaechi, (2018) who stated that inclusive entrepreneurship education can help in providing the needed entrepreneurial skills for all students, because different form of entrepreneurial skills would be inculcated to these students. This will guarantee them the needed skills for being self empowerment, which can give them the needed skills to make meaningful contribution to national development. The essence of inclusive entrepreneurship education will provide the skills which can make recipients of such education program self reliant and empower them for national development.

The results from table 2, shows the strategies that can be adopted to inculcate inclusive entrepreneurship education for graduating students. Some of them include: there should be a Curriculum review so as to adopt Inclusive entrepreneurship development skills into the school curriculum and

educational monitoring agencies such as Nigeria University Commission NUC, National Board for Technical Education NBTE among others should strictly monitor the inclusive entrepreneurship development Curriculum implementation in tertiary institutions. This according to Akpokiniov, (2017) means that educational administration (administrators), have very significant roles to play in the implementation of the inclusive entrepreneurship education for national development in Nigeria. Educational administrators (administration) can play the roles by contributing and participating in curriculum design and reviews, curriculum implementation and supervision, funding, facilities and resources provision, teacher's recruitments, evaluation and assessment and instructional process supervision of the inclusive entrepreneurship education implementation in Nigeria. This result also shows that educational administrators cannot play significant role of engagement in teaching and learning process of inclusive entrepreneurship education programs in Nigeria. The result of this research is a confirmation of the earlier finding of Adetoro (2014), who found that when students who are highly entrepreneurial are joined with those who have very minimal knowledge of entrepreneurship, they learn and improve their skills from the highly motivated ones, hence, there is every need for an inclusive education programs to be merged with entrepreneurial skill development in all our school system.

Conclusions

Building inclusive entrepreneurship skill development in educational technology in our schools is crucial for fitting graduates into the 21st-century global workforce. It can prepare students for the future of work and enable them to contribute meaningfully to the economy and society. Entrepreneurship skills are essential for driving innovation, creating jobs, promoting economic growth, and fostering independence and self-determination. These skills are increasingly in demand in the 21st-century global economy and are important for individuals who want to succeed in their careers and make a positive impact in their communities. The study reviewed how entrepreneurship education impacts the level of several skills of entrepreneurs, which are technical skills, business management skills, and personal entrepreneurial skills. Based on the general review of the study, there is a need to improve the entrepreneurial market by building solid grounds for entrepreneurs (graduands) to excel and succeed in their businesses.

However, improving entrepreneurial education plays a crucial role in providing the necessary skills for an entrepreneur to operate their daily business requirements, and how to face obstacles and challenges that will face them during their entrepreneurial life. In addition, supporting educational institutions through providing the necessary support from the government to the educational institutes to introduce specialised programs, for entrepreneurs (graduands) will improve the quality of education and demonstrate the importance of entrepreneurship education and skills. This study showed statistical evidence that entrepreneurial skill development is necessary to be successful professionally in the 21st global workforce. The current complexity and unpredictability require its inclusion in Educational Technology to make the global and digital transformation happen, create valuable products, and develop, as a team, innovative services.

Recommendations

Based on the findings of the study the following recommendations were made:

1. Educational institutions should prioritize incorporating entrepreneurship education into their curriculum to equip students with the skills and knowledge needed to start and run successful businesses.
2. Efforts should be made to encourage diversity and inclusivity in schools' entrepreneurship programs to ensure that all students, regardless of their background or identity, have an equal opportunity to develop the skills they need to succeed in the global workforce.
3. Mentorship should be provided and encouraged, and networking opportunities provided for students to connect with successful entrepreneurs and business leaders, who can provide guidance and support as they develop their skills and launch their businesses.
4. There should be collaboration between educational institutions and industry partners that can help ensure that entrepreneurship education programs are up-to-date with the latest trends and technologies in the industry, and can provide students with valuable hands-on experience through internships, co-op placements, and other experiential learning opportunities.
5. Educational institutions should encourage interdisciplinary learning, where students can develop a broad range of skills and knowledge in fields such as business, technology, engineering,

and design. This can help students develop a well-rounded skill set that is highly valued by employers in the 21st-century global workforce.

6. Ministry of Education should create an inclusive environment that supports the development of

entrepreneurial skills that connect the graduates with relevant resources and networks in promoting entrepreneurship skill development in educational technology.

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