



ENTREPRENEURSHIP EDUCATION AND STUDENT VENTURE CREATION: A REVIEW OF INSTITUTIONAL BARRIERS AND ECOSYSTEM CONDITIONS

Matthew Olusegun AWOTUNDE

Department of Business Management, College of Economic and Management Sciences, University of South Africa. City of Tshwane, Pretoria 0002. Gauteng, South Africa.

Orcid: <https://orcid.org/0000-0002-0362-2847>

awotuo@unisa.ac.za

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Abstract

Entrepreneurship development among youth and higher institution students is recognised as a strategy for addressing economic growth and sustainable development, particularly in Africa. However, despite growing discussion, policy proposals, and support, youth unemployment rates remain high, while student Total Entrepreneurial Activities remain low. This paper presents a systematic review of the challenges African students face that hinder the development of entrepreneurial skills and explores the prospects for entrepreneurial action. Guided by the PRISMA framework, relevant studies published between 2010 and 2025 were selected from reputable academic databases, including Scopus, Web of Science, and Google Scholar. A systematic search and screening yielded 65 peer-reviewed studies for analysis. Selected studies were synthesised thematically, revealing several major barriers affecting the learners' transformation. Findings highlight, based on the literature reviewed, the mediating roles of self-efficacy and orientation in transforming educational learning into venture outcomes. It therefore develops a conceptual framework connecting institutional inputs, individual competencies, and ecosystem factors to student venture creation. The review synthesises existing research into an integral framework and provides actionable policy recommendations to strengthen the entrepreneurial ecosystem in higher institutions of learning. Therefore, the study recommends synthesising fragmented research into a multi-level conceptual framework linking education, competencies, and ecosystem support to venture creation. It informs policymakers, university management, and industry stakeholders on how to design, implement, and sustain entrepreneurship curriculum, programs and policies that develop students' capabilities and confidence.

Keywords: Entrepreneurship education, Student entrepreneurship, Entrepreneurial ecosystem, Africa, Venture creation.

JEL Classification Codes: M13, I21, L26, O31, J24

1. Introduction

Entrepreneurship is widely acknowledged as a central driver of economic growth, innovation, and job creation globally. (Aparicio et al., 2016; Acs, Szerb & Autio, 2017). In Africa, where demographic shifts have produced a rapidly growing youth population and socio-economic challenges such as high unemployment and poverty are prevalent, fostering entrepreneurial skills among students is particularly critical. (Biney, 2023; Fatoki, 2014). Empirical studies across the continent demonstrate that entrepreneurship outcomes vary significantly by region and country, driven by differences in institutional capacity, policy frameworks, and the maturity of local entrepreneurial ecosystems (Mafimisebi & Ogunsade, 2022). These variations suggest that context-specific research is necessary to understand how entrepreneurship education influences student venture creation in diverse higher institution settings.

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Entrepreneurship education aims to equip learners with knowledge, skills, and cognitive tools and to navigate complex economic and social environments, enhancing their entrepreneurship self-efficacy and orientation. (Weiss, 2017; Liguori et al., 2018). Studies in African universities have shown that students often recognise entrepreneurship as a pathway to economic empowerment, job creation, and social impact, yet relatively few successfully establish sustainable ventures (Dejaghere & Baxter, 2014; Yu et al., 2025). This discrepancy reflects persistent gaps in entrepreneurship education programs that often fail to translate entrepreneurial intention into practical outcomes. Reasons include inadequate integration of experiential learning, insufficient alignment with local entrepreneurship ecosystems, and weak collaboration among universities, government agencies, and industry stakeholders (Mafimisebi & Ogunsade, 2022; Ojo et al., 2026). Consequently, while students may exhibit strong entrepreneurial intentions, institutional and ecosystem barriers often hinder their conversion into real ventures.

The challenges are further compounded by fragmented policy and institutional support across the continent. In some African countries, universities provide mentorship, incubation facilities, and access to funding, whereas in others these structures are weak or nonexistent (Pennetta et al., 2024; Ribeiro et al., 2023). Empirical evidence highlights that entrepreneurial orientation, self-efficacy, and opportunity recognition are key predictors of student venture creation, yet these dimensions are underdeveloped in existing programs (McGee et al., 2009; Santoro et al., 2020; Liguori et al., 2018). Moreover, systematic reviews indicate that research focusing specifically on African students and higher education institutions remains limited, and that studies integrating institutional, policy, and ecosystem factors into a cohesive framework are rare (Nabi et al., 2017; Yu et al., 2025).

Economic development in Africa is closely linked to the capacity of higher education institutions to cultivate entrepreneurial talent that can contribute to inclusive growth and innovation (Anyalew & Zekele, 2018). Effective entrepreneurship education requires multi-stakeholder collaboration, including policy support, industry engagement, and civil society participation, to create an enabling environment that enhances students' self-efficacy, fosters opportunity recognition, and promotes sustainable venture creation (Mafimisebi & Ogunsade, 2022; Garcez et al., 2023). However, the existing literature reveals that most interventions remain fragmented, often emphasising curriculum content, financial literacy, or incubation support in isolation, without addressing their interplay across institutional and regional contexts.

The problem is multidimensional: African students exhibit entrepreneurial intention, yet translating that intention into action is limited by structural and systemic barriers. The gap persists because most entrepreneurship programs are inadequately integrated with practical skills development, fail to effectively nurture self-efficacy, and operate in environments where policy, funding, and ecosystem support are inconsistent (Loannou & Retails, 2025; Pennetta, 2024). While prior studies have examined dimensions such as curricular innovation, mentoring, and entrepreneurial orientation (McGee et al., 2009; Santoro et al., 2020; Liguori et al., 2018), little has systematically synthesised these factors into an integrated model that considers regional variation, institutional readiness, and ecosystem conditions.

This study addresses these gaps by systematically reviewing literature on entrepreneurship education and students' venture creation in African higher education, focusing on the intersection of institutional barriers, ecosystem conditions, and student-level factors such as entrepreneurship orientation, self-efficacy, and opportunity recognition. Specifically, the research aims to a) identify the current state of entrepreneurship among African students,

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including opportunities, challenges, and regional variation; b) evaluate the influence of institutional support, policies, and ecosystem conditions on entrepreneurial orientation, self-efficacy, and opportunity recognition; and c) develop a conceptual framework linking education, competencies, and entrepreneurial outcomes. By integrating fragmented insights into a coherent model, this study provides both theoretical advancement and practical guidance for enhancing entrepreneurship education in Africa.

Empirical evidence suggests that entrepreneurship education, when aligned with ecosystem support and stakeholders' collaboration, can enhance student-driven innovation, venture creation, and economic development (Games et al., 2026; Bender-Slazar, 2023; Yu et al., 2025). By examining African universities' educational practices and their connection to institutional and regional conditions, the study highlights how targeted interventions can foster entrepreneurial self-efficacy and orientation, enabling students to identify and capitalise on opportunities. This approach contributes to theory by synthesising previously fragmented research, and it provides actionable recommendations for policymakers and university administrators. Ultimately, the research aims to inform initiatives that not only strengthen student venture creation but also support inclusive economic growth and sustainable development across African contexts.

2. Literature Review

Theoretical Framework

The current review identified three multi-level theoretical frameworks (Theory of Planned Behaviour, Human Capital Theory, and Entrepreneurial Ecosystem Theory) that offer different perspectives on development by linking individual cognition, skill acquisition, and environmental conditions.

The Theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour by Ajzen (1985) was proposed, building on the earlier Theory of Reasoned Action by Fishbein and Ajzen (1975), providing a well-established framework for understanding the cognitive determinants of individual entrepreneurial intention and behaviour. It was built on the fact that human behaviour is guided by behavioural intentions, which are influenced by three core factors: attitude towards the behaviour, subjective norms, and perceived behavioural control. It implies that intention is the outcome of behaviour, shaped by attitudes towards the behaviour, subjective norms, and perceived behavioural control. This shows that behavioural intention remains the strongest predictor of actual behaviour, and that perceived behavioural control can directly influence behaviour, especially when individuals face constraints or enablers in the environment. Within the entrepreneurship educational context, learners' attitudes affect their evaluation of entrepreneurship as a vital and significant career path. Subjective norms capture the level of influence others have on the actor, which is significant, for example, family, peers, and society on entrepreneurial learners' decisions. At the same time, the theory's perceived behavioural control relates to their confidence in their ability to succeed, initiate and manage a business venture. The theory assumes rational decision-making, underestimating impulse. It may not fully capture the contextual and structural constraints that are most relevant in African higher education institutions, with institutional barriers, policy gaps, and a lack of ecosystem support. The theory failed to account for long-term changes in behaviour and the dynamic evolution of intention. The literature posits that learners' risk-taking is jeopardised by weak social support systems and limited confidence in the system and in their ability to navigate a complex business environment. Between entrepreneurial intention and action, TPB explains the persistent gap and highlights the relevance. While the focus of entrepreneurial education may successfully shape attitudes and intentions due to insufficient experiential learning

opportunities and limited exposure to the real-world entrepreneurial process, it often falls short in enhancing perceived behavioural control. The current study, therefore, established that TPB demonstrates that intention is insufficient to drive venture creation unless supported by enabling institutional and environmental conditions. This is because students who perceive entrepreneurship positively are more likely to engage in venture creation (Yu et al., 2025). This underscores the role of institutional and ecosystem pressures in either facilitating or constraining learners' venture creation.

Becker's Human Capital Theory

Becker's Human Capital Theory (1964), in contrast, reiterates the importance of investing in education/learning to acquire knowledge and skills to perform tasks and enhance productivity and economic outcomes. The theory implies that investing in education and training builds the learner's capability and competence to identify a gap, gather resources, and manage and sustain it effectively in an entrepreneurial context. Therefore, the context of entrepreneurial education in higher institutions is not only to acquire knowledge but also to innovate, create, manage, and sustain through risk-taking, and grow it successfully by adding economic value. This is for building general and specific human capital in entrepreneurial knowledge, such as financial literacy, innovation capacity, and strategic thinking. The effectiveness of entrepreneurship education lies in its ability to engage both human and material/learning resources to enhance performance or production. To replicate such quality and delivery methods in an experiential learning strategy, the theory neglects socio-economic barriers by assuming a linear causal relationship between education and performance. Considering the review, it is established that entrepreneurial education in the African context remains predominantly theoretical, even in the teaching of business administration. This limits the acquisition of hands-on, practical, and experiential skills essential for venture creation and management (Awotunde & Van der Westhuizen, 2021), which does not account for ecosystem or institutional constraints on their application. It implies that the acquisition of knowledge and skills concerns the nature and applicability of the knowledge acquired, which is the critical determinant of entrepreneurial outcomes. This challenges the traditional assumption of a direct relationship between education and productivity and, consequently, advances the argument that human capital development in entrepreneurship must shift towards experiential and action-oriented learning strategies. This could enhance learners' cognitive and behavioural competencies, as the theory underpins the investigation of how entrepreneurship education can enhance students' knowledge, skills, and competencies, which are prerequisites for venture creation.

Entrepreneurial Ecosystem Theory (EET)

Entrepreneurial Ecosystem Theory (EET) is a distinct perspective in entrepreneurship, grounded in earlier work on regional entrepreneurship and innovation systems. It emphasises the interdependence of the various factors of production that influence entrepreneurial activity and success (Isenberg, 2010; Stam, 2015). The theory is regarded as an expected outcome of two or more factors interacting within a particular geographical context to achieve productivity or successful outcomes. The core components are entrepreneurs with the initiative to create ventures, supported by incubators, accelerators, universities, and financial institutions. It considers societal attitudes towards risk-taking and innovation, government frameworks which enable or constrain business creation, and access to market stakeholders, customers, suppliers, and knowledge networks. The theory lacks a standardised operational definition, making empirical testing and measurement challenging, overemphasises regional and structural factors while potentially underestimating individual agency, and may not fully account for cultural variations, limiting cross-context generalizability. It is often descriptive rather than predictive, offering limited guidance on the causal mechanisms between

ecosystem factors and entrepreneurial outcomes. This is closely linked to the strength and functionality of the ecosystem elements in the African higher education context. The review literature indicates that regulatory inefficiency, inadequate infrastructure, limited access to finance (Rashid et al., 2025), and fragmented support are characteristics of weak entrepreneurship ecosystems that hinder youth and student venture creation (Lone et al., 2026). In the provision of training and learning hubs/incubators, the absence of initiatives and supportive external conditions undermines the translation of acquired knowledge and skills into practice. The current study provides a comprehensive framework for understanding the multidimensional challenges and opportunities. Therefore, the ecosystem determines how effective entrepreneurial orientation, self-efficacy, and opportunity recognition translate into actual venture creation (Ribeiro et al., 2023).

In the context of entrepreneurship education and student venture creation in African higher education, these theories provide a framework for understanding how students' entrepreneurial intentions form and translate into entrepreneurial action. The current review explores the challenges and prospects of higher education students' entrepreneurship, focusing on African students' new venture creation. The researcher identified entrepreneurship learning, challenges, and prospects in new venture creation, as well as opportunities for students, graduates, and ecosystem development. This guides the government on policy and management of higher institutions. The next sections discuss a review of literature based on different concepts of entrepreneurship development in African higher institutions, contextualising entrepreneurship in African higher institutions, an overview of the higher education system, entrepreneurship policy and development, challenges faced by African students in entrepreneurship development, prospects for entrepreneurship development among African students, and entrepreneurship initiatives for Africa's development.

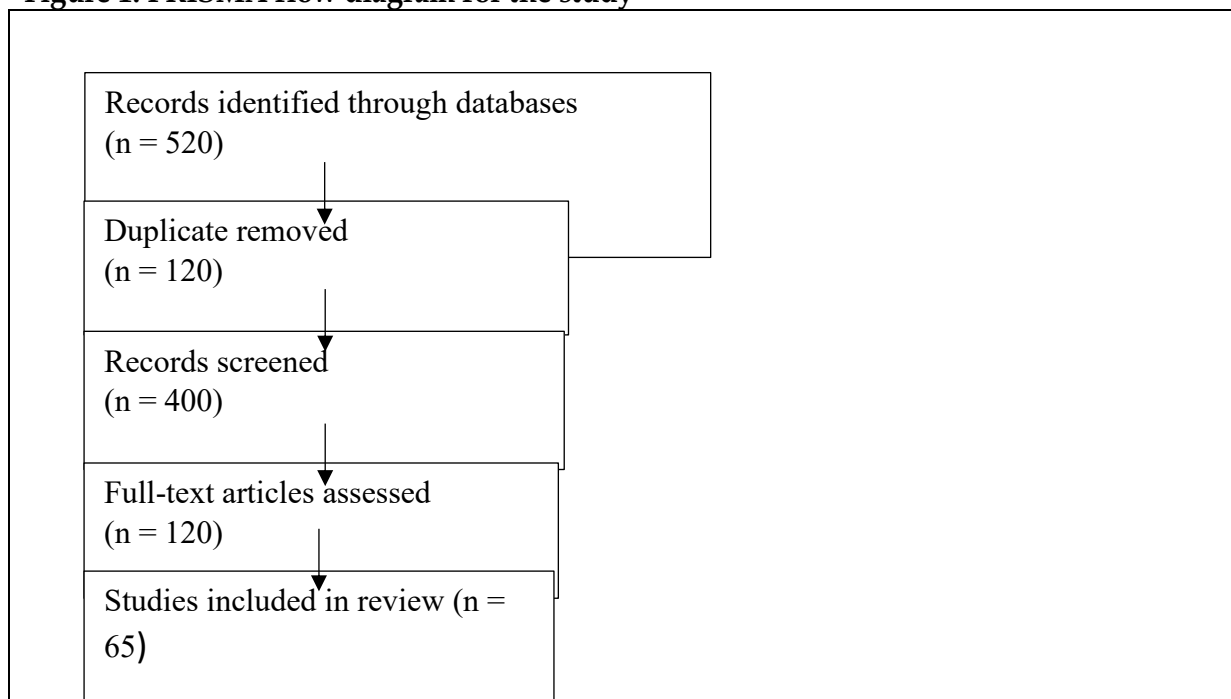
3. Methodology

The study adopts a thematic systematic literature review guided by the Preferred Reporting Items for Systematic Literature Review and Meta-Analysis (PRISMA) as its framework to ensure transparency, methodological rigour, and a comprehensive and unbiased synthesis of evidence. It outlines a detailed methodology that guides the literature review process. This provides a standardised flowchart and checklist to document the clear reporting of the review's procedures, objectives, and conclusions based on the research variables. The researcher identified suitable literature through a systematic process to select the database and determine the quality and quantity of available records. Scopus was chosen as the leading database for high-quality, peer-reviewed articles on entrepreneurial education, as leading scholars have used it in their studies for its reliability (Chapungu et al., 2022). Web of Science and Google Scholar were also employed to ensure a broader search, easy access, literature index, and comprehensive data archives for African literature on entrepreneurship.

The search terms centred on the objectives, topic, region and keywords for entrepreneurial education. They were finalised for advanced search in Scopus, Web of Science, and Google Scholar using appropriate Boolean operators and word structures (Cascini et al., 2021). The primary search strategy in the databases was as follows: "entrepreneurship education", "student entrepreneurship", "venture creation", and "African universities". The results were refined and filtered to ensure relevant, suitable scientific articles were used for analysis, selected according to predefined inclusion and exclusion criteria based on subject area, year of publication, keywords, document type, language, and open access status. The inclusion criteria include peer-reviewed articles published between 2010 and 2025 that focus on higher education in Africa and entrepreneurship education. This is important because of the infancy

of entrepreneurship module offerings at universities in Africa and their purpose. More importantly, the study's peculiarity lies in identifying challenges and possible solutions, and in offering suggestions to policymakers and institutional management. The exclusion criteria include non-English articles, non-peer-reviewed sources, and studies outside higher institutions. The choice of undergraduates/students was driven by the fact that learners see that entrepreneurship is an available alternative to seeking jobs that are not readily available, and that the government alone cannot provide the jobs required by the teeming unemployed youth population. The screen process yielded 520 relevant articles for the search strings; 120 duplicate resources were removed. The researcher screened 400 articles, resulting in 120 full-text articles, and 65 studies were finally included and analysed. Figure 1 shows the screening process for documents to identify studies for inclusion.

Figure 1: PRISMA flow diagram for the study



4. Results and Discussion

Through the application of the PRISMA protocol, the systematic review yielded a final sample of 65 studies that were analysed and used for thematic analysis and revealed four dominant dimensions shaping entrepreneurship development among the youth and higher education students on the African continent, regarded as institutional challenges, individual-level constraints, ecosystem barriers, and enabling factors.

Institutional Challenges

Most entrepreneurial offering universities faced growth challenges due to structural deficiencies, which are considered a primary barrier to entrepreneurial development in African higher education. This is to buttress the studies analysed, which established that outdated curricula constitute a significant theoretical flaw in entrepreneurial teaching and pedagogy, revealing a lack of learning components. The absence of practical, one-on-one pedagogies, such as critical thinking, experiential learning, simulations, and venture labs, limits learners' ability to translate knowledge into entrepreneurial action. Further, faculty capacity constraints are identified as a recurring issue: many academics teach and impart (obsolete) skills that are not aligned with economic trends or current and future work demands. This could be a faculty's lack of, or low level of, a developmental program (train-the-trainer) due to the application of advanced technology and AI in teaching and learning.

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Professionals who can be mentored as experienced entrepreneurship educators were not available to encourage and offer support through their field experience, thereby weakening the effectiveness of program delivery. Limited institutional infrastructure, including underdeveloped innovation hubs and incubation centres, further constrains entrepreneurial engagement. It implies that learners are certified only in theory, omitting the practical skills important to venture creation.

Individual challenges

Low individual entrepreneurial orientation, driven by institutional challenges, critically affects learners' entrepreneurial self-efficacy and mindset (Aboobaker, Renjini & Zakkarya, 2023), thereby shaping venture creation outcomes. A lack of confidence to take risks (fear of failure and risk aversion) stemming from low self-esteem lowers morale. It hinders the activation of potential in the business start-up process. Limited entrepreneurial and financial education poses germane challenges in raising capital, accessing loans, and repaying them, thereby hindering students' Total Entrepreneurial Activities. This is consistent with Ajzen's (1991) Theory of Planned Behaviour, which identifies components that influence entrepreneurial intention. It established that, though entrepreneurial intention may be relatively high amongst African learners, intention-action gaps persist due to a lack of sufficient skills from both academics and learners to impart the required skills, mentor learners, and expose them to the real-world ecosystem and economic demand.

Ecosystem Barriers

One of the major challenges hindering the sustainability of new venture creation is limited access to finance, particularly for early-stage ventures, which often lead to their extinction within the first five years. This could be due to policy and regulatory inefficiencies, informed by complex business registration and bureaucratic processes. It is driven by a lack of professional institutions, resulting in a weak entrepreneurial ecosystem with underdeveloped venture capital networks. It aligns with Entrepreneurial Ecosystem Theory, which emphasises the interdependence of the entrepreneurial ecosystem stakeholders and socio-cultural factors in shaping entrepreneurial outcomes.

Despite these challenges, the review identifies several enabling factors that could enhance entrepreneurship development in the continent's higher education, with a multiplying effect on the ecosystem. The convergence of youth dynamism, technological innovation, ecosystem development, and socioeconomic impact characterises 21st-century African higher institutions (Shom Bafon *et al.*, 2024). While Africa strives to position itself as a hub of innovation and entrepreneurship, its higher institutions must play a central role in nurturing the next generation of African entrepreneurs. This will equip them with the skills, resources, and mindset needed to create sustainable ventures and drive transformative change across the continent. As a result, entrepreneurial orientation and skills acquisition were found to mediate the relationship between education and venture creation. Unfortunately, experiential learning is not integrated as an input from the school or through policy, which greatly affects the activation of intentions. However, 21st-century entrepreneurship in African higher institutions has emerged as a dynamic and increasingly integral component of the continent's socio-economic landscape. Contextualising entrepreneurship within African higher institutions requires an understanding of the unique challenges, opportunities, and evolving trends shaping the entrepreneurial ecosystem across the continent. The provision of university-based incubators and accelerators is essential for sustainable development, as students exposed to practical training environments demonstrate a higher level of innovation, resilience, and business formation and sustainability (Castano *et al.*, 2025). It will increase the adoption of digital technologies and innovation platforms, aiding the expansion of

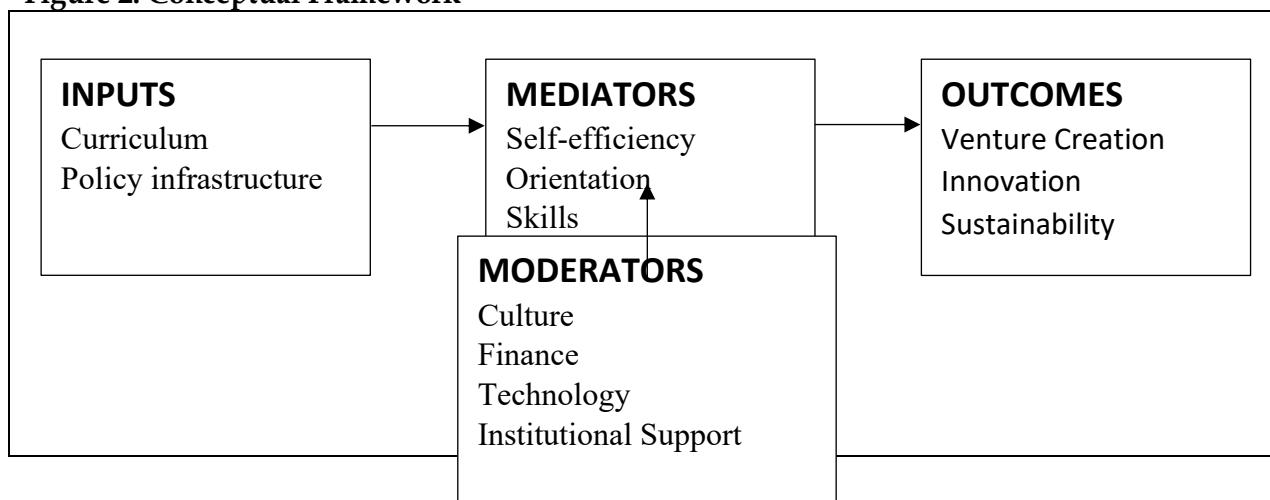
international collaborations and exchange programs that could instil professionalism and standards.

Synthesis of Findings

The current study synthesised entrepreneurship development among higher education students in Africa, revealing a complex interplay among the elements of entrepreneurship transformation. With rapid urbanisation, technological advancement, and globalisation, the review reveals that a multi-level interaction among institutional inputs, individual competencies, and ecosystem conditions shapes the development of entrepreneurship in the African context. Therefore, with the growing recognition of the need for a skilled workforce equipped with entrepreneurial competencies, educational reforms are essential; they are insufficient in isolation (Carayannis et al., 2006), thereby increasing the demand for diverse skills and employment opportunities. Recognising that entrepreneurship is the solution to the global unemployment problem, African higher institutions must play a pivotal role by fostering entrepreneurship education, experiential learning, and innovation hubs that prepare students for the dynamic needs of the 21st-century economy. Students must have entrepreneurship training and skills in the universities where they will be taught and trained.

In a study conducted in Southern Africa by Awotunde (2021), students were trained on the development of their entrepreneurial orientation and efficacy which led to many of the training participants deciding to create their new businesses, few years later other scholars (Nyamuda, 2018; Awotunde, 2021) in a bid to develop student entrepreneurial orientation and efficacy conducted research employing non-dualistic approach for training, the studies produced studentpreneurs with intention and decision to start a new venture. The result is a paradigm shift from traditional, theory-driven curricula to experiential learning and one-on-one entrepreneurship education. This aligns with global critiques of entrepreneurship education, which argue that knowledge acquisition often outweighs skill application. Therefore, to bridge the gap between entrepreneurial intention and actual venture creation, a holistic approach integrating policy support, infrastructure development, and cultural reorientation is required. Based on the review and synthesis of the literature and findings across these studies, the current research proposes a multi-level conceptual model in which the input, in terms of curriculum, policy, and infrastructure, is structured in stages, with mediators, outcomes, and moderators in Figure 2. The applicability and incorporation of the learning institution curriculum, tripartite actors, and policies shape the competencies needed for entrepreneurial action.

Figure 2: Conceptual Framework



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The conceptual framework plays a pivotal role in the development of youth and students' entrepreneurship in Africa, with various impacts on actors and institutions.

Initiatives, Policies and Entrepreneurship Development.

Initiatives and policies to support and promote entrepreneurship development in African universities abound, reflecting the recognition of the critical role that higher education institutions play in fostering entrepreneurial ecosystems. These initiatives and policies encompass a range of activities aimed at nurturing entrepreneurial talent, fostering innovation, and creating an enabling environment for entrepreneurship. It includes incorporating entrepreneurship courses and curricula into university academic programs across various disciplines. These courses cover business planning, marketing, finance, and innovation management, providing students with foundational knowledge and skills to pursue entrepreneurial ventures. The courses could employ experiential learning methods and training, employing a nondualistic approach to foster creative thinking and the application of technology for invention and exhibition, where ideas are developed and acted upon.

Entrepreneurship centres and incubators are suggested for the African universities as innovation learning hubs and business incubators to support aspiring student entrepreneurs. These centres should be empowered to provide resources such as mentorship, networking opportunities, access to funding, and co-working spaces. This will enable students to develop ideas to fruition within networks of potential studentpreneurs and launch business ideas in a supportive environment. Also, adopting critical thinking, innovative teaching, and action-learning methods for the application of digital technology, and promoting international collaboration are essential strategies for enhancing the quality and relevance of entrepreneurship in African higher institutions. This is consistent with Mutanda, Lekhanya, and Moyo (2018), who state that faculty at African higher education institutions lack professional entrepreneurial skills and learning frameworks due to the low internationalisation of scholars. Moreover, initiatives aimed at strengthening research and innovative ecosystems, promoting entrepreneurship and industry partnerships, and expanding access to marginalised populations hold promise for advancing the transformative potential of higher education in Africa (Bvochora & Galavotti, 2025).

To build confidence and instil a culture of risk-taking, universities organise startup competitions, hackathons, and entrepreneurship challenges to encourage students to develop innovative solutions to real-world problems (Tippmann *et al.*, 2023). These events could provide platforms for students to showcase their entrepreneurial ideas, receive feedback from mentors and industry experts, and compete for funding and recognition. Many African universities offer entrepreneurship support programs, such as accelerators, boot camps, and mentorship programs, designed to accelerate the growth and success of student-led startups. These programs provide intensive support and guidance to budding entrepreneurs, helping them refine their business models, access funding, and scale their ventures. Industry-academia collaboration through networks of industry partners, government agencies, and non-profit organisations creates links between academia and the business community. These partnerships facilitate knowledge exchange, technology transfer, and research commercialisation, enabling students and faculty to develop practical solutions to industry demand, challenges, and market needs (De Wit-de Vries *et al.*, 2019). If student, graduate, and youth entrepreneurship are to thrive in Africa, policy reforms and incentives to promote entrepreneurship development in African universities should include tax incentives for startup businesses, grants and subsidies for research and innovation, and regulatory reforms to support the entry of new entrepreneurs and their activities.

Prospects for entrepreneurship development among African Students.

There are opportunities to drive entrepreneurship development to support economic growth, innovation, and social progress across the continent (Coulibaly *et al.*, 2018), informing a rise in interest and awareness of entrepreneurship among African students, driven by unemployment and desire for economic empowerment, job creation, and social impact (Biney, 2021). Students have seen entrepreneurship as a viable career path and are eager to explore opportunities to activate their potential and create ventures. What is the percentage of university graduates willing or able to create ventures with government initiatives and support to grow the economy? African higher institutions are prioritising entrepreneurship education and experiential learning to equip students with the knowledge, skills, and mindset needed to succeed as entrepreneurs (Nwachukwu *et al.*, 2026). Though at a low pace because universities lack skilled faculty to teach innovative, critical-thinking skills, leading students to be less proactive and to make risk-averse decisions. This is consistent with Mutanda, Lekhanya, and Moyo (2019), who state that faculty at African higher education institutions lack professional entrepreneurial skills and learning frameworks due to the low internationalisation of scholars. With skilled scholars, entrepreneurship courses, workshops, and mentorship programs, students could receive practical insights, guidance, and resources to pursue entrepreneurial endeavours. It could open unprecedented opportunities for student entrepreneurs to leverage technology to launch and scale their ventures. This is regarded as global connectivity with the potential client and opens the market and interconnectivity at one's convenience, with little or no challenge. The ecosystems provide resources such as mentorship, networking opportunities, access to funding, and co-working spaces. It enables the students to develop and launch their business ideas in a supportive environment. Organisations are also connecting learners to share ideas and experiences (ENACTUS) through the student exchange program, enabling knowledge sharing among learners and making invaluable contributions to development. Leveraging these connections, students gain valuable insights, forge partnerships, and access resources and markets beyond their local communities, driving cross-border entrepreneurship and global competitiveness.

This initiative aims to transform and advance social entrepreneurship and sustainable development among African students, leveraging entrepreneurship to address pressing societal challenges such as poverty, inequality, healthcare, and environmental sustainability. Therefore, student-led ventures could add value, create positive social impact, and drive inclusive growth across communities. This is consistent with Awotunde (2021), who argues that the prospects for entrepreneurship development among African higher education students are bright and could be promoted by demographic trends, educational initiatives, and technological advancements. This is regarded as ecosystem support, policy reforms, global connectivity, and a growing emphasis on social impact and sustainability.

Entrepreneurship Initiatives for Africa's Development.

In a bid to support the 17 Sustainable Development Goals that are interwoven, many African universities are transforming their institutions by launching initiatives to promote and develop studentpreneurs and the ecosystem. (Khelifi, 2023). University management, government and international support systems strive to transform the ecosystem by empowering learners in diverse ways. This will ease challenges facing potential studentpreneurs through idea sharing, knowledge, and experience in the incubator, learning hub and lab. Entrepreneurship initiatives and student-led ventures have also emerged from African universities, showcasing the continent's vibrant entrepreneurial ecosystem and the potential of young innovators to drive economic growth and social impact (Wright & Mustar, 2019).

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Strathmore University's @iLabAfrica, based in Kenya, is a leading innovation and incubation hub that supports technology entrepreneurship. The lab provides mentorship, technical support, and access to funding for startups developing digital solutions in fintech, agritech, healthtech, and e-commerce. Key success factors include strong university-industry partnerships, a focus on technology-driven innovation, and tailored support for early-stage startups. Replicable models include establishing university-based innovation hubs with industry collaborations and sector-specific focus areas.

MEST Africa (Meltwater Entrepreneurial School of Technology), headquartered in Ghana, is a pan-African entrepreneurial training program, seed fund, and incubator for aspiring tech entrepreneurs. MEST offers a rigorous one-year training program, followed by seed funding and access to a network of mentors, investors, and corporate partners. Key success factors include a hands-on, practical curriculum, access to global networks, and a strong emphasis on mentorship and peer learning. Replicable models include intensive entrepreneurship training, seed funding, and mentorship for tech startups across Africa. More importantly, it educates learners on how to access loans and funds from different bodies, the process of obtaining a loan, the legal issues involved, the payment plan, and the business's sustainability, including the risks.

Enactus is a global nonprofit organisation that operates in over 1,800 universities across 37 countries, including Nigeria and South Africa. As part of development and initiatives, Enactus Nigeria empowers students to develop innovative projects that address social and environmental challenges while creating economic opportunities. This is to support her goal and believe that investing in students who take entrepreneurial action for others creates a better world for us. The student-led ventures focus on sustainable agriculture, renewable energy, women's empowerment, and financial inclusion. Key success factors include a focus on social entrepreneurship, experiential learning, and community engagement. Replicable models include establishing student-led entrepreneurship clubs focused on social impact and sustainable development goals.

Cape Peninsula University of Technology's (CPUT) Entrepreneurship Program and the "Shifting Hope Activating Potential Entrepreneurs" (SHAPE) Training Initiatives at the University of KwaZulu-Natal, both in South Africa, offer a comprehensive entrepreneurship training program that integrates theory with practical experience through business incubation, mentorship, and industry partnerships. The program supports student-led ventures across sectors such as technology, manufacturing, and the creative industries. Key success factors include hands-on and experiential learning, strong industry connections, and tailored support for student entrepreneurs. Replicable models include implementing entrepreneurship programs focusing on experiential learning, industry partnerships, and sector-specific support.

The University of Lagos' Student Entrepreneurship Support Scheme (SESS) provides funding, mentorship, and training to student entrepreneurs. The scheme supports innovative business ideas and ventures by students, enabling them to commercialise their innovations and create sustainable enterprises. Key success factors include financial support, mentorship from experienced entrepreneurs, and access to business development resources. Replicable models include establishing student entrepreneurship support schemes with seed funding, mentorship, and training components.

Challenges Faced by African Students in Entrepreneurship Development.

African higher institution students face several challenges in entrepreneurship development (Söderholm, 2020), stemming from a combination of systemic, socio-economic, and institutional factors (Iwara & Kilonzo, 2022). Many African higher institutions do not offer comprehensive entrepreneurship education or practical training programs tailored to the needs of aspiring student entrepreneurs (DeJaeghere & Baxter, 2014b). Students may lack fundamental business skills (Entrepreneurial self-efficacy and individual entrepreneurial orientation) in business planning, financial management, marketing, and networking, which are essential for launching and sustaining a business. These challenges hinder their ability to effectively engage in entrepreneurial activities and realise their full potential as future business leaders (Steiner & Teasdale, 2019). Individual entrepreneurial orientation and the drive to apply self-efficacy to thrive in the ecosystem are factors that hinder the development of youth and student entrepreneurship in Africa. It behoves the higher institutions of learning not to teach entrepreneurial education in isolation, but to engage in practical training and development to allay fears, instil confidence, and build the ability to develop new ventures. These challenges are systemic, affecting not only potential entrepreneurs but also the broader economy and society (Söderholm, 2020).

Access to finance is a significant barrier to student entrepreneurs in Africa, as traditional financing options such as bank loans often require collateral and credit history, which many students lack (Derera et al., 2014). Moreover, venture capital and angel investor networks are nascent in many African countries, making it challenging for students to secure startup capital to fund their ventures. Many countries' initiatives and support for the ecosystem faced challenges in disbursing funds due to inconsistent data and bureaucratic delays. Inadequate support infrastructure within the institution of learning, including incubators, accelerators, and co-working spaces, hinders the growth and sustainability of student-led startups. Existing entrepreneurship support programs may be limited in scope, capacity, or accessibility, making it difficult for students to access mentorship, networking opportunities, and other resources critical for business development. Cumbersome bureaucratic procedures, as discussed earlier, regulatory barriers, and inconsistent enforcement of business regulations pose challenges for student entrepreneurs in Africa (Zahra & Wright, 2016). Complex and lengthy business registration processes, high compliance costs, and unclear legal frameworks deter students from formalising their ventures and operating within the formal economy. Student entrepreneurs often face challenges accessing markets and reaching customers, particularly in highly competitive industries or sectors dominated by established players. Limited market exposure, information, distribution channels, and branding expertise may constrain students' ability to market and sell their products or services (Varadarajan, 2010), thereby limiting their growth potential. Limited access to technology, digital literacy, and e-commerce platforms further exacerbates the challenges student entrepreneurs face in leveraging technology for business growth. Therefore, a curriculum incorporating ICT is essential for updating the learner's skills.

Discussion of findings

The synthesis of studies on entrepreneurship education and student venture creation in African higher education reveals a multi-dimensional context-dependent ecosystem. Across the literature, a consistent pattern emerges that entrepreneurship development is not solely a product of curriculum delivery but results from a complex interplay among institutional inputs, individual competencies, and ecosystem conditions. This is consistent with Awotunde (2021) and Nyamuda (2018), and highlights that while African universities have increasingly recognised the value of fostering entrepreneurial skills, translating intentions into actual venture creation remains uneven, reflecting structural, pedagogical, and policy-related

constraints. A dominant theme across studies informed the shift from traditional, theory-focused curricula to experiential and action-learning approaches. Evidence from Southern Africa demonstrates that programs integrating entrepreneurial orientation and self-efficacy development significantly improve students' propensity to launch new ventures (Awotunde, 2021; Nyamuda, 2018). This aligns with global critiques that emphasise that knowledge acquisition alone is insufficient and suggests that practical engagement and mentoring are crucial for transforming entrepreneurial intention into tangible outcomes (Santoro, 2020). However, there are contradictions in the extent of impact. At the same time, some studies report strong post-training venture activity, while others suggest that institutional gaps, policy inconsistencies, and ecosystem immaturity limit the scalability of these outcomes (Pennetta, 2024).

The review also identifies emerging patterns of multi-level influences at the individual level. Competencies such as opportunity recognition, problem-solving, and risk tolerance mediate the relationship between education and venture creation (Games, 2026). At the institutional level, curriculum relevance, faculty expertise, and the availability of infrastructure, including innovation hubs and incubators, strongly shape student outcomes (Mafimisebi & Ogunsade, 2022). At the ecosystem level, policy frameworks, stakeholder collaboration, and cultural norms either facilitate or constrain entrepreneurship (Yu et al., 2025). These multi-level interactions highlight the interdependence of institutional readiness, student competencies, and external environment, suggesting that interventions must be coordinated across all levels to maximise impact. Contradictions also emerge regarding the effectiveness of policy interventions. While some research emphasises the importance of governmental and institutional support in reducing barriers to venture creation, other studies indicate that even well-resourced programs fail when cultural norms, fear of failure, or inadequate mentorship persist (Awotunde, 2024). This suggests that structural provisions must be complemented by normative and cultural shifts, which can be addressed through mentoring, role modelling, and ecosystem-building initiatives (Winkler, 2024).

A critical emerging theme is the role of entrepreneurial self-efficacy and orientation as mediators between education and actual venture creation. Across studies, students with higher self-efficacy are more likely to leverage curriculum and experiential learning into concrete entrepreneurial actions (Awotunde, 2021). Moreover, repeated exposure to action-based projects and ecosystem engagement enhances opportunity recognition, bridging the persistent gap between intention and behaviour (Nyamuda, 2018; Games, 2026). This finding underscores the need to move beyond passive knowledge transmission to an interactive, competency-focused pedagogy. The synthesis further reveals regional variations in outcomes, with some institutions demonstrating more effective integration of curriculum, policy, and ecosystem factors than others (Mafimisebi & Ogunsade, 2022). This indicates that generalisations about African entrepreneurship education must be tempered by local context, including resource availability, institutional culture, and regional economic conditions. The review also highlights that fragmentation in institutional support, outdated curricula, and insufficient infrastructure remain key barriers to venture creation, reinforcing the argument for a multi-level conceptual model integrating institutional, individual, and ecosystem dimensions.

Finally, the findings collectively point to the emerging paradigm shift in entrepreneurship education in Africa, from a narrow focus on business knowledge towards a holistic approach that incorporates experiential learning, policy alignment, ecosystem participation, and competency development (Awotunde, 2024; Yu et al., 2025). This shift reflects a broader understanding that entrepreneurial capacity is shaped not merely by individual traits but by

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institutional facilitation and environmental enabling factors, supporting the proposed multi-level conceptual framework. In summary, the discussion synthesises patterns across studies, identifies contradictions in program effectiveness, and highlights emergent themes emphasising the interdependence of individual competencies, institutional structures, and ecosystem conditions. The evidence suggests that to foster student venture creation effectively. African higher education institutions must integrate curriculum reforms, experiential learning, policy support, and ecosystem development, mediated by entrepreneurial orientation, self-efficacy, and opportunity recognition.

5. Conclusion

The review highlights that a complex interplay of institutional, individual, and ecosystem factors shapes the development of entrepreneurship among African higher education students. The discussion of findings reveals that while curricular reforms, experiential learning, and mentorship initiatives significantly enhance entrepreneurial orientation, self-efficacy, and opportunity recognition, structural and ecosystem constraints often limit the translation of intentions into tangible venture creation (Awotunde, 2021). The synthesis underscores the paradigm shift in African universities from theory-driven pedagogy toward experiential, student-centred learning supported by innovation hubs, incubators, and cross-disciplinary collaboration. Such initiatives cultivate the practical skills, problem-solving abilities, and innovative thinking necessary for students to navigate dynamic socio-economic contexts. Regional variations in program effectiveness highlight the importance of context-specific approaches that account for resource availability, institutional culture, and the policy environment (Mafimsebi & Ogunsade, 2022).

By integrating evidence from successful entrepreneurship initiatives across Africa, the review identifies best practices and policy interventions that enhance students' capacity to launch ventures. Key lessons include the importance of stakeholder collaboration, faculty internalisation of entrepreneurial pedagogy, provision of learning infrastructure, and access to funding. The findings reinforce the need for entrepreneurship education to be embedded within a supportive ecosystem that enables students to exchange ideas, collaborate on projects, and leverage interdisciplinary networks to address local and global challenges (Awotunde & Aregbeshola, 2024; Yu et al., 2025).

Ultimately, the study contributes to theory by synthesising fragmented research into a multi-level conceptual framework linking education, competencies, and ecosystem support to venture creation. Practically, it informs policymakers, university management, and industry stakeholders on how to design, implement, and sustain entrepreneurship programs that develop students' capabilities and confidence. By fostering entrepreneurial intention, self-efficacy, and practical opportunity recognition, higher education institutions can play a pivotal role in cultivating a generation of studentpreneurs equipped to contribute meaningfully to Africa's economic growth, innovation, and social development (Games et al., 2026).

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