



## ARTIFICIAL INTELLIGENCE AND INNOVATION STRATEGIES: A PANACEA FOR SUSTAINABLE SKILLS DEVELOPMENT FOR THE LABOUR MARKET IN NIGERIA

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### Abstract

Artificial intelligence is gradually being integrated into doing business, around the world due to the quest to adopt innovative strategies to boost productivity and make output easy. As such, most organizations now include the term innovation strategies in their mission and objective statements; in order to use artificial intelligence (AI) and innovation. Artificial intelligence and innovative strategies have been developed to mitigate the shortages of needed skills in the labour market, hence covering the lacuna created by this shortage of skilled manpower in the labour market. Artificial intelligence (AI) has the potential to fill the gap that exist in the market and can help less experienced workers enhance productivity more efficiently and at a quick space. This paper examined artificial intelligence and innovative strategies as a panacea for sustainable skills development for the labour market in Nigeria; with specific focus on how adoption of AI and innovative strategies for sustainable skill development would impact the Nigerian labour market, process of adopting AI and innovative strategies in various aspect of the Nigerian labour market, and the Challenges of adopting (AI) and Innovative strategies for sustainable skills development in 21st century business in Nigeria are examined amongst others. Recommendations

### Introduction

Every year higher institutions in Nigeria produce and send to the labour market graduate with high grades but unemployable because they lack basic skills needed in the 21<sup>st</sup> century market (Dumani, et al.,2021). According to (Afeez, 2022), opined that high unemployment in Nigeria, especially amongst youth, has become a worrisome trend that raises concern over the employability of thousands of graduates produced by the country's higher educational institutions yearly. The continue rise in unemployment in Nigeria should be of great concern (Ahmad, et al.,2024). Yearly graduates are sent into the market without adequate skills to help them go through their career path, but disappointedly, there is a gap between what industries want and what it is been provided with (Alex & Gursimran,2013), employers still need to spend money to provide on the job training for fresh graduate who most times lack the basic skills to start the job, which is tantamount to a lack of market value (Michael, 2007). They are either useful to themselves or able to add to the labour value chain to the economy to which they are expected to play a pivotal role (Aluku, et al. 2024). The Nigerian population is now put at over 200 million, the total official unemployment rate at 2022 is 33.3 percent (Afeez,.2022). Labour market in its 2020 survey, a credit rating agency for Pan -African, Augusto & co, reveal that joblessness in the African largest economy Nigeria, has hit 35% (Afeez, 2022). Even up till date, Unemployment is very high. Dunami et al. (2021), cited Dave, who opined that even though not all Nigeria graduates are employable, most of them are brilliant but that brilliance is not what employers are seeking for in the labour market. Employers wants graduate who can solve problems (Dunami, et al, 2021) in (Ebi, 2018).



Graduate can only solve problems when they are skilled in one area of societal needs or the other (Yusuf, & Kursad.2022).

In other to solve employers' problem of having to spend huge money on training fresh employees who may likely remain in the organisation or not, the adoption or introduction of artificial intelligence (AI) will help to improve productivity and also to mitigate the lack of skill graduates. Many suggestions have been proffered to bridge the gap of unskilled employees. Artificial intelligence has been opined as the way forward to solving the lack of skill graduates.

### **Artificial Intelligence**

The coming and utilization of Artificial Intelligence in the day-to-day activities as raise some fears, a situation where machine is used to carry out activities instead of humans (Betse,2019). It is very critical to note that while the author is not an advocate of job cut or job loss by potential work force loss which may find AI doing or taking over their jobs. It is however beautiful, to stress that the paper is highlighting the advantages or option of AI model in the labour market to help drive the labour value chain in Nigeria, especially where organisations are not capable of meeting workers salary review periodically. Coursera Staff (2024), Define Artificial Intelligence as a computer system which has the capacity of performing difficult tasks that historically would have been done by man such as reasoning, making decisions, or problems solving. Another defined AI as a theory and development of computer systems capable of performing tasks that in history required human intelligence, such as recognizing speech, making decisions, and identifying patterns (Studyx, 2024)

### **Employability**

Employability is where a set of skills, knowledge and personal attributes that makes an individual more likely to secure and be successful in their chosen occupation(s) to the benefit of themselves, the workforce, the community and the economy.' Vicki T. (2009). In (Yorke, 2006). It is typically viewed from a perspective as something that can be measured objectively and enhanced upon through skills development programs, acquisition of knowledge and experiences (Dawn, 2002). Employability is a problematic concept to define briefly and broadly. As Hillage and Pollard (1998) in (Dawn, 2002) states, it is a term used in a variety of contexts with a range of meanings and can lack simplicity and accuracy as an operational perception. Employability is commonly seen as one of the manifestations of the rapid changes associated with the globalization era of the past two decades (Dawn, 2002) in (cf. Field, 2000). While, vocational rehabilitation service is likely to enable an individual to obtain or retain employment consistent with his or her abilities.

Demonstration of skills

### **SKILL**

Skill is mostly regarded as a focus for systematic research and also as a core object for policy intrusion in modern universal high -technology era. A body of evidence substantively shows that different skill levels have large economic effects for individuals, employers, religions and whole national economies.

Rick (2024) opined that skill is an individual's ability to perform a specific task or solve a problem at a high level of proficiency. Having the ability to solve particular problem (Alan and Wayne, nd), Still there is no compromise among social scientists about the definition of the concept of skill. When sociologist, psychologist and economists, deliberate skill they often appear to be talking about different things. When translated, scholars in different languages have still another take on the matter. Dialogue and discussion between disciplines and cultures is rare, so similarities and differences are not made transparent or resolved. Disciplinary segmentation permits conceptual and semantic differences to persist; and outsiders to academic discourse hear different approaches, depending on whom they are listening to. Regrettably, the scope for misunderstanding



does not end at the library door. Contrasting constructs, skill is one of those social works in the public domain with many meanings, numerous synonyms such as “ability”, “competence”, “aptitude” and “talent”, and varied imprecise translations in other languages. And natural sciences. Green, (2011) suggested that, it proposed to be at once scientific, oriented towards human, social and economic progress, and relevant for a discussion of social and economic action in 21st century settings. He further suggests and group skill to three key features to include;

- i. Productive: using skill is productive of value;
- ii. Expandable: skills are enhanced by training and development.
- iii. Social: skills are socially determined

### **Innovation**

According to Kenneth (2018), opined that Innovation is everywhere today and that most Organizations are now including the term innovation in their vision, mission, and objective statements. Anneli (2017) defined innovation as doing something different. A mind-set, a way of thinking beyond the present and into the future (Anneli, 2017) cited (Kuczmarksj, 2003). The position of chief innovation officer is becoming more a commonplace. Centers for innovation are popping up in colleges of Education, Polytechnics and university campuses in Nigeria through TETFund special intervention of which our own college of Education is one of the Centre for Excellence. Though, such kind of generality has garnered attention, it has resulted in innovation being called the most important and overused word in America (Keneth, 2018) in (O'Bryan, 2013). It also has occasioned a misunderstanding of what innovation means, leading to incorrect decision making by individuals and organizations and representing a potential reason for why a number of companies find innovation elusive (Keneth, 2018) in (Kuratko, Covin, & Hornsby, 2014). A common misunderstanding is the perception held by some individuals and organizations that an innovation must be something completely new and fundamental in nature; minor incremental innovation does not count. Innovation also means a novel way of doing things better or differently often by important springs versus incremental gains (Burt, 2002). This is consistent with the definition of innovation used by the European Commission's Green Paper on Innovation (1995: 1): 'the successful production, assimilation and exploitation of novelty in the economic and social spheres. Innovation can be on a large scale, e.g. identification of a major new technology, a new business venture, or a new program approach to a social problem. But it can also be on a small scale, involving initiatives within a larger project or program, such as a teacher trying a new way of connecting with an individual student. Innovation is sometimes used synonymously with the development or use of new technologies.

### **Innovative Strategies for Sustainable Labour Market in Nigeria**

The ability to generate ideas that create value and advance procedures, from inventing a machine to finding a faster route to work. A worker who possesses an innovation skill in work place is an asset because they enable you to solve problems and advance knowledge in your fields (indeed editorial team, 2022). Innovative skills therefore, are the knowledge and abilities you utilize to create and adapt to change. When people are allowed to make use of their existing knowledge to discover original ideas that can benefit a team and as well as the society at large (indeed editorial team, 2022). To be innovative requires that you have the ability to envision situations from multiple perspective and think disparagingly about the best approach to problem solving. Having innovative skills that is strong at work place, means possession of a personal characteristics, technical expertise and interpersonal intelligence to drive progress in your job.

Nigeria is the most populated black nation in Africa and the entire world where one out of every five Africans live below the poverty line, (Maigida, Saba, Namkere, 2013). Nevertheless, poverty



situation in Nigeria is alarming with an estimated 87 million Nigerians living below the poverty line (Worldbank,nd). in order for organisations to survive the need to balance the demand and supply labor value chain where there is high level of unskilled graduate and non-graduate in Nigeria, Artificial intelligence needs to be structured to achieve industrial needs shortages. the following skill needs to be adopted to innovate.

There are quite a number of artificial intelligences aided machines organisations can take advantage of and get task accomplished without spending much money in training employees and still maximizing profits.

1. Restaurant business; In China for example as well as most developed countries Of the world has produced robots working as a waitress or maybe a waiter in restaurant (ndtv,2024). Reduces organisations dependant on human and wages.
2. Transportation; Railways around the world and light rail projects like metros, are increasing automated or most times driverless (Tom,2020) In France for example, there is an AI aided driven train. There is no human driver.
3. Teaching and learning: AI can help efficient teaching and learning, where student can ask to use AI to generate text based on a prompt provided by the lecturer, and then ask student to critique the results at the level of content, writing, or both. Can ask student to compare /contrast between AI generated text and human generated text, etc.
4. Agriculture: AI has been fully integrated into agriculture which has the potential to transform food systems and help address the world-wide food crisis (Java,2023). AI can help farmers make data -driven decisions, reduce environmental impact and optimise resources usage.
5. Firefighting: AI has the potential to revolutionise the modern fire and rescue service. From predictive analytics and enhanced situational awareness to intelligent resource allocation and augmented training, AI can improve the efficiency and effectiveness of firefighting and emergency response operations. However, it is essential to strike a balance between embracing AI's capabilities and maintaining human oversight and ethical considerations. With careful planning and implementation, AI can indeed play a significant and positive role in the modern fire and rescue service, ultimately saving lives and protecting communities.

### **Conclusion**

As of today, because of the gap in graduates and employable (skill) graduates, the NBTE is collaborating with the colleges of education sector to include skills training in the curriculum of undergraduate to enable them employable. It is now very glaring that if employers of labour adopt AI in their recruitment process employees

### **Recommendations.**

1. Training program should be organised for employees without modern requisite skills in AI to enable them meet up with current realities.
2. AI innovative skills should be employed by employers where they are safety issues.
3. Where there is large task to be done in an organisation AI should be put in machinery as a medium of the lack of active workforce.
4. In job opportunities that has potential of high-risk AI should be deployed to carry out the task.
5. In the military, in order to avoid casualties, drones and other AI technologies should be deployed.



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