

Skill Sets in the 21st Century: Nigerian Experience and Global Benchmark of India

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Article History	Abstract
Original Research Article	<p><i>The paper examined Skill Sets in the 21st Century: Nigerian Experience and Global Benchmark of India. It adopted the content analysis approach in which materials were sought from internet, journals. The paper extrapolated the principles of Katz' Skill Theory viz; conceptual, technical and administrative skills to pursue a central philosophy of acquiring skill set. It compared India's skill set applications in line with global expectations. The paper concluded that Nigerian skill set is not moving at the same pace as other countries of the world including India. That global index on skill development shows Nigeria moving on slower pace than required. The paper opined that even in Nigeria's pace of skill set, does not show sufficient presence in bridging skill mismatch. The present world scope of contemporary skills such as block chain technology, green energy and renewal, big data analysis, artificial intelligence is not prominent in Nigerian scope of skill set. Nigeria rather focuses on existing information technologies and not at the global measure. The paper proffers among others that government should liaise more with the international business community in order to attract more investments or businesses in Nigeria.</i></p> <p>Keywords: Nigeria, Skill-Set, 21st Century, Benchmark, India, Global.</p>
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Introduction

The contemporary era has been confronted with so many skill demands. Skills now require renewal almost on monthly basis or if not less. Skill sets are range of skills that an individual possesses. It has to do with a person's ability to carry out given task or profession with ease as a result of learned expertise. Skills sets may occur in combination within one's professional area or even in multi-task manner. This paper has exercised uniqueness by extrapolating skill sets in line with the theoretical foundation of the study and benchmarked Nigerian skill set experience and that other country, India. The entire expected outcome of the paper will be tied to employability and commerciality.

One of the skill philosophies of the Skills Theory is technical skill, Nweke, (2018) asserts that technical skill does not necessarily imply mechanical or informational technology oriented, it is about expertise in certain professional area. Technical skills in today's world are immediately linked to employability. Technical skills if

properly acquired generates value. Value is achieved when money or its equivalent is derived. You hold the key to value creation. To make the cents, one must create what makes sense. Make it make sense, and if there is enough sense in the sense one is trying to make, then there will be no limit to the cents one is going to make (Ancient Egyptian Proverb). Disney (2001) declared that when values are clear to you, making decisions becomes easier. Differently put, when an individual, a youth is able to have a clear cut technical skill, value is created and we may say such a person understands, his or direction. Let us introspect by examining, what is your technical skills?

Theoretical Foundation

The paper anchors its thought on Skills Theory by Katz (1955: 34) which defined skills as what leaders can accomplish, while traits are what leaders are. He argued that effective leadership or management depends on three basic

personal skills: technical, human and conceptual. The paper extracted the technical, conceptual and administrative concepts to the theory to convey the skills sets required of

youth of Nigeria in the 21st century. Thus the diagram below delineates the connections of the expected skill set.

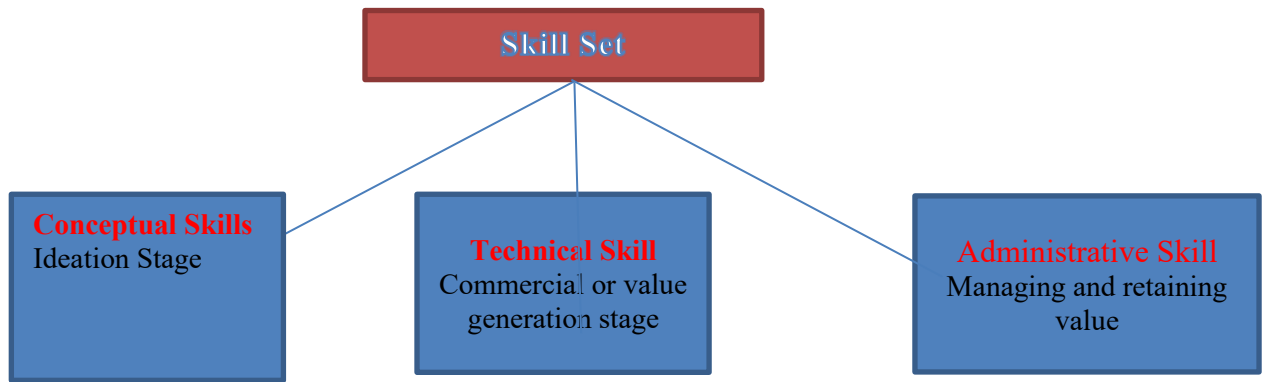


Fig. 1: Researchers' Guide, 2026

Technical Skills

Technical skills are the specialized knowledge and expertise needed to perform specific tasks, as well as the ability to effectively use particular tools and programs in practical situations. Technical skills (and they are diverse) are needed in almost every field and industry, including IT, business administration, health care and education. In fact, most entry-level jobs in any field expect you to be skilled at the basics of technology (from cloud computing on Google Drive, to how social media works for business) (Brown & Hesketh, 2004).

More advanced technical skills that a job may require include programming languages, building and/or writing, technical writing, or data analysis. Technical skills are the specialized knowledge and expertise that help you perform in-depth actions, tasks, and processes. These can pertain to computational and physical tech and also a wide set of other ventures.

The expression is used to refer to sound technicians, electronics technicians, market technicians, computer technicians, engineering technicians and other titles (Imeokparia & Edigbonya 2012). Technical skills are measurable. You need to be able to see the big picture and celebrate every victory along the way with each member of the team that helps accomplish a set process or goal for an organization (Okereke & Okorafor, 2011). But it will also contribute to technical skills in other areas, such as the ability to market and devise new ways of selling services or products for the organization. Technical skills are mastered through experience and training, which is what separates them from softer.....

Conceptual Skills

Conceptual skills like every other level of skills have become emerging. It is required to adapt to everyday business life, social and entrepreneurship. There is a

connection between technical and conceptual skills. Concept lends finesse, credibility, and sellability to any technical skill (Nweke, 2023). It involves identifying a problem area(s). Examples of conceptual skills may include idea to create online voting system for SUG Elections in tertiary institutions in Rivers State, automated metering system as against importation, teaching writing skills, improving on solar energy in Nigeria, fishery in natural habit, waste recycling, among others.

From management valuable as a snake. Also, one is comparing himself at the organization level, sometimes even at a personal level (for self-employed) faces really very complex dilemmas which are not easily manageable. It's especially handy to have conceptual skills for addressing these situations because it broadens the scope of possible solutions and introduces a more creative approach that gives those who possess it an ability to see constructive approaches that may not be immediately obvious or apparent to other participants. According to Okereke and Okorafor (2011), the role of being able to conceptualize ideas is important, because people may have opinions but not every single person can execute those opinions.

In other word, the concept ability which is generate a idea and laid out the implementation path. Such skills are viewed as more strategic because their potential influence is broader across the organization. Conceptual skills-based decision-making is usually effective, and it aims at finding solutions instead of explaining or describing. These abilities enables individual to break down and examine specific scenarios abstractionally in a way that is very useful at extreme levels of management. According to Adebayo, Oluseyi, Godwin, and Adekunbi (2020), conceptual skills acquisition require experience, learning/ exposure to training, some innate skills that can grow at some point in life and be developed into self-efficacy/imaginative abilities within the family environment.

Administrative Skills

Holmes, (2013): administrative skills may include holding on the established idea or skill. It's what occurs post-implementation. How does the business get retained and grown." Essential skills were reflected in operations of effective and efficient performance, like changing and expertise skills such as technical skills. The administrators also had to be knowledgeable experts in relevant fields, the administrative capability required executive leadership and managerial skills for success. The success of an administration in the classroom could be measured by the achievement of administrators. Administrative proficiency as one aspect of successful management represented knowledge and expertise (Robert L. Katz, 1995) that led to effective administration

The Information technology has a vital role to mankind and the life of humans. Information diploma along with health were studies the best utilization perform in process factory, service, organization and production sharing business from who know on them for how every company or manufacturing secure their organisation can further be a wise management from karvon and funnel. Currently, usage of technology was the species of processes but the information technological execution faced the challenges and barriers of individuals and processes especially the information era management. According to the office of the Basic Education Commission (2011), most problems of information technology in the academy were such as, a failure of data gathering, error and delay for processing data, lack of expertise, overloading provide little administrative implementation and decision making, scare morale trap equipment design support on budget wasn't covered requirement that was not satisfied with application requirements.

Besides, the information system was still an important system for providing assistance to academies in various operational processes such as guiding on planning and policymaking decisions, developing learning activities and administration for standardisation (Opas Aimsiriwong 2008). Few information use in academic administration, supporting operations and decision making, non-personal development are the general problem found from information technology implementation in the past (Office of Vocational Education Commission, 2010).

Skill Activities of Youth between Nigeria and India

There are globally sought after skills. This paper attempts to compare the usability or adaptability of such skills in Nigeria compared with that of India.

Highly Sought after Skills in India

- Artificial Intelligence (AI) and Machine Learning (ML)

- Data Science and Analytics.
- Cloud Computing
- Cybersecurity and Ethical Hacking
- Blockchain Technology
- Digital Marketing and SEO (search Engine Optimization)
- Internet of Things (IoT)
- Renewable Energy and Green Technology.

Highly Sought after Skills in Nigeria

High-demand skills in Nigeria in 2026 are dominated by technology and digital expertise, driven by fintech growth, business digitization, and the need for remote, high-income work. Top skills include software development, data analytics, digital marketing, cyber security, and UI/UX design, alongside essential soft skills like project management, leadership, and sales.

- **Technology and Digital Skills:**
- **Software Engineering/Development:** High demand for developers proficient in JavaScript, React Native, and Flutter for cross-platform app development. Data Analytics/Science: Vital for companies using data to drive business decisions, often using SQL, Python, and Excel. Digital Marketing & SEO: Essential for SMEs and brands for online visibility and sales growth. Cybersecurity & Cloud Computing: Critical for protecting financial systems and digital infrastructure. Product Design (UI/UX): Highly sought after, particularly within the fintech industry. Content Creation & Technical Writing: Growing demand for digital content creation, including video editing and graphic design.
- **Business and Management Skills:**
- **Project Management and Agile Methodologies:** Required to manage complex projects and improve efficiency.
- **Financial Management and FinTech Expertise:** Essential in growing financial technology sector.
- **Sales and Business Development:** High need for professionals who can drive revenue.
- **Vocational and Other Skills:**
- **Virtual Assistance and Customer Support:** Booming, especially for remote, international jobs. **Technical Services:** Including phone/laptop repair, web design, and digital consulting.

Global Benchmark

These new jobs come with a 44% change in a core skill set, per WEF (World Economic Forum), with a greater emphasis on:

- Creative thinking.
- Analytical thinking.
- Technological literacy.
- Curiosity and lifelong learning.
- Resilience, flexibility, and agility.
- AI and big data.
- Systemic thinking.
- Motivation and self-awareness.

Nigeria in Comparison

From the information above it seems that Nigeria has not made in-roads to AI and big data, Self-awareness and intrinsic motivation appears low, renewable energy and green technology. Nigeria also appear far flung in block chain technology, Data Science and Cyber security and ethical hacking (testing, is the authorized, legal process of probing computer systems, networks, or applications to identify security vulnerabilities before malicious hackers ("black hats") exploit them. Using the same techniques as attackers, ethical hackers ("white hats") strengthen an organization's security posture by finding and patching weaknesses).

India Skill Set Experience

The evolution of skill development policy in India can be traced to the post-independence period, beginning with the Industrial Policy of 1956, which emphasized the establishment of formal Technical and Vocational Education and Training (TVET) systems through dedicated institutional frameworks. Subsequent legislative and policy interventions further reinforced this foundation, including the Apprenticeship Act of 1961, designed to provide practical, industry-oriented training, and the recommendations of the Indian Education Commission, which played a pivotal role in restructuring the national education system. The introduction of the National Labour Policy (1966) and the first National Policy on Education (1968), along with the establishment of Industrial Training Institutes (ITIs) under the Ministry of Labour and Employment, marked significant steps toward institutionalizing skill formation. Further advancements included the creation of the All India Council for Technical Education in 1987 to regulate and support technical education, as well as policy revisions in 1986 and 1992 that aligned education with emerging economic needs, particularly in the context of liberalization during the

1990s, which saw rapid growth in the IT and service sectors.

Recognizing the changing structure of employment and the emergence of non-traditional skill requirements, the Government of India initiated a new phase of reforms in the early twenty-first century. The establishment of the National Skill Development Corporation in 2008 marked a paradigm shift toward public-private partnerships aimed at expanding the scale and reach of skill training initiatives. This was followed by the National Policy on Skill Development (2009), which emphasized capacity building and industry collaboration. Institutional strengthening continued with the formation of the National Skill Development Agency in 2013 and the introduction of a National Qualification Framework to standardize competencies. In 2014, the Apprenticeship Act was amended to include non-engineering trades, and the Ministry of Skill Development and Entrepreneurship was established to centralize and coordinate skill development efforts. The launch of the Skill India Mission in 2015, along with a revised national policy, further consolidated these initiatives by integrating training systems with broader economic and employment objectives.

The emphasis on skill development has become increasingly urgent in India due to the coexistence of a large unemployed and underemployed population and persistent concerns regarding workforce employability, particularly among graduates. Many employers, including multinational corporations, have highlighted gaps between academic qualifications and industry requirements, leading to increased migration of skilled individuals in search of better opportunities abroad. This situation underscores the critical importance of developing a workforce equipped with market-relevant skills to prevent socio-economic challenges such as underemployment and social instability. Moreover, national flagship initiatives such as Make in India, Digital India, and Smart Cities depend heavily on the availability of a competent and productive labor force capable of meeting global standards of quality and efficiency.

In response, the government has articulated ambitious targets, including the objective of skilling approximately 400 million individuals, supported by the creation of Sector Skill Councils tasked with identifying industry-specific skill requirements, designing training curricula, and overseeing implementation across sectors. These councils facilitate collaboration between industry stakeholders and training providers, ensuring alignment between labor market demand and workforce capabilities. By promoting structured training programs and continuous skill upgrading, these initiatives aim to enhance employability, support industrial growth, and foster inclusive economic

development. Ultimately, the success of India's skill development agenda will depend on sustained institutional coordination, effective policy implementation, and the ability to bridge the gap between education and employment in an increasingly competitive global economy. (source: <file:///C:/Users/USER/Downloads/157-GSJ6271-SkillDevelopmentinIndiaALiteratureReview.pdf>)

Nigerian Experience

According to Ogwo, (2010), employer perceive employees as being lacking in areas of conceptual and creative thinking (48%), self-awareness (44%), time management (40%) global and commercial awareness (36%) and emotional intelligence (34%). At least one other study suggests, however, that fewer than 25% of all employers reported being "Very satisfied" with any skills and that levels of dissatisfaction appeared to be highest in respect of planning and organisational skills (30 %), critical and analytical thinking (28%) and business awareness & entrepreneurial skills (25%). (Phillip Consulting, 2014).

As noted by Sodipo (2010), employers feel that the employees do not have acceptable aptitude for their job (33.3%), also low level of competency (50%), absence of resourcefulness and bad understanding of English language is another major factor contributing to such issue (40%). It is also revealing that while employers rank skills more highly than qualifications (Pakistan Strategy Support Programme {PSSP}, 2014) and soft skills as more relevant than professional skills to employees in NCCs (Bloom & Saeki, 2011), applicants characterise qualifications as more important than skills (Phillips Consulting, 2014). Unfortunately this trend did not just start today and in fact it is rather getting worse (Deblan Oni & Adekola, 2000).

This has been attributed to the conflicting disparity between university outputs and industrial expectations (Akinyemi, Ofem & Ikenomere, 2012) as well as instilling knowledge without useable skills (Fajana, 2015). In a recent survey of employers, qualifications were deemed more important than skills (Phillips Consulting, 2014; Mizra, Jeffri & Hashmi, 2014). This trend is not holds true of Nigeria as it same in Sri Lanka (Herath & Ranasinghe, 2011), India (Bloom & Saeki, 2011) where up to 50% graduates are not skilled (Mishara, 2014), Pakistan (Farooq, 2011) all over Africa in (British Council, 2014; Mckinsey, 2013; ILO, 2013), the USA and indeed all over the globe.

But Bulgaria seems to be an exception (Business Foundation for Education, 2010). The news of 2009 best graduating student in University of Ilorin, Okpoto, R. I still being jobless as at September, 2015 (George, 2015) is a pointer to the dire state of things.

Skill Mismatch

The gulf between education and the workplace has resulted in increasing graduate unemployment and led to sordid manifestations like: difficulty in filling vacant jobs; a disturbing penchant for imported expertise even at entry level, as foreigners (even those with nondescript degrees from obscure universities) are preferred while Nigerian graduates feel let down among others. Also, the connection between education and careers is permanently crumbling (Bersin, 2012; World Economic Forum, 2014) as the former cannot guarantee of career tomorrow and this is not primarily because of there are no jobs; but it is due to skill deficiency. Unfortunately, instead of producing graduates that would be thinking and doing new things (Fisher, 2002), the universities are churning out a generation of pen-pushers who lack the body of skills and know-how required to make an impact on the world of work (Ogunyemi, 1998) and who focus chiefly on passing exams rather than practical skills acquisition (Okebukola, 2015), using stale curriculum (Bamiro,2010). Universities might have placed emphasis on knowledge without paying attention to attitude, skills and other attributes denoted by the KASO which capture both the head and the heart. Farooq (2011) concludes that educational institutions either produce irrelevant graduates or instill such skills in students that they are less desirable by market standards.

Conclusion

The paper examined skill sets in the 21st century: Nigerian experience and global benchmark of Nigeria and India. It concluded that Nigerian skill set is not moving at the same pace as other countries of the world including India. That global index on skill development shows Nigeria moving on slower pace than required. The paper elucidates that even in our pace of skill set, does not show sufficient presence in bridging the skill mismatch. The present world scope of contemporary skills such as block chain technology, green energy and renewal, big data analysis, artificial intelligence is not prominent in Nigerian scope of skill set. Nigeria rather focuses on existing information technologies and not on global measure.

Way Forward

Based on the foregoing and the conclusion of the paper, the following have been proffered to improve skill set among Nigerian youth:

1. Government should liaise more with the international business community in order to attract more investments or businesses in Nigeria
2. Nigerian youth may evolve new methods of learning such as using social media facilities such as u-tube, Facebook, WhatsApp and not just using social media as a mere socialization arena.

3. Nigerian Government should make innovation and entrepreneurship a deliberate policy.

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