# Technical Education and Job Creation: A Moderating Analysis of Entrepreneurial Mindset: A Case Study of Undergraduate Trainees Of Bonny Vocational Centre, Rivers State

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***Abstract***
*In the face of rising unemployment and dynamic global economic shifts, fostering job creation through entrepreneurial initiatives and skills acquisition for the youth by corporate bodies and government agencies at all levels has become a critical development strategy for sustainability. Despite the increase in youth empowerment through technical education, the country still faces a high rate of youth unemployment, estimated at 42.5% in 2023. Although numerous studies have been conducted on the impact of technical training and job creation among youths, none have underscored the moderating impact of an entrepreneurial mindset and innovative research on job creation to address the socio-economic problems associated with youth unemployment in the country. Hence, this study investigates the moderating effect of an entrepreneurial mindset on the relationship between technical education and job creation (A Case Study of Undergraduate Students of BVC, Rivers State). Using the Taro Yamani formula, the study employs a sample of 104 respondents comprising undergraduate trainees in the Bonny Vocational Centre. A 21-item structured questionnaire is used to collect data from the respondents, while regression analysis is employed to analyse the data. The results of the analysis indicate that an entrepreneurial mindset has a strong moderating effect on the correlation between technical education and job creation. In line with this, the study recommends enhancing youth-focused training on entrepreneurship and research innovation, as well as creating a regular framework to support the growth of youth enterprise start-ups and research commercialization.*

***Key words:*** *Entrepreneurial mindset, Innovative research, Job creation, technical education, and Developmental strategy.*

## INTRODUCTION

In the face of rapid population growth and economic instability, Nigeria continues to struggle with high unemployment, especially among the youth. According to the National Bureau of Statistics (2023), youth unemployment stood at 42.5%. This alarming rate underscores the urgency for sustainable job creation strategies with an entrepreneurial mindset, characterized by creativity and proactive problem-solving innovative research that would bring about an optimistic outcome. However, Nigeria's dynamic youth population has shown a promising avenue through entrepreneurship and innovation to address this issue. The nexus of entrepreneurial mindset, being defined as the ability to identify opportunities, take initiatives, drive innovation and research-based innovation, plays a pivotal role in fostering job creation, employment and economic transformation (Schumpeter, 1934; OECD, 2022).

Youth-led start-ups are emerging across fintech, agritech, and education sectors in Nigeria, of which many are supported by innovation hubs and acceleration programs. According to Business Day (2024), reported that 72% of youth-led businesses in Nigeria have integrated innovative technologies, while 44.4% of the start-up ecosystem is dominated by youth entrepreneurs under 35 years of age. Innovation that is being driven by a strong entrepreneurial culture contributes directly to the creation of jobs and the strengthening of the informal sector (Naira metrics, 2024).

Unemployment, particularly among youths, remains a pressing challenge in many developing economies, including our country, Nigeria. Technical Education and Vocational Education have long been viewed as a strategic approach to equipping individuals with practical skills for self-reliance and economic participation (UNESCO, 2016), yet no positive effect among the youths towards business start-ups of their own. However, while technical education imparts valuable skills, it does not automatically translate into job creation unless completed by attributes that promote entrepreneurial behaviour (Okolie et al., 2020).

Entrepreneurial mindset is characterized by innovation, resilience, opportunity recognition and a proactive attitude that is increasingly recognized as a critical catalyst in transforming technical skills into business ventures or employment opportunities (MeGrath & MacMillan, 2000; Rae, 2012). This mindset enables individuals not only to apply for technical know-how but also to navigate uncertainties, take initiatives and develop innovative solutions to market needs (Kurtto, 2016).

Also, empirical evidence suggests that technical graduates often lack the capabilities necessary to convert their skills into sustainable livelihoods, which leads to underemployment or migration in search of limited formal job opportunities (Adebisi & Oni, 2012). Consequently, there is a growing interest among scholars in examining the synergistic effect of technical education and entrepreneurial mindset on job creation, especially in the context of facing high youth unemployment (Ogunde et al., 2012; ILO, 2021).

The paper tries to examine if there is a significant relationship between technical education and job creation, and determine if the relationship is a result of the moderating effect of entrepreneurial mindset. This is to investigate if technical education alone may be sufficient or insufficient unless accompanied by the recognized and behavioural traits that drive job creation.

## STATEMENT OF THE PROBLEM

Despite significant government and non-governmental investment in technical education in developing nations like Nigeria, unemployment and underemployment remain persistent. Although technical education equips individuals with practical skills for self-reliance and productivity, its translation into sustainable employment or entrepreneurial ventures has been inconsistent. This disconnect raises concerns about job expectations and opportunities for educated and unemployed individuals. An emerging perspective suggests that while technical

skills are essential, the entrepreneurial mindset, characterized by innovation, risk-taking, and opportunity recognition, plays a crucial role in enhancing these individuals' job creation abilities.

This study aims to fill the gap in empirical studies on the moderating effect of entrepreneurial mindset on the relationship between technical education and job creation in Nigeria's economy. It seeks to provide evidence-based insight that can inform educational reforms, entrepreneurship development, and labour market strategies, highlighting the critical psychological and attitudinal drivers of economic empowerment.

## RESEARCH QUESTIONS

i. Does technical education significantly influence job creation?
ii. Does an entrepreneurial mindset have a moderating effect on the relationship between technical education and job creation?

## STATEMENT OF HYPOTHESIS

i. $H_1$: Technical education will positively influence job creation
ii. $H_2$: Entrepreneurial mindset will have a moderating effect on the relationship between technical education and job creation.

## LITERATURE REVIEW

### Entrepreneurial Mindset

An entrepreneurial mindset refers to a set of attitudes, skills and behaviours that enable individuals to identify opportunities, take initiatives and innovate solutions in various contexts (Dweck, 2006; Haynie et al., 2010). It has garnered increasing attention in entrepreneurship literature as a critical driver of innovation, opportunity recognition and value creation. It is widely regarded as a set of cognitive and behavioural attitudes that enable individuals to identify and exploit opportunities, navigate uncertainty and create economic and social value (Haynie et al., 2010; Kuratko, 2016).

Schumpeter (1934) first conceptualized the entrepreneur as an innovator who disrupts market equilibrium through new combinations of resources. This foundational view has evolved to emphasize the mindset or mental frameworks that underlie entrepreneurial action. McGrath and MacMillan (2000) described the entrepreneurial mindset as the ability to rapidly sense, act and mobilize resources in dynamic environments. They argue that such a mindset is essential not only for starting new ventures but also for sustaining innovation in existing organizations.

Lumpkin and Dess (1996) further expanded on this by linking the entrepreneurial orientation construct to performance outcomes. They identified dimensions such as innovativeness, key traits that are central to an entrepreneurial mindset. Shane and Venkataraman (2000) emphasized opportunity recognition as a core entrepreneurial function, highlighting that the mindset plays a crucial role in perceiving and acting on emerging market gaps.

Recent studies have also positioned the entrepreneurial mindset as essential in educational and professional development. Kuratko (2016) notes that fostering this mindset in students and professionals is fundamental to developing innovative leaders capable of addressing contemporary economic and social challenges.

## THEORETICAL REVIEW

### Joseph Schumpeter's Theory of Innovation (1934)

The theory posits that innovation is the primary force of economic development. Entrepreneurs act as agents of change by introducing "new combinations" into the market.

Accordingly, an entrepreneurial mindset glued together with technical education will lead to immense output of innovation, new industries, transformation of existing ones, and its evolution will generate employment in several ways in Nigeria.

**Gary Becker's Human Capital Theory (1964)**

The Theory suggests that investments in education and training enhance an individual's productivity, which contributes to the increase in economic value and employment. Hence, formal education and vocational training can enhance job creation and, as individuals' skills and knowledge, make them more productive and attractive for employment.

## EMPIRICAL REVIEW

Several empirical studies have examined the interplay between technical education, entrepreneurial mindset and job creation, though few or no studies have specifically addressed the moderating effect of entrepreneurial mindset. Nonetheless, the growing body of literature offers insights.

A study by Yusuf et al., (2023) as an emerging support which suggest that entrepreneurial mindset moderates the relationship between technical education and job creation, using structural equation modelling (SEM) revealed that individuals with high entrepreneurial orientation were more likely to convert technical skills into viable business ventures thereby increasing the number of jobs created.

Similarly, Abiola and James (2021) employed regression analysis to test interaction effects and found that entrepreneurial mindset significantly strengthened the positive impact of technical education on entrepreneurial performance and job creation outcomes. Olumide (2021) observed a positive correlation between technical education and the development of Small and Medium Enterprises in Sub-Saharan Africa. Thus, Nwachukwu and Eze (2020) found that the entrepreneurial mindset of technical graduates significantly predicted their likelihood of starting and sustaining a business.

Furthermore, Okoye & Raymond (2021) found that technical and vocational education significantly improves self-employment outcomes among Nigerian youths. Their study, based on a sample of 500 graduates from technical institutions, reported that 68% of respondents who received formal technical training had either created small businesses or were gainfully employed in technical fields. In addition, [Mensah et al. (2020)] examined graduates of technical colleges in Ghana and concluded that technical competencies strongly correlate with job readiness and entrepreneurial initiatives.

Lastly, Eze & Nwankwo (2019) emphasised that graduates with both technical and entrepreneurial orientation were more likely to initiate start-ups and employ others. Their regression analysis showed that entrepreneurial mindset significantly moderates the relationship between technical training and job creation, with a $\beta = 0.42$, $p < 0.01$.

## IMPLICATIONS FROM THE LITERATURE

These findings suggest a clear empirical agreement that the entrepreneurial mindset significantly influences the effectiveness of technical education in promoting job creation. This mindset shapes how individuals perceive opportunities, mobilise resources, and take initiatives. Therefore, integrating entrepreneurship education within technical curricula could enhance the impact of technical training on employment outcomes.

## METHOLOGY

The study adopted a survey design, with a sample of 104 trainees from Bonny Vocational Centre, Bonny Island, Rivers State, selected from a total population of 186 students using the Taro Yamani formula. A 21-item structured questionnaire, rated on a 4-point Likert scale, was

used to collect data from the respondents, and PROCESS model regression analysis was employed to determine the moderating effect of entrepreneurial mindset on the relationship between technical education and job creation.

## RESULT AND ANALYSIS

**Table 1: Showing the Reliability and Validity of the Instrument**

| Variables | Cronbach's Alpha |
|---|---|
| Technical Education | 0.711 |
| Job Creation | 0.774 |
| Entrepreneurial Mindset | 0.702 |

**Source:** Etuk, 2005.

**Table 1** above indicates the result of the pilot study conducted to determine the reliability and validity of the instrument used in this study. The analysis showed that the Technical Education scale has a Cronbach Alpha coefficient of 0.711, Job Creation has 0.774, while Entrepreneurial Mindset has 0.702. However, this shows that the instrument has internal validity and is well-reliable for the study according to Etuk (2005).

**Table 2: Regression Analysis showing the relationship between Technical Education and Job Creation.**

**Regression Model Summary:**

**Coefficients[a]**

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 5.156 | 1.236 | | 4.173 | .000 | | |
| | Technical Education | -.253 | .091 | -.412 | -2.790 | .008 | .979 | 1.021 |
| | Entrepreneur mindset | .127 | .127 | .148 | 1.000 | .324 | .979 | 1.021 |

a. Dependent Variable: Job creation

**Model Summary[b]**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .025[a] | .209 | .167 | 1.61440 |

a. Predictors: (Constant), Technical Education, Entrepreneur mindset

b. Dependent Variable: Job creation

**Process Model Regression**

| Predicator | B (Beta) | Std.Error | t.value | Sig(p) |
|---|---|---|---|---|
| **Constant** | **2.35** | **0.45** | **5.22** | **0.00** |
| **Tech.edu. (TE)** | **0.50** | **0.10** | **5.00** | **0.00** |
| **Enrep. Mindset (EM)** | **0.40** | **0.12** | **3.33** | **0.001** |
| **TE×EM (Interaction)** | **0.25** | **0.008** | **3.13** | **0.002** |

**Interpretation**

i. The above table indicates that the main effect of Technical Education on job creation is significant (β= 0.50 < 0.001)
ii. Also, the main effect of the Entrepreneurial mindset is significant (β= 0.40, p= 0.001).
iii. The interaction between (TE × EM) is significant. (β= 0.25, p= 0.002), indicating that E.M moderates the relationship between Technical Education and Job Creation.
iv. The above table indicates that the main effect of Technical Education on job creation is significant (β= 0.50 < 0.001)
v. Also, the main effect of the Entrepreneurial mindset is significant (β= 0.40, p= 0.001).
vi. The interaction between (TE × EM) is significant. (β= 0.25, p= 0.002), indicating that E.M moderates the relationship between Technical Education and Job Creation.
vii. And a positive interaction suggests that the effect of technical education on Job Creation is stronger when the Entrepreneurial mindset is high.

**Table 3: Hayes PROCESS Macro showing a mediation Path Analysis of the Variables**

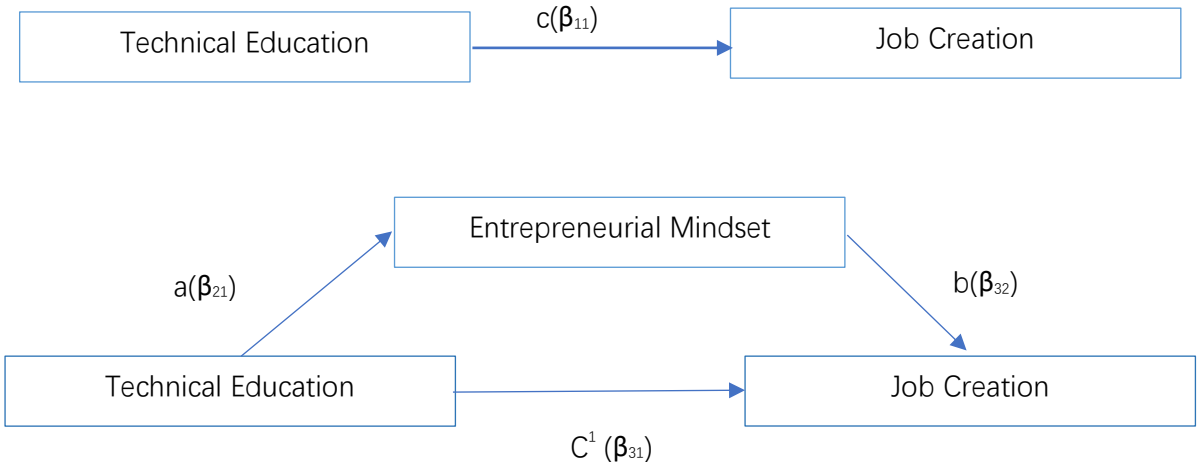


**Table 3** above shows that Technical Education indirectly influences Job creation through the mediation effect of entrepreneurial mindset. This indirect effect suggests that individuals who have acquired technical training can utilize it towards job creation if they have an

entrepreneurial mindset to do so. Hence, they may end up becoming job seekers and adding to the level of unemployment within the society.

## RECOMMENDATIONS

The study therefore recommends the following to enhance employability through technical and vocational education under the entrepreneurial mantra.

1. **Embed Entrepreneurship Modules within Technical Education to Foster Self-Employment and Innovation**
   The text suggests incorporating entrepreneurial training into technical education curricula, promoting mindset development through experiential learning and membership, and implementing a policy intervention program to integrate technical education and entrepreneurial development. The government should create regulatory frameworks to support start-up growth and commercialization among youth, highlighting the importance of fostering an entrepreneurial mindset for job creation.
2. **Promote Access to Start-up Capital and Business Support**
   Entrepreneurship faces obstacles due to limited funding and business support, especially for young trainees from vocational centres like Bonny Vocational Centre. Although technical skills are taught, many graduates find it difficult to turn these skills into profitable businesses because of a lack of resources and experience in business operations. Promoting start-up funding and establishing support services can help bridge this gap and foster entrepreneurship.
3. **Strengthen Industry-Education Collaboration**
   Cooperation between industry and education is crucial for workforce readiness, innovation, and sustainable economic growth. The gap between industry-specific skills and those taught in schools is growing in the global economy. A strong industry-education partnership ensures curricula align with real-world demands, equipping students with relevant skills for the labor market. This strategic partnership fosters innovation, enhances employability, and sustains economic resilience, producing highly qualified workers for the fast-paced, technologically advanced workplace.
4. **Encourage Innovation and Problem-Solving**
   Creativity and problem-solving skills are crucial for society's advancement and tackling modern challenges. Cultivating a culture that values innovation, experimentation, and critical thinking equips individuals and organizations for meaningful solutions.
   Encouraging curiosity, risk-taking, and failure as learning opportunities in environments fosters innovation. Real-world problems in the curriculum develop analytical skills, while cross-disciplinary collaboration enhances output and competitiveness. Encouraging creativity in education, business, and public policy benefits society, the economy, and sustainable development.
5. **Implement Monitoring and Evaluation Frameworks**
   Monitoring and evaluation frameworks are crucial for projects, programs, and initiatives to achieve their goals efficiently. They provide an organized approach for monitoring development, assessing results, and identifying areas for improvement. By collecting and analyzing data, stakeholders can make informed decisions, allocate resources wisely, and adjust strategies in real time.

## CONCLUSION

The study reveals that an entrepreneurial mindset is a crucial factor in converting transferable skills acquired through technical education into real-world employment opportunities. Strong entrepreneurial mindsets increase the likelihood of trainees innovating, launching their own companies, and employing others, thus boosting the local economy and

emphasizing the importance of incorporating entrepreneurial ideals into vocational training programs.

The study suggests that educational institutions and policymakers should focus on curriculum revisions that emphasize entrepreneurship, problem-solving, and critical thinking, alongside technical proficiency, to better prepare students for the changing labour market and foster alliances between academic institutions, commercial sectors, and governmental organizations.

The study suggests that curriculum revisions focusing on entrepreneurship, problem-solving, and critical thinking, alongside technical proficiency, are crucial for educational institutions and policymakers. This approach equips students to handle the changing labour market demands. Alliances between academic institutions, the commercial sector, and governmental organizations can provide resources, mentorship, and real-world experience for trainees. Technical education plays a significant role in job creation, boosting employability and encouraging entrepreneurship. Training with an entrepreneurial mindset can develop confidence and business sense.

Technical education, when combined with an entrepreneurial spirit, can significantly drive economic growth and job creation, as demonstrated by the Bonny Vocational Centre, empowering young trainees to become skilled workers and job creators.

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