

Integrating Technopreneurial Skills for Graduate Employability in Federal Universities in South-East, Nigeria: An Imperative for Economic Recovery

Ukala, Chinyere Catherine
Chinyere.ukala@uniport.edu.ng
Department of Educational Management,
Faculty of Education,
University of Port Harcourt, Port Harcourt
Nigeria.

&

Adieme, Franca Ginikachi
Department of Educational Management and Business Studies,
Faculty of Education,
Federal University Oye Ekiti, Oye Ekiti
Nigeria.

Abstract

This study investigated integrating technopreneurial skills for graduate employability in Federal Universities in South-East, Nigeria as an imperative for economic recovery. Two research questions and one hypothesis guided the study. Descriptive research design was adopted for the study. The population of the study comprised all the 1, 577 lecturers from the Faculties of Education in the five federal universities in South-East Nigeria. Using simple random sampling technique, three universities were selected. Taro Yamane's formula was used to determine a minimum sample size of 319; hence, a sample of 350 lecturers (135 males and 215 females), which represents 22% of the population was drawn using proportionate stratified random sampling technique. The instrument that was used for data collection was a self-designed 20-item questionnaire entitled: "Integrating Technopreneurial Skills for Graduate Employability Scale(ITSGES)." The instrument was structured after the four-point modified Likert rating scale, and was duly validated by three experts. The internal consistency of the instrument was determined using Cronbach's Alpha statistical method. Reliability coefficients of 0.75 and 0.86 were obtained for the various sections of the instrument respectively, which showed that the instrument was reliable. Mean and standard deviation were used to answer the research questions while t-test was used in testing the null hypothesis at 0.05 level of significance. The findings of the study revealed, among others that, the technopreneurial skills that can enhance employability among graduates are: digital, word processing, information technology, analytical, networking, entrepreneurial, Internet, observational, technical, innovative, creative, communication and go-getting. Based on the findings, it was recommended, among others, that lecturers should endeavour to integrate technology enhanced learning (TEL) into the teaching-learning process in order to equip students with prerequisite digital skills needed to make them employable and generate wealth for national economic recovery and sustainability.

Keywords: Integrating, Technopreneurial, Skills, Graduate employability and Economic recovery.

Introduction

The production of a workforce with the prerequisite knowledge, skills and attitudes that promote socioeconomic development of a nation is the sole responsibility of higher education institutions. Thus, any country that is battling with recession or economic recovery has to critically look into her education sector. With the emergence of a technology-driven economy, tertiary institutions in Nigeria are expected to train relevant manpower that can either be digitally self-reliant or be gainfully employed so as to contribute to national development. With the upsurge of unemployment among our graduates, it becomes imminent for universities to equip their products with hard, soft and go-getting skills that will enhance employability, foster financial independence, adapt to the rapidly evolving world and promote sustainable development. In order not to be swept aside by the tide of globalisation with its competitiveness, universities must make efforts to restructure their curricula by integrating technology-based entrepreneurship education into the teaching and learning process. This way, their products (graduates) will be able to meet the requirements of employers of labour and global standards instead of being tagged Unemployable graduates. Lending credence to this assertion, Kpee et al. (2012) posited that, the relevant curriculum for Nigerian universities should develop students to keep abreast of economic, social, political, cultural and technological needs of the world as a whole and Nigeria in particular.

In a bid to redress the issues of unemployability among Nigerian graduates, entrepreneurship education was introduced in all levels of education with greater emphasis on tertiary institutions as it exposes students to acquire skills that can enable them to create jobs and reduce dependency on external aids. Ukala (2023) noted that, digital skills are the driving force of today's global economy, and integrating them into the education system will make students relevant and competent in the world of work. Pantami (2023) emphasized that, the world has shifted its focus from university degrees to employees' digital skills or competencies. In recognition of the roles information, communication and technology (ICT) play in the development of a nation, the Federal Republic of Nigeria (2012) stipulated in the National Policy on ICT that tertiary institutions shall provide the required information technology (IT) knowledge, skills and attitudes in learners to successfully compete in the global economy. Conversely, Nwosu and John (2018) observed that, the universities in Nigeria have deviated from the policy because they keep churning out unemployable graduates that have continued to flood the labour market; thereby, increasing the growth rate of unemployed youths in the nation.

In corroboration, most of the public tertiary institutions still deliver instructions using only the traditional approach in this digitalisation era. Hence, the need to introduce technopreneurship education, which integrates technology enhanced learning (TEL) into teaching and learning process.

Technopreneurship is a new concept that is coined from technology and entrepreneurship. It simply entails teaching entrepreneurship education with technologies. Integrating technology in teaching and learning entrepreneurship, which is skilled-based, will enable students to acquire digital skills that will bring about job creation, employment and generate wealth for national economic development. Druker (1994), as cited in Selladurai (2016) defined technopreneurship as a process of merging technology prowess, entrepreneurial talent and skills in the transformation of goods and services. Colombo and Delmastro (2019); Selvarany and Venusamy (2015) described technopreneurship as a process which involves merging technology competence with entrepreneurial skills. Ayeni and Olabisi (2023) viewed technopreneurship as the ability to identify real problems, set a vision to transform the identified problems into business opportunities by skilfully using technology to refine business acumen. Similarly, Selladurai opined that technopreneurship is the creation of new ventures in order to explore technological innovations that will lead to commercialization and industrialization towards global marketing. Nanda (2024) suggested that, as technology advances, businesses and industries must adopt the trends and incorporate technopreneurship into their operations. Hence, universities must transition to technopreneurship, which is technology-based in teaching entrepreneurship in order to effectively equip students with digital and technical skills needed by employers of labour in this digital economy.

Skill or competency is an ability or capacity someone possesses to implement a particular task effectively. As defined by Chell (2013), skill is the knowledge, attitudes and abilities that qualify an individual to perform a particular task. Technopreneurial skills are the competencies needed to incorporate entrepreneurial innovations and creativities with the help of technological knowhow. Obanya (2014) asserted that, to fit an individual into the wider society requires the inculcation of a set of life skills determined by the nature, the needs and the evolving trends in the society. Thus, the emergence of technology has resulted in astronomical increase of technology-based companies that require digitally skilled workforce. Training graduates to acquire technopreneurial skills will solve the issues of skill mismatch or gap in this digital economy. Paramasivan and Selladurai (2022) emphasised that, equipping students with digital

and technical competencies to perform specific tasks and processes such as the use of technological tools, equipment or software are critical technopreneurial skills needed in this 21st century. Nanda (2024) posited that observation skill is paramount for effective technopreneurship education, which is an act of being sensitive to one's environment by making use of the five senses of sight, hearing, smell, taste and touch. *Hashimi et al. (2021) maintained that*, potential technopreneurs must be equipped with technical reasoning, data analytical, information technology and business skills. Priyadharshini and Selladurai (2018); Soomro and Shah (2020) posited that, integrating technopreneurship education in universities will produce balanced individuals with saleable skills that are consistent in both theory and practice, who can efficiently fit into the labour market.

Equipping graduates with technopreneurial skills have been identified as veritable tools that can holistically address the issues of unemployment and unemployability in Nigeria. According to Obanya (2014), go-getting skills, which centre on creativity, innovative and entrepreneurial skills, bring out imaginative intelligence in employees and make them think out-of-the-box and have the ability to apply head-hands-heart to any situation. Okolie et al. (2019) observed that technical skills, which include but not limited to typing, critical thinking, analytical, entrepreneurial, information and technology (IT), problem-solving, among others, are hard skills technopreneurs possess. Ayeni and Olabisi (2023) recommended communication and networking skills as social media competencies for generating wealth for national economic sustainability. Hence, the use of social media devices such as Facebook, Google, Snapchat, Instagram, TikTok, among others have helped technopreneurs to discover innovative ways of creating values and contents in online businesses. Soomro and Shah (2020) suggested Internet skill that will enable students to navigate the global village, evaluate opportunities, develop new products and recognize potential market applications as a core technopreneurial skill. Thus, acquisition of technopreneurial skills is the key to career-oriented jobs and wealth creation in Nigeria.

Benefits of integrating technopreneurship education in higher education institutions have been documented in most of the countries of the world. In Malaysia, Haryanti et al. (2018) reported that, technopreneurship education has revamped the entrepreneurship education method of learning to actively engaged classrooms that meet every student's learning needs. Colombo and Delmastro (2019) noted that, with the introduction of technopreneurship education, Italy has performed better in terms of adoption of innovations; hence the government has achieved

tremendous success in fostering the development of technology-based jobs. From a study conducted by Soomro and Shah (2020) in China, it was observed that technopreneurship is a key driver of increased economic growth, economic competitiveness and job creation. Yusi et al. (2017) noted that, Finland has equally advanced technologically by adopting technopreneurship as a tool that drives a fundamental shift in job creation by providing strong education system, access to Internet and infrastructures. Similarly, Nanda (2024) reported that, the integration of technopreneurship education in Indonesian higher education institutions has tremendously enhanced economic output and job creation.

Research findings of Ayeni and Olabisi (2023) revealed that, technopreneurship education plays a critical role in developing future entrepreneurs, that is, graduates of entrepreneurship education by providing them with skills, knowledge and capabilities to adopt ICT, Internet and other computer-based devices in launching and managing business ventures of any kind. Priyadharshini and Selladurai (2018) noted that, the introduction of technopreneurship education in India has made positive impacts on the economic development, reduction of unemployment and eradication of poverty. Thus, science, technology and entrepreneurship have been proven to be dynamic tools that transform economic growth, development and sustainability. Lending credence to this assertion, Harsono (2013) pointed out that, technopreneurship is a veritable factor in economic development and social change. Nanda (2024) maintained that, technopreneurship education provides students with diverse learning experiences in digital devices and skills that enable them to identify and exploit opportunities, formulate problems, think creatively and work collaboratively. In a related study, Paramasivan and Selladurai (2022) observed that, technopreneurial skills expose learners to information, knowledge and understanding of technology that is entrenched in computer-based devices and Internet facilities. Hence, Nigerian universities should endeavour to make the best use of available resources to expand students' access to technology, and help them to acquire prerequisite digital skills.

Employability simply means having the capability of being employable. Yorke (2006) defined employability as a set of skills, knowledge and personal attributes that make individuals more likely to secure and be successful in their chosen occupations to the benefit of themselves, the workforce, the community and the economy. Hillage and Pollard (1998, as cited in Amana and Halilu, 2016) viewed employability as having the capability to gain employment, sustain employment and obtain new employment if required. Thus, employability requires a graduate to

possess requisite hard and soft skills to be in a job and remain in a job for sustainable development. Employers expect graduates to be prepared for not only employment but also employability. Empirical evidence from recent studies conducted in Nigeria showed that, there is a high rate of graduate unemployment, which not only related to lack of jobs but also lack of employable skills or competences that employers require (Oladokun & Olaleye, 2018; Nwosu & John, 2018; Suleiman, 2021; Pantami, 2023). To further explain the graduate employability situation in Nigeria, a study that was recently conducted by Adeosun (2022) in three major universities in three regions of the country revealed that only 25% of graduates had sufficient knowledge and skills that satisfied the employers while 75% were unemployable. Hence, there are growing skills mismatch or gaps between graduate output and requirements of the labour market.

Economic recovery, which is characterised by sustained period of improving development activities that result in growing the nation's gross domestic product (GDP) and employment opportunities, is usually initiated after recession. Normally, during economic recovery, there are always introduction of emerging competitive businesses, economic reforms, creativities and innovations. Soomro and Shah (2020) asserted that technopreneurship is a key driver of economic growth, economic competitiveness and job creation in China. Priyadharshini and Selladurai (2018) observed that, technopreneurship education is one of the tools Indian Government adopted to attain sustainable and stable economic growth. Nwideeduh and Adieme (2021) emphasised that, technology has become the basis of every nation's socioeconomic growth, development and sustainability in this digital economy. Hence, promoting technopreneurship education in the university education system will go a long way to achieving economic recovery, growth and development in Nigeria.

Statement of the Problem

Graduate unemployability has become a worrisome phenomenon, and it has been on the front burners of the national discourse for the past three decades. The challenges facing employment in Nigeria is not only unemployment but also unemployability. Employers of labour have decried a great skill mismatch between the degrees and the skills graduates possess. The evolution of technology has transformed the world, and increased the number of technology-based companies that seek employees with technical, digital and soft skills that can match their job specifications. Employers of labour have been agitating for graduates who are resourceful and equipped with knowledge, attitudes and the prerequisite skills needed for the world of work.

With the labour market increasingly demanding skills in the use of digital technologies, pressure is constantly mounted on the Nigerian Ivory Towers, the universities, to change their teaching strategies by integrating technologies into the teaching-learning process.

As a matter of fact, many nations keep reviewing their education curricula so as to effectively prepare students, who inhabit a virtual world, with digital knowledge and skills they need now and in the future. The Nigerian Government has also been making concerted efforts through policies, bye-laws, provision of computers, conferences, among others, to ensure technology-driven classrooms in the federal tertiary institutions. Regrettably, with all these efforts, the universities seem to continue to churn out unemployable graduates as they keep increasing on monthly basis. Unarguably, it appears degrees are no longer sufficient to equip graduates to be gainfully employed, and be able to compete favourably with their counterparts in this digitalised world. Thus, this has underscored the problem of this study.

Aim and Objectives of the Study

This study investigated integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria: An imperative for economic recovery. Specifically, the objectives sought to:

1. examine the technopreneurial skills that can be integrated for graduate employability in federal universities in South-East, Nigeria; and
2. ascertain the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria.

Research Questions

The following research questions guided the study:

1. What are the technopreneurial skills that can be integrated for graduate employability in federal universities in South-East, Nigeria?
2. What are the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria?

Hypothesis

One hypothesis was formulated and tested in the study at 0.05 alpha level: of significance

Ho₁ There is no significant difference between the mean ratings of male and female lecturers on the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria.

Methodology

This study adopted the descriptive research design. The population of the study comprised all the 1,577 lecturers from the Faculties of Education in the five federal universities in South-East Nigeria (South-East Academic Reports of Universities, 2022). The universities are: University of Nigeria, Nsukka, Enugu State; Nnamdi Azikiwe University, Awka, Anambra State; Michael Okpara University of Agriculture, Umudike, Abia State; Alex Ekwueme University, Ndufu Alike-Ikwo, Ebonyi State and Federal University of Technology Owerri, Imo State. Using simple random sampling technique, three universities (University of Nigeria, Nsukka, Nnamdi Azikiwe University, Awka and Alex Ekwueme University, Ndufu Alike-Ikwo), were selected. Taro Yamane's formula was used to determine a minimum sample size of 319; hence, a sample of 350 lecturers (135 males and 215 females), which represents 22% of the population was drawn using proportionate stratified random sampling technique.

The instrument that was used for data collection was a self-designed 20-item instrument entitled: Integrating Technopreneurial Skills for Graduate Employability scale (ITSGES).” The instrument was structured after the four-point modified Likert rating scale of Strongly Agree(SA) = 4 points, Agree(A) = 3 points, Disagree(D) = 2 points and Strongly Disagree(SD) = 1 point, respectively. The instrument was duly validated by three experts in Test and Measurement from the Department and psychology, guidance and counseling, of Faculty of Education, University of Port Harcourt. The internal consistency of the instrument was determined using Cronbach's Alpha statistical method. Reliability coefficients of 0.75 and 0.86 were obtained respectively for the various sections of the instrument, which showed that, the instrument was reliable. Mean and standard deviation were used to answer the research questions. Any mean score from 2.5 and above was agreed upon, and the mean below 2.5 was disagreed upon. t-test was used in testing the null hypothesis at 0.05 level of significance

Results

Research Question 1: What are the technopreneurial skills that can be integrated for graduate employability in federal universities in South-East, Nigeria?

Table 1: Mean Scores and Standard Deviations on the Opinions of Male and Female Lecturers on the Technopreneurial Skills that can be Integrated for Graduate Employability in Federal Universities In South-East, Nigeria

S/ N	Technopreneurial Skills that can be Integrated for Graduate Employability Include:	Male Lecturers		Female Lecturers		$\bar{X}_1$ $\bar{X}_2$	Decision
		$\bar{X}_1$	SD ₁	$\bar{X}_2$	SD ₂		
1.	Digital skill.	3.25	0.58	3.23	0.46	3.24	Agreed
2.	Word processing skill.	3.13	0.59	3.17	0.47	3.15	Agreed
3.	Information technology (IT) skill.	3.16	0.59	3.22	0.46	3.19	Agreed
4.	Analytical skill.	3.20	0.59	2.20	0.46	3.20	Agreed
5.	Networking skill.	3.22	0.59	3.24	0.46	3.23	Agreed
6.	Entrepreneurial skill.	3.20	0.59	3.18	0.47	3.19	Agreed
7.	Internet skill.	3.23	0.58	3.21	0.46	3.22	Agreed
8.	Observational skill.	3.19	0.59	3.20	0.46	3.20	Agreed
9.	Technical skill.	3.21	0.59	3.28	0.45	3.25	Agreed
10.	Go-getting skill that can make graduates use their heads-hands- hearts to effectively implement tasks.	3.28	0.58	3.26	0.46	3.27	Agreed
Aggregate Mean & Standard Deviation		3.21	0.59	3.22	0.46	3.22	

Data on Table 1 shows the mean responses of male and female lecturers on the technopreneurial skills that can be integrated for graduate employability in federal universities in South-East, Nigeria. Both male and female lecturers agreed on all the items with high mean scores above the mean criterion of 2.50. Their aggregate mean scores of 3.21 and 3.22

respectively, indicate that they agreed that the technopreneurial skills that should be intergrated for graduate employability include: digital, word processing, information technology (IT), analytical, networking, entrepreneurial, Internet, observational, technical and go-getting skills.

Research Question 2: What are the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria?

Table 2: Mean Scores and Standard Deviations on the Opinions of Male and Female Lecturers on the Benefits of Integrating Technopreneurial Skills for Graduate Employability in Federal Universities in South-East, Nigeria

S/ N	Benefits of Integrating Technopreneurial Skills Include:	Male Lecturers		Female Lecturers		$\bar{X}_1$ $\bar{X}_2$	Decision
		$\bar{X}_1$	SD ₁	$\bar{X}_2$	SD ₂		
11.	Technopreneurial skills provide graduates with diverse learning experiences that enable them to be adept in technology-based jobs.	3.28	0.58	3.26	0.46	3.27	Agreed
12.	They provide graduates with capabilities to adopt digital skills in managing business venture of any kind.	3.23	0.58	3.25	0.46	3.24	Agreed
13.	They equip graduates with needed skills required by employers of labour; thereby, making them employable.	3.26	0.58	3.24	0.46	3.25	Agreed
14.	They do not develop graduates to be self-reliance.	1.58	0.73	1.63	0.57	1.61	Disagree d
15.	They expose graduates to online networking that is entrenched in software applications that enable them	3.19	0.59	3.16	0.47	3.18	Agreed

to create content values.

16.	They are the key driver to economic recovery, growth, development, sustainability, etc.	3.27	0.58	3.26	0.46	3.27	Agreed
17.	They promote actively-engaged classrooms by meeting every learner's needs.	3.22	0.59	3.18	0.47	3.20	Agreed
18.	They bring out imaginative intelligence needed for the world of work from students.	3.30	0.57	3.24	0.46	3.27	Agreed
19.	They foster job/wealth creation which helps in reducing unemployment among graduates.	3.20	0.59	3.22	0.46	3.21	Agreed
20.	They equip graduates with skills that enable them to exploit business opportunities so as to help the country become a producing nation instead of a consuming one.	3.24	0.58	3.21	0.46	3.23	Agreed
Aggregate Mean & Standard Deviation		3.17	0.59	3.15	0.47	3.16	

Data on Table 2 displays the mean responses of male and female lecturers on the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria. The respondents agreed on almost all the items except item 14, which they disagreed on with the mean score lower than the mean criterion of 2.50. Their aggregate mean scores of 3.17 and 3.15 respectively, indicate that they agreed that integrating technopreneurial skills into teaching-learning process have many benefits which include: providing graduates with diverse learning experiences that enable them to be adept in technology-based jobs; providing graduates with capabilities to adopt digital skills in managing business venture of any kind; equipping graduates with needed skills required by employers of labour; exposing graduates to online networking that is entrenched in software applications; being key driver to economic recovery, growth, development, sustainability, etc.; promoting actively-engaged classrooms by

meeting every learner's needs; bringing out imaginative intelligence needed for the world of work; fostering job/wealth creation which helps in reducing unemployment among graduates and equipping graduates with skills that enable them to exploit business opportunities so as to help the country become a producing nation instead of a consuming one.

Table 3: Summary of t-test on the Difference between the Mean Ratings of Male and Female Lecturers on the Benefits of Integrating Technopreneurial Skills for Graduate Employability in Federal Universities in South-East, Nigeria

Status	N	$\bar{X}$	SD	df	t-cal	Critical Value	Remarks	Decision
Male Lecturers	135	3.17	0.59	348	0.33	± 1.96	Not Significant	Failed to Reject
Female lecturers	215	3.15	0.47					

P < 0.05

Data on Table 3 present the summary of t-test analysis on the difference between the mean responses of male and female lecturers on the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria. The result shows that t-calculated value of 0.33 is less than the t-critical value of ± 1.96 . Since the t-calculated value is less than the t-critical value, the null hypothesis is failed to reject at 0.05 alpha level. Thus, there is no significant difference between the mean ratings of male and female lecturers on the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria.

Discussion of Findings

This study has revealed that the technopreneurial skills that should be integrated for graduate employability include: digital, word processing, information technology (IT), analytical, networking, entrepreneurial, Internet, observational, technical and go-getting. This finding is in agreement with Paramasivan and Selladurai (2022); Nanda (2024), who observed that, equipping students with digital and technical competencies to perform specific tasks and

processes such as the use of technological tools, equipment or software are critical technopreneurial skills needed in this 21st century. The finding is also in line with *Hashimi et al. (2021)*; *Suleiman (2021)*; *Obanya (2014)*, who posited that, potential technopreneurs must be equipped with technical reasoning, data analytical, information technology, business skills and go-getting skills that will enable them to become self-employed and efficiently fit into the labour market. The finding corroborates with *Okolie et al. (2019)*; *Soomro and Shah (2020)*; *Ayeni and Olabisi (2023)*, who observed that, technical skills, which include but not limited to typing, critical thinking, analytical, entrepreneurial, information and technology (IT), problem-solving, networking, communication, Internet, among others, are hard skills technopreneurs possess. Thus, the finding implies that integrating technopreneurial skills into instructional delivery will proffer the solutions needed to eradicate unemployment, poverty, economic downturn, among others in Nigeria.

Another finding of this study revealed that, integrating technopreneurial skills into teaching-learning process have many benefits which include: providing graduates with diverse learning experiences that enable them to be adept in technology-based jobs; providing graduates with capabilities to adopt digital skills in managing business venture of any kind; equipping graduates with needed skills required by employers of labour; exposing graduates to online networking that is entrenched in software applications; being key driver to economic recovery, growth, development, sustainability, etc.; promoting actively-engaged classrooms by meeting every learner's needs; bringing out imaginative intelligence needed for the world of work; fostering job/wealth creation which helps in reducing unemployment among graduates and equipping graduates with skills that enable them to exploit business opportunities so as to help the country become a producing nation instead of a consuming one. The finding agrees with *Obanya (2014)*, who posited that, go-getting skills, which centre on creativity, innovative and entrepreneurial skills, bring out imaginative intelligence in employees and make them think out-of-the-box and have the ability to apply head-hands-heart to any situation.

The finding is also in consonance with *Soomro and Shah (2020)*, who conducted a study and found out that technopreneurship is a key driver of increased economic growth, economic competitiveness and job creation in China. In corroboration, the research finding of *Nanda (2024)* revealed that the integration of technopreneurship education in Indonesian higher education institutions has tremendously enhanced economic output and job creations. The finding is also in line with *Ayeni and Olabisi (2023)*, who discovered that, technopreneurship

education plays a critical role in developing future entrepreneurs by providing them with skills, knowledge and capabilities to adopt ICT, Internet and other computer-based devices in launching and managing business ventures of any kind. The result of the null hypothesis showed there is no significant difference between the mean ratings of male and female lecturers on the benefits of integrating technopreneurial skills for graduate employability in federal universities in South-East, Nigeria. Hence, the implication of this finding is that universities should endeavour to make the best use of the available resources to expand students' access to technology, and help them to acquire prerequisite digital skills that will make them fit perfectly into the world of work.

Conclusion

Based on the findings of this study, it is therefore concluded that integrating technopreneurial skills into university education instructional delivery is the key that can unlock economic development, sustainable empowerment, employability, job creation, economic sustainability, global competitiveness, among others in this knowledge-based economy. Equipping students with technopreneurial skills will enable them to become adept with digital skills and also entrepreneurs who can contribute to the nation's gross domestic product (GDP) and sustain its economic growth. In other words, this study has empirically proven that technopreneurship education is the driving force that Asian countries: India, Malaysia, Indonesia, China and many others that experienced economic downturn used to navigate to economic recovery, growth and development. Thus, integrating technopreneurship education into the university education curriculum can enable students to acquire marketable skills needed to contribute to national development.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Lecturers should endeavour to integrate technology enhanced learning (TEL) into the teaching-learning process in order to equip students with prerequisite digital skills needed to make them employable and generate wealth for national economic recovery and sustainability.
2. National Universities Commission (NUC) should include Technopreneurship Education in the Core Curriculum Minimum Academic Standard (CCMAS) as it encompasses all the skills needed for graduate employability, job creation and economic development.

References

- Adeosun, G. (2022). 9% of Nigerian graduates find employment: Why are 91% Nigerian youths not employable? *International Journal of Academic Research in Business and Social Sciences*, 2(3), 128-134.
- Amana, E. A. & Halilu, I. (2016). Technological advancement and the employability of business graduates in Nigeria. *International Journal of Educational Research and Management Technology (IJERMT)*, 1(2), 37-51.
- Ayeni, D. O. & Olabisi, T. P. K. (2023). Technopreneurship education, occupational counselling, and sustainable development in Nigeria. *British Journal of Multidisciplinary and Advanced Studies: Business and Management Sciences*, 4(4), 34-43.
- Chell, E. (2013). Review of skill and the entrepreneurial process. *International Journal of Entrepreneurial Behaviour & Research*, 19(1), 6-31.
- Colombo, M. G. & Delmastro, M. (2019). How effective are technology incubators? Evidence from Italy. *Research Policy*, 31(7), 1103-1122.
- Federal Republic of Nigeria (2012). Nigeria national policy for information technology. <http://www.nitda.gov/docs/policy/ngitpolicy.pdf>
- Harsono, A. (2013). Building technopreneurship for next generation: How the benefits of technoentrepreneurship education affect career intentions of college students. *Sisfotenika*, 3(1), 31-40. <https://amity.edu/UserFiles/admaa/4a51dPaper%201.pdf>
- Haryanti, N., Nor, M. D., Maziah, S., Rahman, A., Hayati, Y., Muhammad, N., Norbaya, S., Rashid, M., Farleena, N. & Aznan, M. (2018). Revamping technopreneurship education in public higher education. *International Journal of Engineering & Technology*, 7(4) 1355-1357.
- Hashimi, S. A., Zaki, Y., Al-Muwali, A. & Mahdi, N. (2021). The role of nurturing technopreneurship education and building university students' entrepreneurial mindsets and skill sets in fostering digital innovation and augmenting the tech start-up ecosystem in Bahrain. *International Journal of Learning, Teaching and Educational Research*, 20(6), 152-173.
- Koe, W. E., Alias, N. E., Marmaya, I. A. & Mohamad, M. (2020). Likelihood in choosing technopreneurship as career among undergraduate students. *International Journal of Academic Research in Business and Social Sciences*, 10(5), 686-696.
- Kpee, G. G., Oluwuo, S. O. & Baridam, D. M. (2012). Academic renewal and relevance in South-South Nigerian universities: Curriculum prospects and challenges. *Global Voice of Educators*, 1(1), 1-9.
- Nanda, N. R. (2024). Technopreneurship strategy to grow entrepreneurship career options for students in higher education in Indonesia. *ADI Journal on Recent Innovation*, 5(2), 110-126.
- Nwideeduh, S. B. & Adieme, F. G. (2021). Application of digital surveillance as a managerial tool for quality assurance in secondary schools in Rivers State, Nigeria. *The International Journal of Business and Management*, 9(3), 9-15.

- Nwosu, J. C. & John, H. C. (2018). Entrepreneurship education and the challenges of graduate employability in Nigeria. *International Journal of Innovation, Management and Technology*, 9(5), 189-193.
- Obanya, P. (2014). *Educationeering*. HEBN Publishers Plc.
- Okolie, U. C., Igwe, P. A., Eneje, B. C., Nwosu, H. & Mlangi, S. (2019). Enhancing graduate employability: Why do higher education institutions have problems with teaching generic skills? *Policy Futures in Education*. <https://doi.org/10.1108/HESWBL-04-2017-0026>
- Oladokun, T. T. & Olaleye, A. (2018). Bridging skill gap in real estate education in Nigeria. *Pacific Rim Property Research Journal*, 24(1), 17-34.
- Pantami, I. A. (January 31st, 2023). Positioning West Africa digital economy for the future. Conference Paper presented on Tuesday, 31st January, 2023 at the Ministry of Communications and Digital Economy, Abuja. *The Vanguard Newspaper*.
- Paramasivan, C. & Selladurai, M. (2022). Technopreneurship education: Teach and train the youths. *Asian Journal of Management*, 8(4), 1172-1175.
- Priyadharshini, J. & Selladurai, M. (2018). Technopreneurial education and its impact in India. *AJMR: Asian Journal Multidimensional Research*, 5(10-11), 113-119.
- Selladurai, M. (2016). Conceptual framework on technopreneurship. *SELP Journal of Social Science*, 3(27), 92-97.
- Selvarany, A. & Venusamy, K. (2015). A study of technopreneurship in small and medium industry. *International Journal of Management*, 6(1), 401-408.
- Soomro, B. A. & Shah, N. (2020). Technopreneurship intention among non-business students: A quantitative assessment. *World Journal of Entrepreneurship, Management and Sustainable Development*, 17(3), 502-514.
- Ukala, C. C. (2023). *21st century skills acquisition for youth sustainable empowerment*. Paper presented at the official commissioning of Skills Development Centre, Port Harcourt, Nigeria on Thursday, 23rd November.
- Yorke, M. (2006) *Employability in higher education: What it is - what it is not*. Higher Education Academy. www.employability.ed.ac.uk/what/
- Yusi, T. M., Endang, S. A. & Eko, G. S. (2017). Technopreneurship intentions in Faculty of Computer Science, Brawijaya University. *Journal of Applied Management*, 15(2), 230-239.