The scale **Journal Website:** https://thescalejournal.com.ng/
An Interdisciplinary Journal of
The ACADEMIC STAFF UNION OF POLYTECHNICS - ZONE D
ISSN: 2992-3727 Published 30th November, 2025

SKILL ACQUISITION, DEVELOPMENT, AND ENRICHMENT AS A CHANNEL OF ECONOMIC GROWTH AND STABILITY IN NIGERIA: DRAWING LESSONS FROM CHINA AND SINGAPORE

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ABSTRACT

This study aims at examining how acquired skills and its corresponding development and enrichment can help Nigeria leapfrog through economic woes and become an economic force. 40 lecturers drawn from two Federal Polytechnics and two Federal Universities in the South East States of Nigeria were used as the study population. Although this research is descriptive, secondary data was sourced to explain how China and Singapore succeeded in the area of skill development. Primary data was also sourced to measure the strength of data relationship using Pearson's Moment Correlation Coefficient of Variation, reliability score showing 0.82. Mean scores and Standard Deviation [SD] were used to analyse the three research questions, while Z-test was used to analyse the three null hypotheses. The results showed that education reforms vis a vis curriculum enrichment, technology transfer, and the reorganisation of related Technical and Vocational Education and Training [TVET] institutions, have a positive impact on economic growth, while government's failure to adequately fund TVET is responsible for Nigeria's slow technological and economic growth, among others. It was recommended that government must redesign TVET programmes to conform to modern day realities, from primary to tertiary levels, and linked to other national policies to achieve overall objectives.

Keywords: Skill Acquisition, Skill Development, Skill Enrichment, Economic Growth, Economic Stability, TVET

INTRODUCTION

The place of skill acquisition and its consequent improvement in the socio-economic life of a nation cannot be challenged, especially amongst developing countries battling with acute unemployment, youth restiveness, insurgency, brain drain, and worsening poverty situations. Studies [European Union, 2011; Martinez-Fernandez, 2013; Undiyaundeye, 2015; Udo, 2015; Alam, Ahsan, and Ogawa, 2024] reveal that skill acquisition engenders economic growth and stability; a veritable tool for employment generation, poverty alleviation, higher productivity, knowledge transfer, and a foreign exchange earner. In today's swiftly changing employment environment, where technological progressions are upsetting traditional job patterns, Technical and Vocational Education and Training [TVET] becomes inevitably more important than ever [Dixit & Ravichandran, 2023].

Over the years, the Nigerian government's efforts to curb unemployment, improve her people's living standard, check insecurity, and grow her Gross Domestic Product [GDP], which led to the establishment of various programmes such as the Green Revolution Programme of 1976, School – To – Land Programme of 1978, Youth Employment and Vocational Skill Development Scheme of 1986 [under NDE], Small Scale Industrial and Graduate Farmers Programme of 1988 [under NDE], National Open Apprenticeship Scheme of 1988 [Douli, 2002, in Idoko, 2014], National Poverty Eradication Programme [NAPEP], Better

ISSN: 2992-3727 Published 30th November, 2025

Life Programme, Family Support Programme, Family Economic Advancement Programme [FEAP] [Paulinus, et al, 2020], YouWin [Punch News, 2nd October, 2019], among others, as well as the reconstitution of vocational institutions for enhanced skill acquisition and development, are yet to pay off. In addition, TVET policy document in Nigeria remains an illusion as its implementation outcomes show that TVET policy document is unconnected from its actual practice [Okoli et al, 2020].

As the "Skill not Degrees" mantra by Prof. Idris Bugaje, the Executive Secretary of National Board For Technical Education [NBTE] consistently gains attention amongst Entrepreneurship scholars [Punch, 2023; NAN, 2023; Salient Reporters, 2024], it requires that policy makers must fine-tune sound rudimentary cum culturally based TVET curriculum and structure that will enhance the technical ability of students/mentees for skill enrichment, reverse brain drain, improve national productivity, enhance professionalism and inclusiveness, and achieve overall economic development, for as captured in the Nigeria's Policy document: *"**The purpose of development of individuals is to enable them contribute to the development of the society. For this reason, the plan lays emphasis on TVET as the "master key" to unlocking our future [FME, 2012, pp2, in Okoli et al, 2020]**"*. The essence of this study, therefore, is to explain how acquired skill and its corresponding development and enrichment will assist Nigeria to leapfrog through her economic woes and become an economic force in Africa.

STATEMENT OF THE PROBLEM

Although studies reveal that skill acquisition is a means of addressing skill shortages, skill mismatches, poverty reduction, poor remuneration, inadequate vocational educators, lack of employable skills, lack of dignity for craftsmen, among others; and having been proved as a veritable tool of economic stability [Ayomike, 2014; Mkpughe and Igberadja, 2016; Idoko, 2021; Nzeneri et al, 2021; Ogur, 2022; Eze, 2023], Nigeria's efforts aimed at solving these numerous problems and create employment opportunities for purposes of lifting millions out of poverty through various skill acquisition intervention programmes is yet to yield strong results [Okoli, et al, 2020]. For instance, with a population of over 233,299,283 people [World Population Review, 2024], the country's unemployment level increased interestingly in Q3 of 2023 at 5.0%, showing 0.8% increase from Q2 of 2023 [NBS, 2023]. Considering the fact that 87.3% of employed Nigerians as at Q3 of 2023 are self-employed with the remaining 12.7% primarily engaged as staff, the population of youths unemployed, not in education or any form of training stood at 13.7% in Q3 of 2023 [NBS, Feb. 2024] which is a very big problem. As observed by Virk, Edioma-Ubong, and Ini [2024], with a rapid growth of the population of the Nigerian teenagers aged 14 years estimated at 43%, and Nigerian youths aged between 15 and 24 years estimated at 33%, progression trend likely to continue till at least 2050, Nigeria is experiencing a "Youth Bulge". Again, since the incorporation of science into Nigeria's education curricula in 1842, the country has been without a national policy to direct and move science and technical education, which its absence is part of Nigeria's poverty-breeding education as opposed to the wealth-creating one to achieve a notable technological take-off [FME, Nov. 2019]. Therefore, the problem of this work is: How will acquired skill and its attendant enrichment and development help Nigeria to alleviate youth unemployment and achieve economic growth and stability?

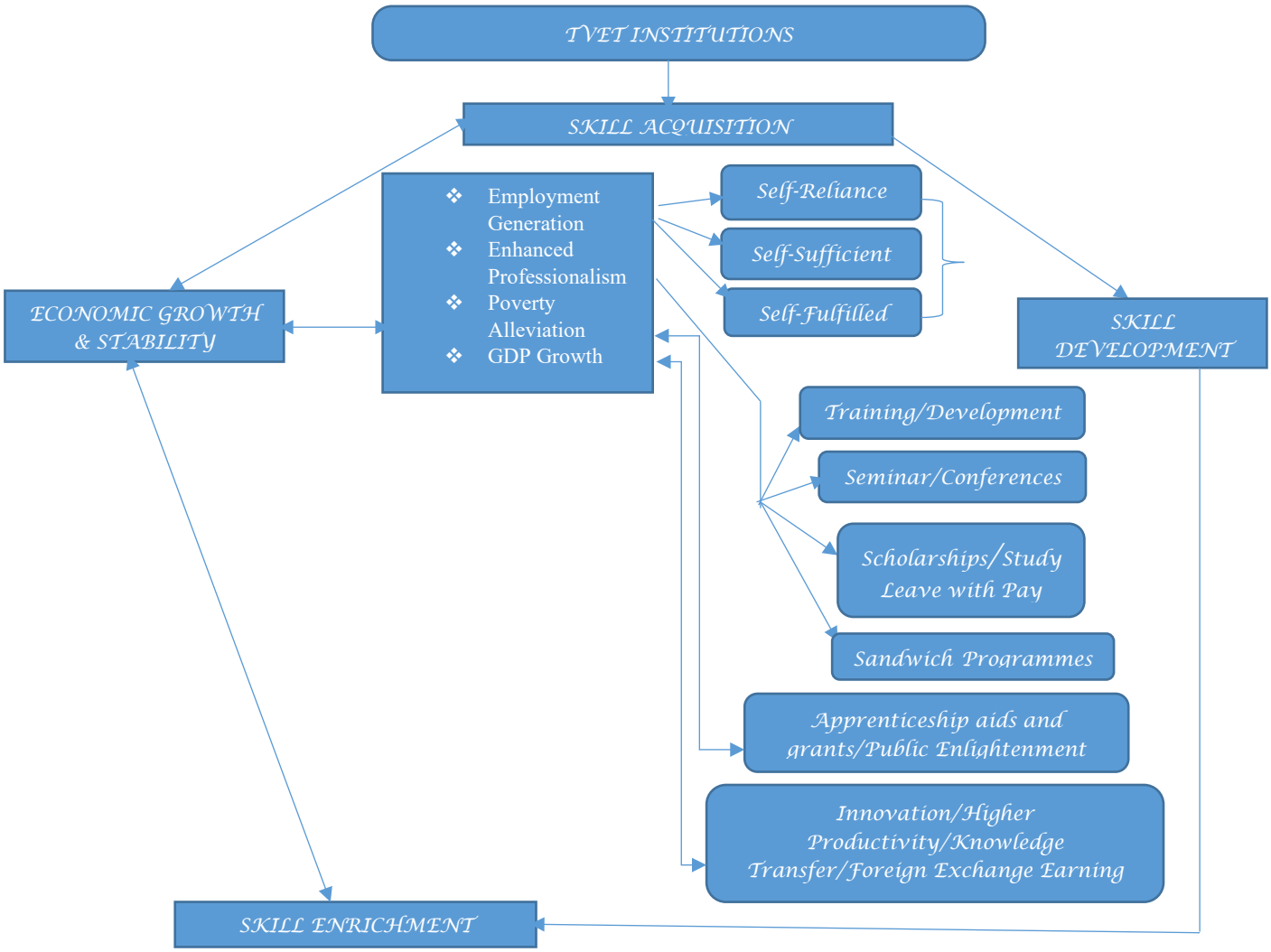
OBJECTIVES OF THE STUDY

This study intends to examine how acquired skill and its corresponding development and enrichment will assist Nigeria in her quest for economic growth and stability, with lessons drawn from China and Singapore. In specific terms, the study sought to:

1. Explain how acquired skill will help Nigeria to leapfrog through her economic woes so as to become an economic force in Africa.
2. Evaluate the current Nigerian skill development framework.

3. Ascertain why government efforts are not yielding the desired result despite its huge investment on TVET.

CONCEIVED MODEL OF SKILL ACQUISITION, DEVELOPMENT, AND ENRICHMENT FOR ECONOMIC GROWTH AND STABILITY



SOURCE: Researcher's Desk, 2024 [Figure 1]

LITERATURE REVIEW

As 267 million estimates of young people are not in employment, education or training [UNESCO, 2022], and as youth unemployment level has become an urgent policy issue in Africa considering the wide gap between employment creation and economic growth, policy makers have increasingly proposed self-employment as a solution to this lack of formal jobs [Ajayi and Anyidoho, 2021]. Interestingly, skill acquisition and development via TVET system provides a better platform to train and arm our teaming youths to acquire the right skill for technological development and advancement, and knowledge transfer. TVET has gained sufficient popularity and is viewed as the motivating power for sustainable development.

ISSN: 2992-3727 Published 30th November, 2025

However, TVET requires sustained renovation and revitalisation if it must achieve its enormous prospects to impact development [Paryono, 2017].

As noted by Goel [2010] in Okwelle [2013], TVET handles an important part in human resource development for improving industrial productivity and quality of life; and is the most effective instrument for the society to grow the natural ability of citizens and respond to the present and future challenges facing it [Okoli, et al, 2020]. As defined by UNESCO (2001) and well captured in the Nigeria's National Policy on Education (2004:29), TVET is: "a comprehensive term referring to those aspects of the educational process involving in addition, to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life" [Okwelle and Ayonmike, 2014]. TVET links education and the world of work, revealing and releasing the potentials of our teaming youths and adults for a positive future [UNESCO, 2022]. It is designed to organise those involved for a vocation or a specialised profession, and so is directly linked with a nation's productivity and competitiveness [CEDEFOP, 2011]. As observed by Ali et al [2018], while vocational education is a practical form of education, training or retraining planned to get ready individuals wishing to enter or continue in paid employment in any recognised jobs and in an emerging profession, technical education, on the other hand, is concerned with a scientifically planned order of classroom and laboratory experiences to get ready persons for a collection of jobs in dedicated technological fields. Therefore, mindful of the fact that knowledge and skills that people bring to work are important aspects in economic and equitable social development [Asian Development Bank, 2009], acquiring the right skill and its attendant development and enrichment remain instrumental to a country's economic growth and stability.

SKILL ACQUISITION

According to Idoko [2014], skill acquisition is the form of training by persons or group of persons that can lead to gaining of knowledge for self-sustenance. As a tool of vocational education, skill acquisition leads to the gaining of practical and applied knowledge and skills needed to produce and retain manpower [Nyanabo and Ahukannah, 2008, in Onyema et al, 2020]. It is the demonstration of idea and knowledge through training which is aimed at imparting in persons the spirit of entrepreneurship required for meaningful development [Donli, 2004 in Idoko, 2014]. In its social sense, skill acquisition assists individuals to provide fun, joy, love, affection and satisfaction to other individuals and by extension the entire nation, and can also help to reduce criminal activities such armed robbery, banditry, kidnapping, raping, and other social vices among the youths [Udo, 2015]. Politically, it helps to achieve national integration and equitable distribution of national wealth, and can be a useful tool to achieve economic growth and stability. Acquired skills can be viewed as a means to an end; they are not ends in themselves as they require constant improvement as our ever-changing business environment demands, hence skill development.

SKILL DEVELOPMENT

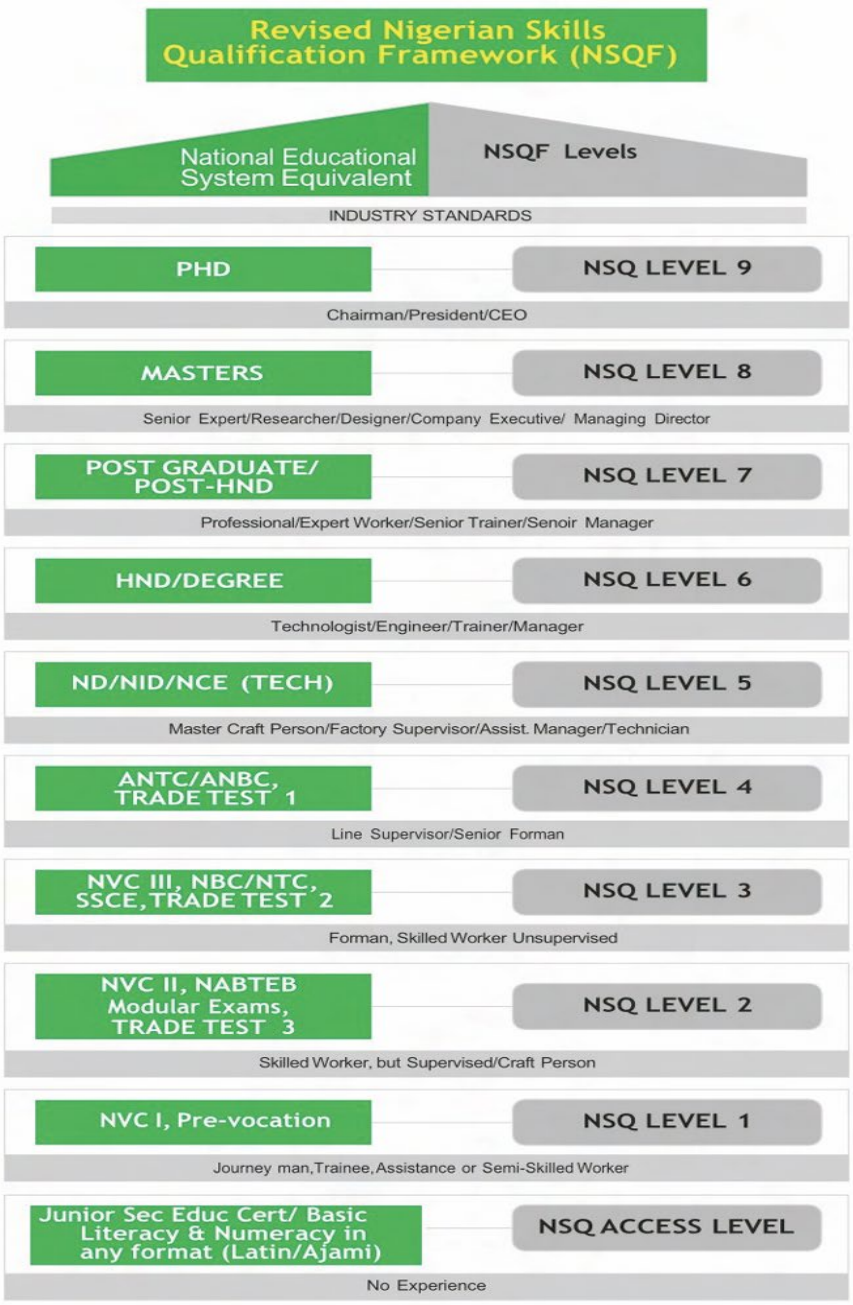
Skills development generally connotes the productive abilities acquired through all levels of education and training, arising from basic and foundational skill [Formal], transferable skill [non-formal], technical and vocational skill [Informal], and professional and personal skill [On-the-job] settings [SIDA, 2018]. The idea of skill development centres on raising confidence, improve productivity, define career path, enhance individual growth, and achieve competitive advantage [Sulochana, 2018]. Acquiring such capabilities depend on a quality lifelong learning system and a supportive learning environment [SIDA, 2018], among others.

SKILL ENRICHMENT

Skill enrichment is summarised as experiences and activities that are not part of the regular curriculum but rather extended to enhance the regular curriculum [Renzulli et al, 2021]. Enrichment does not connote additional responsibility; it's all about positive thinking, forming part of a programme that relates to ideas and subjects within the core curriculum. It allows mentees to brainstorm and come up with innovative concepts to solve a problem. It demands blending strong cognitive skills, ICT skills, analytical skills, emotional skills, complementary [creativity, problem-solving, and critical thinking] skills, and interpersonal and communication skills with core curriculum to temper the impact of socio-economic and technological changes in the business environment [[ILO and OECD Report, 2018]]. Renzulli et al [2021] identified four critical areas that should be reflected upon when considering enrichment: Why and to whom are this enrichment activities provided? What content is required? How can the instructions or teaching approaches use in enrichment learning and teaching situations impact on the mentees? What enrichment outcomes should be included into learning experiences?

NIGERIA SKILLS QUALIFICATIONS FRAMEWORK [NSQF]

According to NBTE NSQF Operational Manual, the NSQF "is a system for the development, classification, and recognition of skills, knowledge, understanding and competencies acquired by individuals irrespective of where and how the skill was acquired" [NBTE, 2024]. It gives a clear declaration of what the Student/Mentee must know or able to do; whether the study took place in the classroom, on-the-job, or less formally; and aims to promote lifelong learning and deliver quality assurance and recognition [Ibid, 2024]. With 82 listed occupations and their corresponding validation standards, some of the available National Occupations which are validated by NBTE for National Skills Qualification [NSQ] certification include: Plumbing, Masonry, Painting and Decoration, Tiling, Electrical Installation, Welding, Carpentry and Joinery, Paint Making, Construction Equipment Operation, Hospitality and Catering, Traveling and Tourism, Event Decoration, Power System Protection, Turbine Maintenance, etc. [Ibid, 2024]. The NSQ framework is based on National Occupation Standards [NOS] which are statements of achievements or capabilities an individual must prove when carrying out job tasks in a workplace, in addition with specifications of the foundational knowledge and understanding [Ibid, 2024]. Below is Nigeria's revised Nigerian Skills Qualification Framework NSQF]:



Source: **NBTE REVISED NIGERIAN SKILLS QUALIFICATION, MARCH 2024 [**Figure 2]

SKILL ACQUISITION AND ECONOMIC GROWTH AND STABILITY IN NIGERIA

Economic growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another [Onyekwere, 2016]. It entails growing standard of living for the clear majority of citizens by promoting better opportunities, acceptance of diversity, pledge to be fair to all, social mobility, and commitment to democracy [Friedman, 2006]. It is a country's general economic health which can be measured by looking at the country's GDP [Ashley, 2013 in Ezebunwa and Njoku,

2024]. Economic stability, on the other hand, connotes tools in the hands of government in the form of public and monetary policies that assist in the demonstration of economic performance [Özpençe, 2017]. It defines a situation where unemployment is low, prices are stable and at their general levels, void of cumulative or sharp movements [Stein, 1956 in Özpençe, 2017].

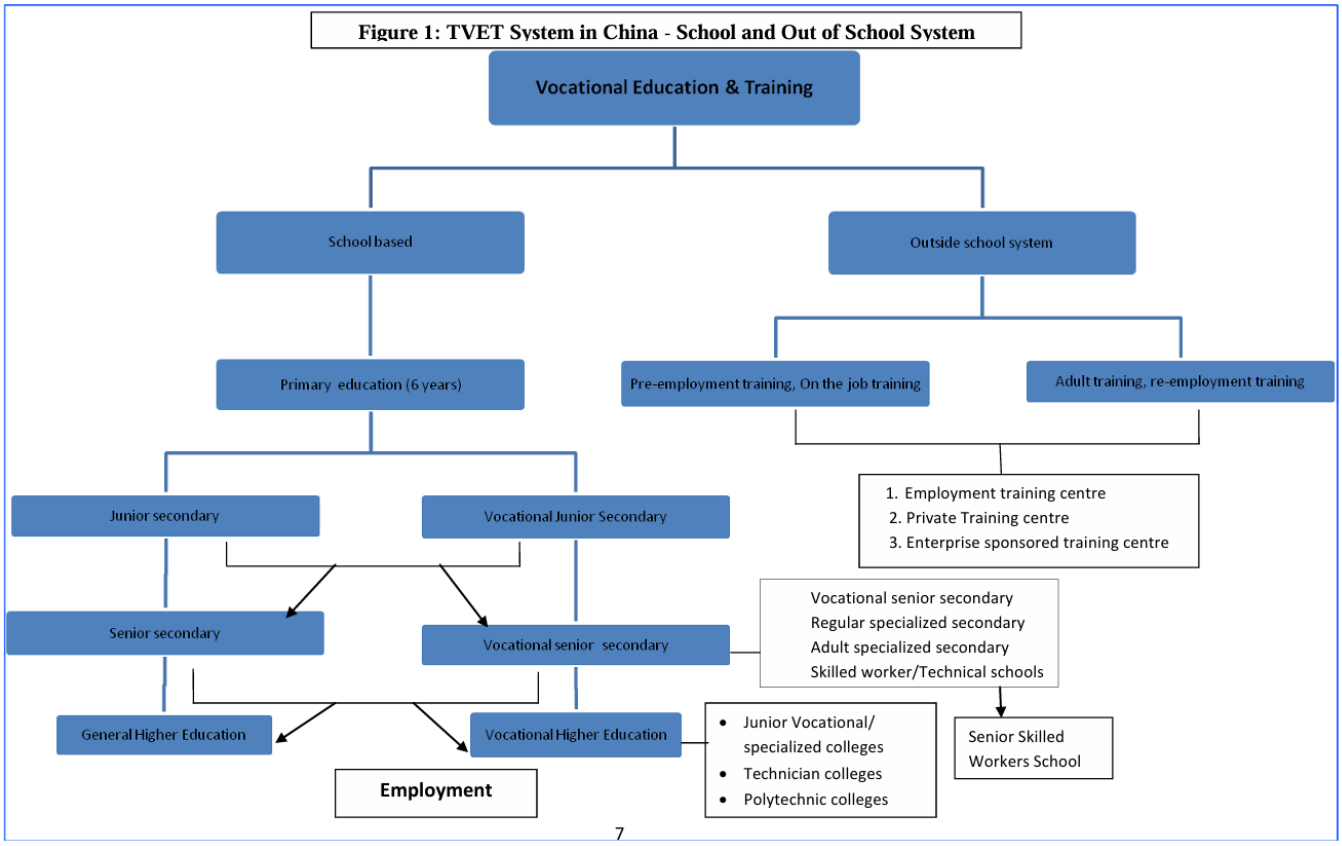
Nigerian economy has been on a sharp decline in recent time resulting from poor policies of government and pressure on the foreign exchange which has seen the naira skyrocket up to nearly 200% since the assumption of Tinubu's administration. These weakening economic conditions, economic sluggishness, issues of underdevelopment and economic recession [Onyekwere, 2016] led to the "**End Bad Governance**" protest between August 1st and August 10th to drive home the poverty and anger ravaging the populace. For instance, Nigeria's economic growth averaged at 7.4% annually between 2000 and 2010 and remained robust in 2011, driven by the non-oil sector; yet the growth neither reduced poverty nor created necessary jobs [African Economic Outlook, 2012]. In the quarter 4 of 2023, her GDP grew by 3.46% (year-on-year) in real terms lower than the 3.52% achieved in the fourth quarter of 2022 []NBS, 2024]. Unemployment level in Nigeria has remained on the increase. In a recent survey by National Bureau of Statistics [NBS] to ascertain why Nigerians are desperately travelling abroad using data of migrants from Imo State, Lagos State, Edo State, and Delta State, result showed that 57.7/42.3 respondents from Imo State, 55.3/44.7 respondents from Lagos State, 55.5/44.5 respondents from Edo State, and 60.2/39.8 respondents from Delta State, male and female respectively, agreed that search for better jobs and greener pastures occasioned their move abroad [NBS, 2020]. Achieving, therefore, stability in the polity by enhanced business productivity, poverty alleviation, employment generation, foreign direct investment, growth in human capital, and overall economic growth will continue to elude Nigeria if skill acquisition founded on well-established and efficient vocational education and training systems is not entrenched (Fuller, 2015). [Dixit and Rach. 2023]. Skill acquisition and development challenges in Nigeria include: perception [vocational education seen as a less-prestigious career choice than academic education], Curriculum design, poor funding, lack of employable skills, industry linkage, low societal recognition, and process politicisation [Dixit & Ravichandran, 2023; Olaitan, 1990; Nzelum, 2001; Nwaogu, 2006; in Lawani and Lawani, 2018; Ayonmike, 2014; Odu, 2011; Makoju, 2000; Puyate, 2008; Uwaifo and Uwaifo, 2009; Igberadja, 2015; among others, in Mkpughe and Igberadja, 2016; Ubani, et al, 2021].

THE CHINESE LESSONS

Often described as one of the greatest economic success stories in modern times is the rapid rise of China as a major economic power, second in the world after the United States; emerging as the world's largest manufacturer, merchandise exporter, and holder of world's largest foreign exchange reserves [Morrison, 2014]. With her real GDP growing at an average of over 10% annually, and its attendant contribution to output and employment from agriculture declining in favour of rising shares for industry and services, the need for skilled workers grew as a result [IAMR Report, 2014]. The structural reforms initiated from 1979 [when Chinese economic reforms started] to 2013 [Morrison, 2014], which shifted economic management from command economy of Chairman Mao Zedong toward a market driven economy, increased trade and investment thereby raising the average productivity of labour, improved living standards, raised income per head up to $2,000 [five fold since 1980], and forced over 260 million rural workers with poor education especially in vocational education and training, to migrate to cities in search of jobs; whose enterprises were not only producing for domestic consumption but for exports as well [ADB, 2009; Weiping Shi*, 2017]. For instance, according to the National Monitoring and Survey Report on Migrant Workers in 2012, with average age of 37, statistics show that up to 60.5% of migrant workers have only a junior secondary school education; only 10.7% of migrant workers have received agricultural technical training,

25.6% have received non-agricultural technical training, and up to 69.2% of the migrant workers with no vocational and technical training (NBS, 2013b in Weiping Shi*, 2017).

TVET SYSTEM IN CHINA



SOURCE: Institute of Applied Manpower Research, 2014 [Figure 3]

For historical reasons, two main types of TVET, as shown in figures 3 above, exist in China which include Vocational education overseen by China Ministry of Education, and which involves Junior Secondary Technical and Vocational Schools for elementary school graduates; and Vocational High Schools and regular Specialised Secondary Schools for junior secondary school graduates, and Higher Vocational Colleges for senior secondary school graduates, which attracts Diploma certificate on graduation [CCWT, Sept. 2020].

However, considering how poor funding of education in most Chinese regions and the under-investment in human capital development paved way for more investment in physical capital projects, benefits associated with quality education such as innovative ideas, labour efficiency, technical ability of the workforce, among others, were ignored [Heckman, 2002]. Realising this fundamental mistake considering the importance of skilled technicians in nation building, the Chinese MoE in 2000 issued the ***Setting Standards*** for Higher Vocational Schools in the interim aimed at standardising the rudimentary operating conditions of Higher Vocational Colleges, which later gave birth to further modernisation of the Chinese TVET system [TSC, 2002; 2005, in CCWT, 2020]. Between 2005 and 2010, China State Council issued a decision on the estimation of 200 national model higher vocational colleges, releasing in 2010 the ***Outline of the National Medium- and Long-Term Talent Development Plan*** (2010-2020), which offered

a prospect of nurturing a large number of entirely diverse band of skilled personnel with technicians, senior technicians, and other highly skilled personnel [TSC, 2005, in CCWT, 2020]. In 2014, a reform to transform China existing universities into ***Applied Universities*** [see Figure above] was proposed by the MoE that allowed students to move from higher vocational colleges to a 4-year undergraduate or postgraduate level programme, and degrees to awarded named ***Professional Degree*** [CCWT, 2020]. Further still, higher TVET educational policies such as the MoE Action Plan for Innovation and Development of Higher Vocational Education (2015-2016), the Implementation Plan of the National Vocational Education Reform (2019) and its consequent establishment of 50 high-level higher vocational colleges and 150 key majors led to increased number of higher TVET students up to 3.69 million in 2018, that is five times higher than 1998 figure TSC, 2019; Editorial Board of Education Annual Report, in CCWT, 2020].

In addition, seeing the need for agricultural sector modernisation for sustainable [broad-based] economic development, and the need to discourage the use of poor agricultural tools and local seedlings which result into poor agricultural yields, and migrant overexploitation resulting from poor skills, various TVET schemes were initiated to provide migrants with low manual skills, high quality vocational education and training for better employments and decent life [Weiping Shi*, 2017]. As noted by Han Xu [2016]: "It is estimated that by 2020 China will need 18 million agricultural talents in the areas of (1) family farm management and chain business management, (2) agricultural technology research and food safety management, (3) international trade and marketing, and (4) rural cooperatives management and enterprise management".

Culture is perceived as a type of productive force that generates such assets as skills, products, expression and insights, which add to a community's social and economic well-being [Fellner, 2006]. The role of Confucianism in the rapid transformation of the Chinese economy and society cannot be over-emphasized, and which has many components as listed by Zhang Hongyi, thus: a) Economic running should depend on all-inclusive harmony, consistent with natural laws, human sovereignty and avoidance of extremes; b) Economic dealings should be used to curb selfishness and check inequality; c) Economic behaviour should emphasise making fortunes in a small manner, living a prudent life and working hard; d) Economic policies of the government should emphasise making people rich and reducing poverty; e) Economic management should define well-managed government; and 6) Economic life should be incorporated with economic moral standards (Hongyi, 1989 in Fellner, 2006).

Finally, China internship scheme, considered an essential part of her TVET programmes, has assisted students in acquiring workplace learning experiences, and has proved to be effective in assisting vocational college students develop a new self-identity and pursue life meaning (Hou et al., 2020). For instance, mindful of the challenges reported by interns, institutions, and employers, the Chinese government came up with several policies aimed at promoting high quality student internship management in the TVET system which includes the ***Guideline for the Management of the Internship of the Secondary Vocational Schools in 2007*** (DVAE, 2007) and ***Guideline for vocational schools and colleges one decade later, updated from 17 items to 39 items*** (DVAE, 2016 in CCWT, Sept. 2020). These technical colleges are mandated to not only be hands-on in collaborating with employers in the provision of uniform and batched internships, but must also monitor internship processes in terms of finding suitable employers, craft internship programmes, provide internship supervision, and evaluate outcomes (DVAE, 2016, in CCWT, Sept. 2020).

Table 2: COMPARING CHINA AND NIGERIAN SKILL ACQUISTION SYSTEM

S/N	CHINA	NIGERIA
1	Skill acquisition managed by Ministry of Education and Ministry of Human Resources and Social Security	Skill acquisition managed by Ministry of Education and Ministry of Labour and Productivity
2	China's skill acquisition system culturally rooted in Confucianism	Nigeria's skill acquisition system not culturally rooted but follows developments the world over
3	China converted existing universities into applied universities to ensure rapid skill development, awarding professional degrees	Nigerian universities are divided into universities of education, science and technology, agriculture, and conventional universities awarding only degrees
4	Technical colleges, about 50 in number, in China collaborate with employers in the provision and monitoring of uniform and batched internships to assist students acquire workplace learning experiences	Nigeria has dysfunctional technical colleges that lack collaboration with employers.

UNESCO-UNEVOC [NOV. 2018]. "TVET Country Profile China; ADB [2009]. "Financing Technical and Vocational Education and Training in the People's Republic of China". www.adb.org.

LESSONS FROM SINGAPORE

Singapore is said to be the best-known case of a country that has effectively and constantly up-skilled its labour force over the last 40 years [Kuruvilla and Erickson, 2002]. Singapore has a well-articulated, harmonised and result-driven skills policy and practice, which involves key stakeholders such as employers, unions, citizens, professionals, and different tiers of government [WorldSkillsUk, 2019]. Her economic development can be categorized in three stages [see Figure 4] which includes: Factor-Driven economy [intensive labour in the 1960s-1970s], Investment-Driven economy [capital intensive in the 1980s-1990s], and the Innovation-Driven economy in the 2000s evolving into a newly industrialised, globalised and diversified economy it is today [Seng, 2012].

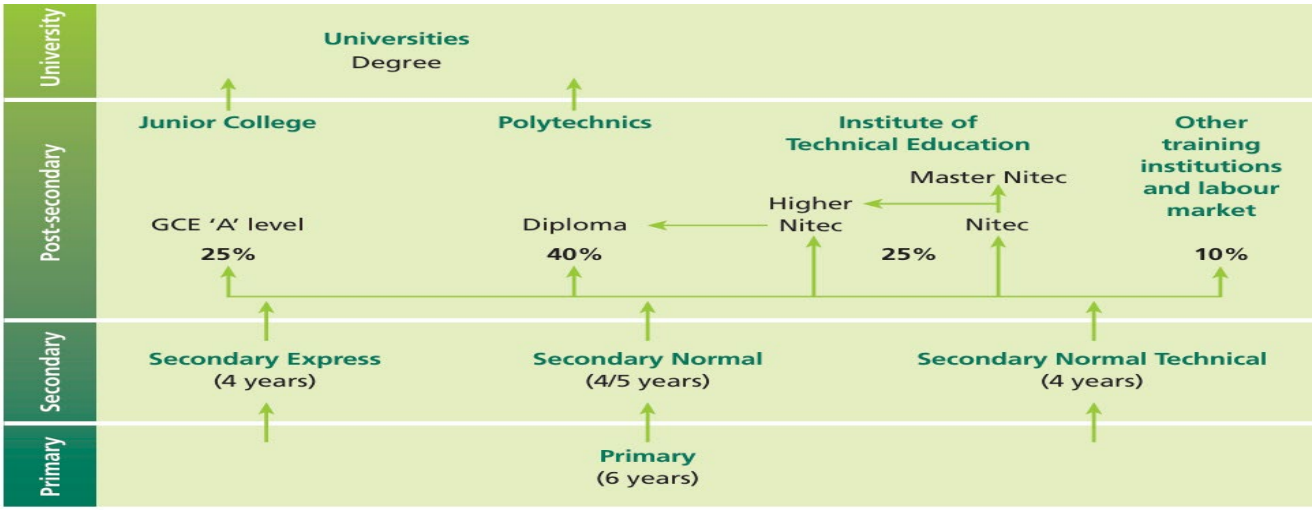
FIGURE 4 - Stages of Singapore's Economic Development



Source: Seng [2012] Case Study on "National Policies Linking TVET with Economic Expansion: Lessons from Singapore"

In 1992, the Institute of Technical Education [ITE] was established as a post-secondary institution to revolutionalise the position and reputation of vocational learning to a knowledge-based economy, provide career chances for young adults, industry-based training programmes, as well as develop national professional skills certification and principles [WorldSkillsUk, 2019]. As captured in figure 4, to match the capital-intensive, high-tech economic plan, the Goh Report, identifying low level of literacy especially in English Language amongst graduates, proposed the New Education System with a new standardised curriculum that raised highly the standards of English language, Mathematics, and Science, in addition to a redefined examination structure; remodeled Teacher's Training Colleges, engaged A grade engineers to teach new programmes in Design and Technology in their secondary schools with pay equivalent to beginning engineers in other industries, and raised public expenditure on education from US$21.4 million in 1978-79 to $US245.38 million in 1982-83 [Tucker, 2012].

Figure 5: Structure of Singaporean Institute of Technical Education as a Post-Secondary Institution



Source: Seng [2012] Case Study on "National Policies Linking TVET with Economic Expansion: Lessons from Singapore"

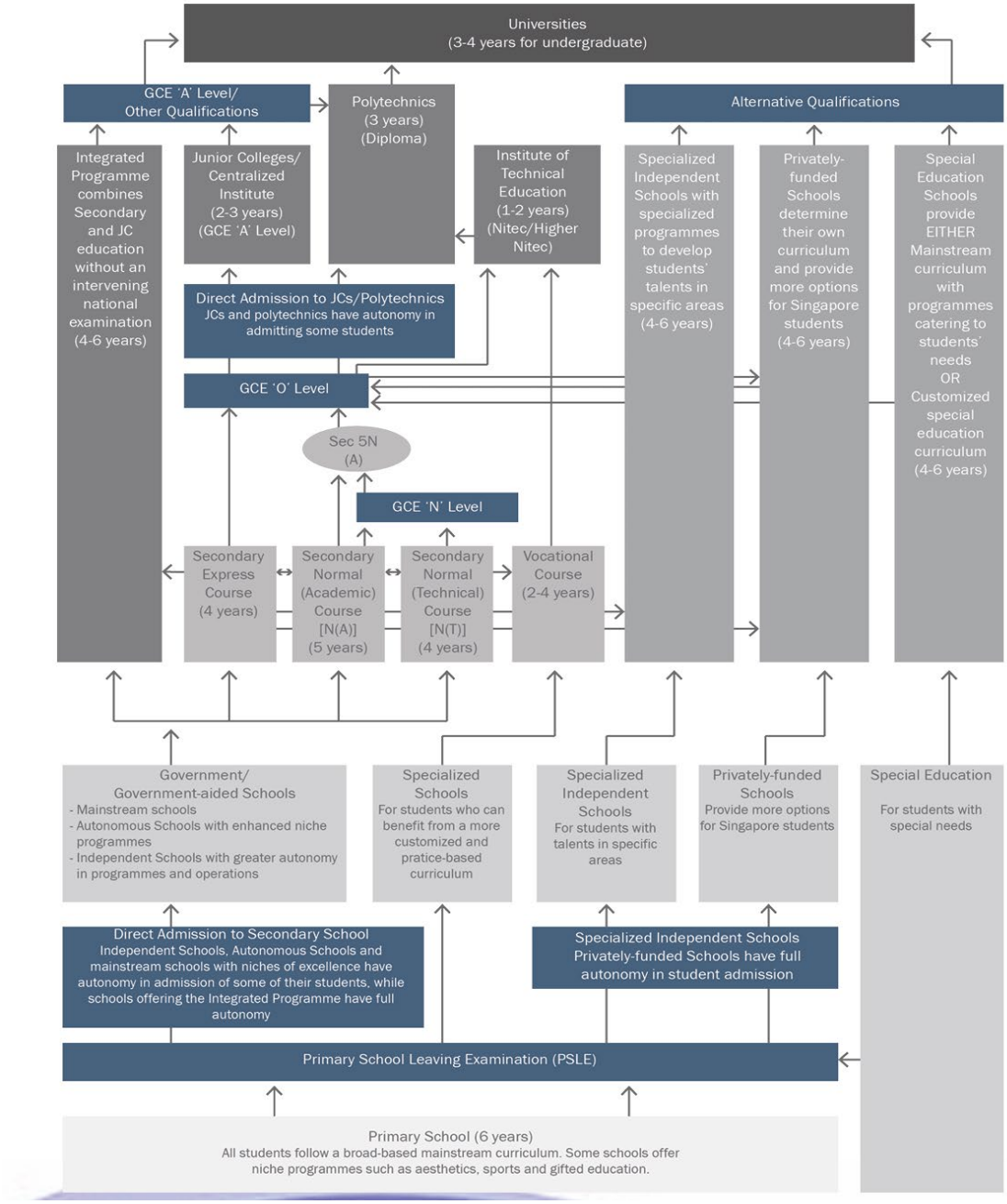
Basic features of Singapore System of Skills Development [SSDS] include: a.) Structure – Ministry of Trade and Investment, Ministry of Education, Ministry of Industry, Economic Development Board [EDB], Productivity and Standards Board [PSB], the Institute of Technical Education [ITE] as in figure 5, and Precision Engineering Institute [PEI]; b.) Linking economic development strategies with skill development; c.) The Foreign Direct Investment, skills, and technology transfer model; and d.) The skills development fund – established by 1984 legislation which requires firms to contribute 1% of staff gross salary of employees earning $1,500 into the fund, 80% of the entire contributions to be recouped by these employers via training grants for skill development request [Kuruvilla and Erickson, 2002].

In 2014, mindful of the vision of Singapore's erudite Prime Minister, Goh Chok Tong, who in his speech titled "Shaping Our Future: Thinking Schools, Learning Nation," noted that "a nation's wealth in the 21st Century will depend on the capacity of its people to learn," thereby challenging policy makers to grow in the students a spirit of inquiry and original thinking¸ the inclination to do something differently, even if it involves the risk of failure, and the rockiness of character and the capacity to bounce back and try again, among others [Tucker, 2012], launched the SkillsFuture scheme aimed at providing a high quality system of education and training as well as foster a culture of lifelong learning for everyone, etc. [WorldSkillsUk, 2019]. The concept of a "Factory school" was also implemented, aimed at equipping students with skills and knowledge required by modern day workforce, which involves close cooperation with industry

ISSN: 2992-3727 Published 30th November, 2025

partners to arrange for students a training environment that narrowly looks like real factories while presenting them with applicable tasks [Dixit and Ravichandran, 2023].
Below is a graphic presentation of students' flow from the Singaporean compulsory education system via the VET system. The chart illustrates the major institutions providing education and training, the qualifications required to attend them and the qualifications they provide, starting from their formal education at age six.

Figure 6: Flow of Singaporean Compulsory Education System through TVET



Source: The Phoenix: Vocational Education and Training in Singapore, October 2012.

Table 3: COMPARING SINGAPORE TO NIGERIA

S/NO	SINGAPORE	NIGERIA
1.	Economy largely industrialised, globalised, diversified, and innovation-driven	Economy struggling to industrialise, globalise, diversify, and far from been innovative
2.	Healthy funding of TVET via Skills Development Fund and a robust and challenging education system driven by innovation	Poor funding of education at large
3.	Greater investment in human capital	Poor investment in human capital preferring bogus, corruption driven, investments in capital projects
4.	Vocational education curriculum designed to meet modern day workforce challenges starting from the primary level [in the form of niche programmes]	NBTE vocational education curriculum designed to meet modern day workforce challenges; yet curriculum not extended to universities, secondary and primary school levels
5.	Polytechnic education designed for 3 years without breach for industrial training as such is already part of the curriculum	Polytechnic education running on 5 years stretch, inclusive of 1 year compulsory industrial attachment
6.	Runs a factory-like school in partnership with employers modern day skill acquisition and life-long learning culture	No prototype/factory-like school in Nigeria
7.	Employs only Grade 'A' graduates as teachers whose salaries are highly competitive	Employs based on favoritism
8.	Strong-willed national leaders poised with the spirit of education revolution for a better society	Self-imposed, rigging-assisted leaders who imposes their will and those of their cronies on the nation.
9.	Strong technical and vocational institutions with entire education system focused on practical skills development, industry collaboration, and the recognition of vocational education as a viable and esteemed career pathway	Few technical and vocational institutions especially the Polytechnics
10.	Vocational institutions linked to the industries they serve	Vocational institutions not linked to industries as students are required to hook up with institutions of their choice

Source: Seng, L. S. [2012]. "Case Study on "National Policies Linking TVET with Economic Expansion: Lessons from Singapore". UNESCO; Mkpughe, C. I. and Igberadja, S. [2016]. "Constraints and Remedy to Quality Vocational Skills Development among Vocational Education Students in Nigeria as Perceived by Vocational Educators".

METHODOLOGY

This study used descriptive survey research design with 40 respondents as population drawn from lecturers of Michael Okpara University of Agriculture, Umudike, Alex Ekwueme Federal University, Ndiufu-Alike, Federal Polytechnic Ngodo Isuochi, and Federal Polytechnic, Nekede, in the South East of Nigeria. The sampling technique was not used considering the smallness of the population. The instrument for data collection was a 24-item questionnaire constructed by the researcher from the review of literature to guide the study, using Likert's 4-type rating scale of Strongly Agree (SA – 4point), Agree (A – 3point), Disagree (D – 2point), and Strongly Disagree (SD – 1point). The reliability test was done using Pearson's Moment Correlation Coefficient and a reliability of 0.82 was considered high enough to measure data variables. The validation of the instrument was done by experts from the department of Business Administration, Federal Polytechnic Ngodo Isuochi.

RESULTS AND DISCUSSION

The results and discussions were presented in line with the research questions and hypotheses.
Research Question 1: How will skill acquisition help Nigeria to leapfrog through her economic woes so as to become an economic force in Africa?

CLUSTER 1

S/N	ITEM STATEMENT	Polytechnic Lecturers [Group A] N=20			University Lecturers [Group B] N=20		
		Mean	SD	Remark	Mean	SD	Remark
1	Acquisition of the right for technological development	3.20	0.62	Agreed	3.40	0.68	Agreed
2	Through knowledge transfer acquired from Technical and vocational education and training [TVET]	3.20	0.83	Agreed	3.35	0.67	Agreed
3	Through sustained renovation and revitalisation of vocational education and training	3.40	0.68	Agreed	3.30	0.73	Agreed
4	Through increase in the nations productivity and competitiveness by acquiring specialised professional knowledge	3.40	0.60	Agreed	3.30	0.86	Agreed
5	Through job retention and subsequent knowledge enrichment	3.40	0.60	Agreed	3.30	0.66	Agreed
6	Through provision of fun, joy, affection, and job satisfaction	3.15	0.93	Agreed	3.20	0.70	Agreed
7	To reduce criminality such as banditry, armed robbery, rape, among others	3.30	0.66	Agreed	3.25	0.72	Agreed
8	To acquire practical skills, attitudes, and understanding related to occupations in various economic and social life	3.25	0.85	Agreed	3.25	0.85	Agreed
		26.3	5.77		26.35	5.94	
		3.2875	0.721		3.2938	0.743	

Table 4

Table 4 above representing Cluster 1 in both Group A [Polytechnic Lecturers] and Group B [University Lecturers] reveals that the mean score averaged at 3.2875 and 3.2938 respectively indicating, in general, positive attitudes, with mean scores consistently above 3.0. Group B has somewhat higher and more constant scores ranging from 3.20 to 3.40 compared to Group A which ranges from 3.15 to 3.40.
INTERPRETATION: There's a strong agreement between polytechnic and university lecturers that skill acquisition has the potentials to address Nigeria's economic challenges and leapfrog her to become an economic force in Africa. However, the slight difference here proposes polytechnic lecturers might be marginally more positive.

Research Question 2: How does non-evaluation of the current Nigerian skill development framework contribute to its present economic woes?

CLUSTER 2							
S/N	**ITEM STATEMENT**	**Polytechnic Lecturers [Group A] N=20**			**University Lecturers [Group B] N=20**		
		Mean	**SD**	**Remark**	**Mean**	**SD**	**Remark**
9	Low morale and unemployment	3.35	0.81	Agreed	3.40	0.68	Agreed
10	Poor development of vocational education curriculum	3.15	0.88	Agreed	3.45	0.60	Agreed
11	Turning out graduates with paper qualification	3.20	0.89	Agreed	3.30	0.66	Agreed
12	Low societal recognition	3.35	0.67	Agreed	3.50	0.51	Agreed
13	Poor perception of vocational education in Nigeria	3.05	0.94	Agreed	3.30	0.73	Agreed
14	Bring about poor linkage between TVET institutions and existing industries	3.50	0.51	Agreed	3.15	0.81	Agreed
15	Insufficient fund for training of vocational instructors, knowledge impartation, and the establishment of mock factories/industries to assist students gain first-hand practical knowledge before graduation.	2.95	0.89	Agreed	3.45	0.60	Agreed
16	Carrier mismatch	2.85	0.93	Agreed	3.40	0.60	Agreed
		25.4	6.52		26.95	5.19	
		3.175	0.815		3.688	0.6488	

Table 5

Table 5 above representing Cluster 2 in both Group A and B reveals that the mean score averaged at 3. 1750 and 3. 3688 respectively also indicating a common consensus, with mean scores consistently above 3.0. While Group B has higher mean scores ranging from 3.15 to 3.50 with a higher agreement compared to Group A, the latter has more variability with mean scores ranging from 2.85 to 3.50.

INTERPRETATION: There is an obvious variance in perspectives on the non-evaluation of the current Nigerian skill development framework as university lecturers appear more satisfied about the current framework compared to polytechnic lecturers.

Research Question 3: Why is it that government's effort at skill development not yielding the desired result despite huge investment on TVET?

CLUSTER 3

S/N	ITEM STATEMENT	Polytechnic Lecturers [Group A] N=20			University Lecturers [Group B] N=20		
		Mean	**SD**	**Remark**	**Mean**	**SD**	**Remark**
17	Lack of qualified personnel	3.40	0.60	Agreed	3.35	0.67	Agreed
18	Lack of political will on the part of government	3.30	0.66	Agreed	3.15	0.81	Agreed
19	Politicisation of TVET structure	3.35	0.75	Agreed	3.25	0.79	Agreed
20	Corruption and nepotism	3.25	0.91	Agreed	3.30	0.66	Agreed
21	The current TVET curricula is not culturally rooted on the societal needs, expectations and aspiration	3.15	0.88	Agreed	3.20	0.70	Agreed
22	Phobia about innovation in the area of vocational education and training and professional development	3.35	0.67	Agreed	3.30	0.66	Agreed
23	Poor infrastructural/vocational amenities	3.20	0.70	Agreed	3.40	0.60	Agreed
24	Poor investment in human capital development	3.15	0.81	Agreed	3.45	0.60	Agreed
		26.15	**5.98**		**26.4**	**5.49**	
		3.2688	**0.7475**		**3.3**	**0.6863**	

Table 6

Table 6 above representing Cluster 3 in both Group A and B reveals that the mean score averaged at 3.2688 and 3.3000 respectively indicating that both groups share similar consensus but with Group B has somewhat higher positive attitudes, with mean scores consistently above 3.0.

INTERPRETATION: Theirs is a high level of consensus between polytechnic and university lecturers regarding the challenges facing government efforts in skill acquisition. The slight difference might indicate that university lecturers are marginally more critical or have slightly different perspectives on these challenges.

For each of these clusters, the null hypothesis that there is no significant difference between the mean scores of Group A and Group B will be tested using a significance level of $\alpha = 0.05$ (95% confidence level).

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The formula for the Z-test statistic is:

$Z = (\bar{x}_1 - \bar{x}_2) / \sqrt{[(s_1^2/n_1) + (s_2^2/n_2)]}$
Where:
$\bar{x}_1$, $\bar{x}_2$ are the mean scores for Group A and B respectively
s_1^2, s_2^2 are the variances for Group A and B respectively
n_1, n_2 are the sample sizes (both 20 in this case)

HYPOTHESIS 1: There is no significant difference between the Mean Score of lecturers from the Polytechnics and the Universities in the South East geopolitical zone of Nigeria with regards to how skill acquisition will Nigeria to leapfrog through her economic woes and become an economic force in Africa.

Cluster 1:
Group A: Mean = 3.2875, Variance = 0.0106
Group B: Mean = 3.2938, Variance = 0.0045
$Z = (3.2875 - 3.2938) / \sqrt{[(0.0106/20) + (0.0045/20)]}$
$Z = -0.2273$

GROUP	N	Mean	SD	Df	Z-Cal	Z-tab	Decision
Polytechnic Lecturers	20	3.288	0.721	38	-0.2273	1.96	Reject
University Lecturers	20	3.2938	0.743				

Table 7

Given that the critical value for a two-tailed test at $\alpha = 0.05$ is ± 1.96. Since $|-0.2273| < 1.96$, we fail to reject the null hypothesis indicating that there is no statistically significant difference between Group A and Group B for Cluster 1 considering their positions on how skill acquisition will help Nigeria to leapfrog through her economic woes and become an economic force in Africa.

HYPOTHESIS 2: There is no significant difference between the Mean Score of lecturers from the Polytechnics and the Universities in the South East geopolitical zone of Nigeria with regards to how non-evaluation of the current Nigerian skill development framework contribute to its present economic woes.

Cluster 2:
Group A: Mean = 3.1750, Variance = 0.0534
Group B: Mean = 3.3688, Variance = 0.0145
$Z = (3.1750 - 3.3688) / \sqrt{[(0.0534/20) + (0.0145/20)]}$
$Z = -3.2967$

GROUP	N	Mean	SD	Df	Z-Cal	Z-tab	Decision
Polytechnic Lecturers	20	3.175	0.815	38	-3.2967	1.96	Accept
University Lecturers	20	3.688	0.6488				

Table 8

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Given that |-3.2967| > 1.96, we reject the null hypothesis and accept the fact that there is a statistically significant difference between Group A and Group B for Cluster 2 considering their positions on how non-evaluation of the current Nigerian skill development framework contribute to its present economic woes. This divergence between polytechnic and university lecturers could be as a result of different experiences with their current academic curriculum and framework and varying levels of involvement in TVET.

HYPOTHESIS 3: There is no significant difference between the Mean Score of lecturers from the Polytechnics and the Universities in the South East geopolitical zone of Nigeria with regards to why the efforts of government on skill acquisition is not yielding the desired results despite huge investment on TVET.

GROUP	N	Mean	SD	Df	Z-Cal	Z-tab	Decision
Polytechnic Lecturers	20	**3.2688**	**0.7475**	38	-0.9524	1.96	Reject
University Lecturers	20	3.3	**0.6863**				

Table 9

Cluster 3 (Questions 17-24):
Group A: Mean = 3.2688, Variance = 0.0084
Group B: Mean = 3.3000, Variance = 0.0114
$Z = (3.2688 - 3.3000) / \sqrt{[(0.0084/20) + (0.0114/20)]}$
Z = -0.9524
Given that |-0.9524| < 1.96, we uphold the null hypothesis by establishing that there is no statistically significant difference between Group A and Group B for Cluster 3 in line with their position on why the efforts of government on skill acquisition is not yielding the desired results despite huge investment on TVET.

CONCLUSION

Based on the above findings, we conclude that Nigeria, with a healthy population and a productive youth base, coupled with sound economic base, has the capacity to become an economic force in Africa. Yet poor perception, the use of outdated curricula which results into inconsistencies between the skills employers' demand and what students possess, poor funding of TVET institutions and programmes, deficiency in employable skills, industrial linkage, low societal recognition, and poor collaboration in the design and development of curricula, among many others, are the major challenges facing skill acquisition and development in Nigeria.

RECOMMENDATION

Based on the findings in this study, the following recommendations were made:

1. There has to be a more inclusive and collaborative approach vis a vis the Polytechnics and Universities in the design and development of skill acquisition curricula/framework to achieve a comprehensive and effective policies in Nigeria.
2. Greater investment in human capital must be considered over and above bogus, corruption-driven, investments in capital projects.
3. Vocational education curricula must be designed to meet modern day workforce challenges starting from the primary level [in the form of niche programmes]. Tertiary institutions in Nigeria must run as applied institutions to achieve skill impartation.
4. Polytechnics must run a straight 4-year B.Tech. programmes aligned with well-structured internship schemes that will allow students to not only graduate with a skill, but become self-employed, self-reliant, self-sufficient, and self-fulfilled.

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5. Entrepreneurship development centres must have representation in each department operating as workshops to achieve efficiency and effective impartation of practical knowledge.
6. Government must remove bureaucratic bottlenecks surrounding academic sponsorships and education funding at all levels to encourage innovative thinking and knowledge advancement.
7. Craftsmanship must be incorporated into primary and junior secondary education curriculum to kill idleness during vacations.

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