



REINTEGRATION THROUGH ENTREPRENEURSHIP: THE EFFECT OF TECHNICAL SKILLS AND INNOVATION ON SELF-EMPLOYMENT OF EX-CONVICTS IN GOMBE STATE, NIGERIA

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ABSTRACT

This research investigates the effect of technical skills and innovation on self-employment among ex-convicts in Gombe State in Nigeria, with entrepreneurial intention serving as a mediating factor. The study focuses on individuals who have completed their prison terms and participated in entrepreneurship education programs across correctional centers in Gombe, Billiri, and Tula. Unemployment and discrimination remain major challenges for ex-convicts, often leading to recidivism and social instability. By examining how entrepreneurship education equips ex-convicts with practical skills, innovative capacities, and the mindset to pursue self-employment, the study seeks to highlight pathways for successful reintegration. Drawing on Human Capital Theory, Risk-Taking Theory, the Theory of Planned Behavior, and Desistance Theory, the research emphasizes the role of education in building human capital, fostering innovation, and reducing crime through self-employment. Empirical evidence suggests that technical skills and innovation are critical drivers of entrepreneurial success, while entrepreneurial intention acts as the psychological link that transforms acquired competencies into business ventures. The expected findings will demonstrate that entrepreneurship education significantly enhances self-employment prospects among ex-convicts, reduces recidivism, and strengthens community resilience. The study contributes to academic discourse while offering practical insights for policymakers, correctional authorities, and government agencies. Ultimately, it underscores the transformative potential of entrepreneurship education in empowering ex-convicts, promoting inclusive growth, and advancing Nigeria's development agenda.

Keywords: Self-Employment, Entrepreneurship Intention, Technical Skills, Innovation, Ex-Convicts, Gombe State

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1.0 INTRODUCTION

While self-employment serve as an effective pathway to accomplish the desirable economic growth and development of a nation and it is a practical strategy for reducing household poverty and unemployment, among people (Vuorio & Puumalainen, 2020), yet Unemployment continues to be a pressing issue on a global scale, with particular problem observed in developing and



underdeveloped nations. This problem often serves as a catalyst for the creation of criminal activities, as noted by Odewale, et al., (2019). A report from the international Organization for Peace Building and Social Justice (PSJ) disclosed that a staggering 70 percent of Nigeria's youth resort to criminal behavior due to the scarcity of economic opportunities and pervasive poverty. This terrible economic landscape pushes many young individuals towards criminality and even terrorism in search of sustenance, status, and survival. In this regard, fostering self-employment emerges as a crucial solution, particularly for ex-convicts seeking to reintegrate into society. Embracing self-employment not only diminishes poverty but also cultivates self-reliance and elevates living standards among the unemployed populace. Recognizing the potential of self-employment as a means of poverty reduction and economic empowerment through entrepreneurial education is paramount.

Entrepreneurship offers ex-convicts a promising way to rejoin the economy, helping them overcome traditional barriers and create a livelihood despite challenges. As society works to reduce inequality and expand fair economic opportunities, it is important to understand the employment challenges faced by people who have been through the justice system. According to Sagar, (2024) Entrepreneurship is a driving force that goes beyond business itself, shaping both society and the economy. Its influence reaches further than profits or market success, leaving a meaningful impact on communities, nations, and entire economies.

This is essential for addressing pressing social challenges such as poverty and enhancing overall well-being within communities. Furthermore, entrepreneurship emerges as a potent antidote to unemployment, empowering individuals to transition from job seekers to job creators, thereby fostering sustainable economic empowerment.

A fundamental aspect of nurturing entrepreneurial ecosystems lies in education and fostering an entrepreneurial mindset. Entrepreneurship education plays a pivotal role in equipping individuals with the requisite skills and knowledge to think creatively and innovatively, as evidenced by studies conducted by Yu et al. (2022) and Yumei et al. (2021). By instilling entrepreneurial competencies, education not only cultivates a spirit of innovation but also empowers individuals to seize opportunities and navigate the dynamic landscape of business ownership.

Entrepreneurial intention is the psychological drive that connects acquired entrepreneurial skills to actual self-employment outcomes. While skills provide individuals with the knowledge and capacity to start a business, intention determines whether those skills are translated into action. In this study, entrepreneurial skills serve as the independent variable, shaping the competencies of ex-convicts, while self-employment is the dependent variable, representing the desired outcome of reintegration. Entrepreneurial intention mediates this relationship by influencing the likelihood that trained individuals will pursue business ventures. Thus, intention acts as the critical link that transforms skill acquisition into sustainable self-employment opportunities.

1.1 **Statement of the Problem**

As self-employment is on the decrease, unemployment and rising crime threaten social stability, especially in Gombe State, where correctional centers release about 1,872 inmates back into society each year (GSCS, 2024). Unfortunately, many of these individuals struggle to find jobs due to extensive discrimination.



Several factors make reintegration harder, including lack of proper entrepreneurship education, poor innovation, illiteracy, cognitive challenges, and limited business opportunities. Without self-employment options, ex-convicts face even greater difficulties competing and surviving in their communities.

To tackle these challenges, this study examines how entrepreneurship education can promote self-employment among ex-convicts in Gombe State correctional centers. It focuses on the role of entrepreneurial intention as a mediator. Entrepreneurship education is treated as the independent variable, with two dimensions: technical skills, and innovation. Self-employment is the dependent variable, representing the desired outcome.

1.2 **Objectives of the Study**

The primary objective of this research is to delve into the intricate dynamics of the relationship between entrepreneurship education and self-employment among ex-convicts in Gombe State, with a specific focus on the mediating role of entrepreneurial intention. To accomplish this overarching goal, the study delineates several specific objectives:

- i. Explore the relationship between technical skills and innovation on self-employment prospects among ex-convicts in Gombe State;
- ii. Investigate the mediating effect of entrepreneurial intention on the relationship between technical skills and self-employment among ex-convicts in Gombe State;
- iii. Investigate the mediating effect of entrepreneurial intention on the relationship between innovation and self-employment among ex-convicts in Gombe State; and,
- iv. Examine the relationship between entrepreneurship intention and self-employment outcomes among ex-convicts in Gombe State.

1.3 **Scope and Significance of the Study**

The scope of the research is limited to three major correctional centers in Gombe State Gombe, Billiri, and Tula where many inmates participate in entrepreneurship education programs. By focusing on this specific group, the study provides targeted insights into how technical competencies, and innovation foster entrepreneurial intention and lead to self-employment. In doing so, it emphasizes the transformative role of entrepreneurship education in empowering ex-convicts, strengthening communities, and contributing to Nigeria's development agenda.

This study examines how entrepreneurship education influences self-employment among ex-convicts in Gombe State, with entrepreneurial intention acting as a mediator. Its significance lies in addressing unemployment and reducing recidivism by equipping ex-convicts with practical skills, knowledge, and the mindset to start businesses. For ex-convicts, the findings highlight how entrepreneurship can provide economic independence, rebuild livelihoods, and ease reintegration into society. For government and policymakers, the study shows how effective entrepreneurship programs can stimulate job creation, innovation, and broader economic growth.



2.0 CONCEPTUAL REVIEW

Self-employment is recognized as a one of the factors for economic development. It is widely regarded as a match in terms of employment creation and raising national wealth through economic development Yerrabati (2022). Wuisan (2024) define and categories self-employment into; economically dependent Solo Self-Employment (EDSSE) which means and Necessity Self-Employment (NSE). Moreover, according to Agogbua and Mgbatogu (2022), self-employment can be categorized into various forms: Completely Independent Self-Employed, Dependent Self-Employed, Voluntary Self-Employed, and Necessity Self-Employed.

Self-employment can be understood as the act of creating and managing one's own income-generating activity or business, with the goal of earning profits and sustaining a livelihood. It covers a wide range of small-scale ventures such as trading, carpentry, laundry services, tailoring, knitting, cosmetology, running a salon, pottery, and similar businesses.

2.1 Entrepreneurship Education

Entrepreneurship has emerged as a cornerstone of economic development and innovation. The role of entrepreneurship in the development of an economy involves more than just increasing per capital output income other than initiating and constituting change in the structure of business and society. The study of entrepreneurship has relevance today, not only because it helps entrepreneurs better fulfill their personal needs but because of the economic contribution of the new ventures (Akindele, 2025). Education is a structured process of learning that helps people gain skills, knowledge, or qualifications across different fields, from basic abilities to specialized Entrepreneurship education according to this work is operationalized into Technical skills and Innovation.

2.2 Technical Skills (TEK)

Technical knowledge (TEK) is the foundation on which entrepreneurship education builds, as noted by Adelaja (2021). This prior knowledge, gained before starting a business, gives entrepreneurs flexibility and adaptability in today's changing business world. Harahap et al. (2024) explain that TEK equips learners with practical, job-ready skills in fields such as welding, tailoring, carpentry, agriculture, ICT, and hospitality. These skills enable individuals to establish small businesses or work independently in skilled trades. TEK is essential for handling the challenges of entrepreneurship and achieving success. Past education and practical experience also serve as valuable assets in the competitive corporate environment.

In correctional centers, technical skills are mainly taught through vocational training. These programs aim to prepare inmates with practical abilities that can help them secure self-employment after release. The training covers a wide range of trades such as carpentry, tailoring, electrical work, metalwork, aluminum pot making, laundry services, hairdressing, shoemaking, cap making, and detergent production. By learning these skills, inmates are empowered to earn a living, become self-reliant, and contribute positively to society once reintegrated. Vocational training therefore plays a crucial role in reducing the risk of re-offending and easing the burden on communities. By equipping individuals with marketable skills, it creates opportunities for sustainable livelihoods and supports their transition into productive members of society.



2.3 **Innovation**

In today's dynamic business landscape, innovation stands as the cornerstone of success, with stagnation posing a looming threat to both individuals and companies alike (Storen, 2014). Entrepreneurs recognize innovation (IIN) as a pivotal driver of venture creation, underscoring its indispensable role in achieving self-employment and attaining business prosperity (Baron & Tang, 2011). Extensive literature supports the symbiotic relationship between innovation and entrepreneurship education, highlighting the transformative impact of educational interventions on fostering innovative thinking and entrepreneurial prowess (Dobni, 2014; Ferrari et al., 2009; Galindo & Méndez, 2014; Jiang & Sun, 2015; Zhou & Xu, 2012).

Moreover, innovation emerges as a linchpin for new venture creation, amplifying the significance of cultivating an innovative mindset among nascent entrepreneurs (Baron & Tang, 2011). Thus, the imperative question arises: how can this spirit of innovation be nurtured and cultivated? Entrepreneurship education emerges as a catalyst for cultivating individuals endowed with innovative capabilities, poised to graduate from educational institutions equipped with a vision for venture creation.

2.4 **Entrepreneurial Intention**

Human beings are not passive observers of their lives; instead, they actively shape their futures, especially when choosing to pursue entrepreneurship. Herdjiono et al. (2017) emphasize that entrepreneurship does not occur by chance but results from deliberate decisions made by individuals. At the center of this active choice is the concept of entrepreneurial intention (EI). As explained by Anwar et al. (2020), EI refers to a person's inner desire or aspiration to start a business in the near future, marking them as an emerging entrepreneur. Building on this, Anwar and Saleem (2021) describe entrepreneurial intention as a self-declared belief in which an individual consciously plans and intends to establish a new venture at some stage in life.

Entrepreneurial intention therefore represents the purposeful decision and commitment to engage in entrepreneurship. It reflects a person's motivation, determination, and readiness to turn their goals into real actions aimed at achieving business success. By recognizing and strengthening entrepreneurial intention, individuals can channel their entrepreneurial drive and prepare themselves for successful ventures in the future.

3.0 **THEORETICAL REVIEW**

3.1 **Human Capital Theory (HCT)**

Human Capital Theory views education as a key driver of productivity, innovation, and economic growth (Robert, 1991). Investment in training and skill development is seen as yielding returns similar to physical assets (Olaniyan & Okemakinde, 2008). Regions such as Korea, Singapore, and Taiwan show how education strengthens economies. Schumpeter (1934) adds that entrepreneurship training fuels "creative destruction," where new ideas and technologies replace old ones. Van Den Berg (2001) further links education to product development in knowledge-based economies. Overall, HCT highlights education as essential for building skilled workforces, driving innovation, and sustaining development.



3.2 **Risk-Taking Theory (RTT)**

Risk-Taking Theory, advanced by Cantillon and Mill, emphasizes entrepreneurship as a process of managing uncertainty. Entrepreneurship education equips individuals with the mindset to take calculated risks, weigh benefits, and make informed decisions (Alam & Hossan, 2003). By teaching foresight, critical thinking, and resilience, education prepares entrepreneurs to face challenges confidently. This theory shows how risk-taking, when guided by training, fosters innovation, business creation, and economic progress.

3.3 **Theory of Planned Behavior (TPB)**

Ajzen's (1991) Theory of Planned Behavior explains entrepreneurial intention through three factors: personal attitude, perceived behavioral control, and subjective norms. Attitude reflects how individuals view entrepreneurship's risks and rewards; perceived control relates to confidence and access to resources; norms involve social expectations and cultural pressures (Karimi et al., 2016). External factors like networks, finance, and social equity also influence intentions (Fairlie & Robb, 2007; Lofstrom et al., 2014). TPB shows how personal beliefs and social context shape the decision to start a business.

3.4 **Desistance Theory**

Desistance Theory (Maruna, 2004) focuses on how individuals move away from crime and rebuild their lives. It highlights gradual identity change, motivation, and social reintegration (Szifris et al., 2018). Employment plays a central role by providing structure and positive relationships (Doyle et al., 2021). Baldry et al. (2018) outline interventions at three levels: primary (skills and behavior change), secondary (building pro-social identities), and tertiary (community belonging). In this study, desistance theory explains how entrepreneurship education can help ex-convicts transition from crime to self-employment, supporting rehabilitation and reintegration.

Together, these theories show that education builds human capital, strengthens risk-taking ability, shapes entrepreneurial intention, and supports reintegration for ex-convicts. They provide the foundation for understanding how entrepreneurship education can foster innovation, reduce recidivism, and promote sustainable self-employment.

4.0 **EMPIRICAL REVIEW**

Numerous studies have explored the impact of entrepreneurship education programs on self-employment and entrepreneurship intention across various contexts. Odewale, Hani, Migiro, and Adeyeye (2019) investigated the influence of entrepreneurship education on students' perceptions of self-employment at Universiti Utara Malaysia. Their findings revealed that technical knowledge and innovation significantly influenced students' views on self-employment, although the relationship with communication skills was insignificant.

Similarly, Nseobot and Effiong (2019) examined the impact of entrepreneurship education on skill acquisition and self-reliance among prison inmates in Akwa Ibom State, Nigeria. The study found a positive relationship between entrepreneurship education and skills acquisition, indicating its potential to enhance self-reliance among inmates. However, the research was limited to incarcerated individuals, warranting further investigation into the effects of such programs on ex-convicts reintegrating into society.



In contrast, Kaiser et al. (2020) explored barriers to inmate program participation in a private southern US prison. While their study identified challenges hindering inmate engagement in programs, it did not assess the success of ex-convicts participating in entrepreneurship programs post-release, focusing solely on incarcerated individuals within the US prison system.

Barda (2023) investigated the inclusive entrepreneurial intention among female ex-prisoners in Tunisia, using the Planned Behavior Theory. The study revealed significant relationships between attitude, subjective norms, perceived behavioral control, and inclusive entrepreneurial intention among female ex-prisoners, suggesting entrepreneurship as a viable reintegration option.

Moreover, Oluatuse et al., (2023) examined the effectiveness of entrepreneurship education in stimulating entrepreneurial skills in an African context. Their study highlighted the importance of aligning entrepreneurship education with contextual peculiarities to optimize outcomes. Waife (2021) explored the willingness of SMEs in Ghana to employ ex-convicts, revealing a high level of reluctance among business owners. This underscores the need to empower ex-convicts with entrepreneurship education and skills to increase their chances of self-employment. Lastly, Irankunda et al., (2020) investigated the beneficial effects of ex-convicts status on self-employment and entrepreneurship in the United States. Their findings suggested a positive linkage between ex-convict status and self-employment, emphasizing the importance of expanding entrepreneurship education and access to startup capital for ex-convicts. Boateng *et al.*, (2025) explored vocational training programmes in Ghanaian prisons, concluding that such programmes hold promise for rehabilitation and reintegration, although structural deficiencies and limited support constrain their impact. Omoruyi and Agbontaen (2024) conducted a quantitative study involving 695 respondents in Nigeria Correctional Service, finding that effective rehabilitation programmes significantly reduce recidivism and promote self-employment. Harahap *et al.*, (2024) found that vocational training significantly improved the self-employment prospects of former inmates in Indonesia.

Despite these contributions, most studies either focus on students, inmates still in prison, or general vocational training, with limited attention to ex-convicts post-release in Nigeria. Moreover, while technical skills and innovation have been identified as important, few studies have examined their direct effect on self-employment outcomes with entrepreneurial intention as a mediating factor.

Furthermore, although entrepreneurial intention has been recognized as a key mediator in shaping entrepreneurial behavior (Barda, 2023), few studies have examined its role in linking technical skills and innovation to self-employment specifically among ex-convicts. This leaves a clear gap in the literature. Therefore, this research is justified as it addresses an underexplored area by focusing on ex-convicts in Gombe State in Nigeria, investigating the effects of technical skills and innovation on self-employment, and examining the mediating role of entrepreneurial intention. This study will contribute new insights to both theory and practice, offering evidence-based strategies for reducing recidivism, empowering ex-convicts, and strengthening reintegration through entrepreneurship.

Therefore, with the view above the research hypotheses can be postulated as follows:



- H₁ - There is a significant relationship between technical skills and innovation on self-employment among ex-convicts in Gombe State.
- H₂ - There is a significant relationship between and self-employment among ex-convicts in Gombe State.
- H₃ - There is a significant relationship between technical skills and entrepreneurial intention among ex-convicts in Gombe State.
- H₄ - There is a significant relationship between innovation and entrepreneurial intention among ex-convicts in Gombe State.
- H₅ - There is a significant relationship between entrepreneurial intention and self-employment among ex-convicts in Gombe State

5.0 EXPECTED OUTCOME

This study is expected to show that entrepreneurship education, particularly through technical skills and innovation, can help ex-convicts in Gombe State successfully reintegrate into society by pursuing self-employment. The findings will highlight the importance of reformatory education programs in correctional centers as a way to reduce recidivism and strengthen community resilience. It is also anticipated that the study will call for government support, including financial assistance, to empower ex-convicts in their entrepreneurial ventures.

Beyond academic contributions, the research aims to provide practical benefits by equipping ex-convicts with tools for sustainable livelihoods, while guiding policymakers and correctional authorities in designing effective rehabilitation strategies that address unemployment and crime.

6.0 CONCLUSION

This study set out to examine the effect of technical skills and innovation on self-employment among ex-convicts in Gombe State in Nigeria, with entrepreneurial intention as a mediating factor. From the review of theories and empirical evidence, it is clear that education, skill acquisition, and innovation play a central role in shaping entrepreneurial outcomes. While previous studies have highlighted the importance of entrepreneurship education for students, inmates, and ex-convicts in other contexts, there remains a significant gap in understanding how these factors operate specifically among ex-convicts in Nigeria after reintegration.

By addressing this gap, the research contributes to both theory and practice. Theoretically, it strengthens the link between human capital development, innovation, and entrepreneurial intention as drivers of self-employment. Practically, it provides insights for policymakers, correctional authorities, and rehabilitation programs on how to empower ex-convicts with relevant technical skills and innovative capacities. Such empowerment not only enhances their chances of successful reintegration but also reduces recidivism, alleviates unemployment, and fosters community resilience. Ultimately, the study underlines the transformative potential of entrepreneurship education in correctional and post-correctional contexts. By equipping ex-convicts with the right skills, innovative mindset, and entrepreneurial intention, Nigeria can unlock new pathways for rehabilitation, self-reliance, and inclusive economic growth.



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