



Reimagining entrepreneurial education in South African universities to enhance graduate employability

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Abstract— This study examines how entrepreneurial education in South African universities can be redesigned to improve graduate employability. Specifically, the study aims to evaluate how experiential learning, structured mentorship, and university-industry collaboration can better align entrepreneurial education with South Africa's socio-economic context and developmental needs. This study adopts a qualitative desktop research methodology. Data were collected through a structured review of peer-reviewed journal articles, policy documents, and institutional reports sourced from academic databases, including Google Scholar and accredited open-access journals. The primary data collection instrument was a systematic document review protocol, and the data were analysed using qualitative thematic analysis. The findings revealed four central themes: weak conversion of entrepreneurial intention into action, limited institutional support for entrepreneurial capacity, outdated pedagogies that inhibit innovation, and a lack of focus on sustainability. These provide an evidence-based understanding of the gaps and opportunities within the South African higher education system. The study is framed by human capital theory and entrepreneurial intention theory, which explain the link between education, motivation, and entrepreneurial outcomes. It contributes theoretically by contextualising these theories in South Africa, proposes reforms to experiential learning and entrepreneurial ecosystem partnerships, and, academically, synthesises international best practices with local conditions to inform a more effective entrepreneurial education model.

Keywords: Entrepreneurial education, Human capital theory, Entrepreneurial intention theory, Graduate employability, Youth unemployment

To cite this article (APA): Liebenberg, D., Beharry-Ramraj, A., & Moos, M. N. (2026). Reimagining entrepreneurial education in South African universities to enhance graduate employability. *International Journal of Studies in Inclusive Education*, 3(1), 1-7. <https://doi.org/10.38140/ijisie.v3i1.2504>

I. INTRODUCTION

ENTREPRENEURIAL education has become a cornerstone of university curricula worldwide. It is increasingly recognised as a transformative tool for fostering innovation, driving economic growth, and enhancing employment outcomes. As global economies grapple with technological advancement, shifting trade dynamics, and rising inequality, entrepreneurship offers a constructive response to these challenges (Bratitsis et al., 2025). Universities are central to this process, equipping graduates with theoretical understanding and the practical, innovative mindset required to seize opportunities and build sustainable enterprises (Farrell et al., 2022; Odeyemi et al., 2024).

In the South African context, the urgency is more pronounced. Youth unemployment remains among the highest in the world, exceeding 45 percent (Statistics South Africa [Stats SA], 2024). This figure is symptomatic of deeper systemic issues, such as persistent inequality, slow economic growth, and limited job opportunities for graduates (Pillay & Beharry-Ramraj, 2024). According to Farrell et al. (2022), entrepreneurship has the potential to stimulate economic resilience and job creation. However, the current structure of entrepreneurial education in South Africa remains inadequate, particularly when compared with international counterparts. The country's higher education institutions often lack the coordinated support systems and experiential learning models required to convert entrepreneurial intention into action.

Although entrepreneurship modules have been incorporated into several university programmes, outcomes remain mixed. Graduates frequently struggle to transform academic knowledge into viable business ventures. Many cite insufficient mentorship, funding, and industry exposure as key barriers (Omoniyi & Bongani, 2022). These challenges illustrate the critical need to reimagine entrepreneurial

education in South Africa that aligns with global best practices while remaining sensitive to the nation's specific socio-economic conditions.

Entrepreneurship involves more than launching new enterprises. It involves solving societal problems, creating value, and fostering adaptability in uncertain environments. However, as noted by Iddris et al. (2022), entrepreneurial education in South Africa tends to neglect the dynamic, experiential learning opportunities common in countries such as the United States and Germany. This issue is compounded by weak entrepreneurial ecosystems that lack formalised collaboration between universities, government, and industry. For example, South African institutions have yet to adopt structured models such as the triple helix model, which has been successful in driving entrepreneurial innovation in countries like Brazil and China (Vujovic & Baloutsos, 2024).

Drawing on examples from global leaders, including the Massachusetts Institute of Technology and entrepreneurial universities in China and Germany, the study evaluates how practical, mentorship-driven, and policy-supported entrepreneurial ecosystems contribute to success. It also reviews South African mentorship efforts, as outlined by Lose and Cheteni (2024), to assess where improvements are both necessary and feasible.

II. PROBLEM STATEMENT

Over the past two decades, entrepreneurial education has evolved from a niche subject into a core component of university curricula. This evolution stems from growing recognition of the role entrepreneurial education plays in addressing socio-economic issues such as unemployment, poverty, inequality, and economic stagnation (Farrell et al., 2022). In the current knowledge-driven economy, entrepreneurial education not only equips individuals to establish businesses but also cultivates their ability to think innovatively, solve complex problems, and adapt to uncertainty (Bratitsis et al., 2025).

Internationally, institutions such as Massachusetts Institute of

Technology, Germany's Technical University of Munich, Brazil's University of São Paulo, and China's Tsinghua University have led the way in integrating practical entrepreneurial programmes with theoretical instruction (Vujovic & Baloutsos, 2024; Massachusetts Institute of Technology, 2024). These models blend business incubators, cross-sector collaboration, and experiential methods, resulting in high rates of start-up formation and sustainable graduate-led ventures. Standard components include mentorship initiatives, partnerships with private industry, access to venture capital, and innovation hubs, all of which significantly enhance students' entrepreneurial capabilities (Bratitsis et al., 2025).

In contrast, South Africa's entrepreneurial education system continues to face challenges. While many universities have formally introduced entrepreneurship modules, graduate outcomes remain underwhelming. The country's youth unemployment rate, currently exceeding 45% (Stats SA, 2024), reflects the disconnect between academic training and entrepreneurial outcomes (Maziriri et al., 2022). Theoretical dominance, minimal experiential content, and limited interaction with entrepreneurial ecosystems contribute to this gap. As Odeyemi et al. (2024) argue, many South African programmes rely heavily on lecture-based learning, leaving students without the tools to navigate real-world business challenges. Studies show that despite demonstrating entrepreneurial interest, graduates struggle to transition into action due to a lack of mentorship, insufficient funding access, and weak university-industry-government collaboration (Lose & Cheteni, 2024; Omoniyi & Bongani, 2022).

The socio-economic environment exacerbates these educational challenges. Inequality, funding constraints, and institutional misalignment result in unrealised entrepreneurial aspirations. Lose & Cheteni (2024) highlight that South Africa's entrepreneurial ecosystem remains fragmented, with mentoring initiatives and incubators underutilised at many universities. Addressing these challenges calls for a systemic shift. South African universities must implement experiential learning models that prioritise applied skills, innovation, and collaboration. Strengthening ties through the Triple Helix Model can facilitate cooperation between universities, government agencies, and industry, thereby expanding support for mentorship, funding, and entrepreneurial training (Etzkowitz & Leydesdorff, 2000).

By reimagining entrepreneurial education to reflect global standards while remaining contextually grounded, South African institutions can play a transformative role in addressing unemployment and driving sustainable growth. Such reforms will not only empower graduates to generate economic value but also enable universities to fulfil their potential as hubs of entrepreneurial leadership in the region.

III. LITERATURE REVIEW

Global best practices of entrepreneurial education

The global landscape of entrepreneurial education highlights its crucial role in addressing graduate employability and economic development. In developed economies such as the United States and the United Kingdom, entrepreneurial education has fostered innovation, enabled the formation of start-ups, and contributed to long-term economic stability (Anwar et al., 2021; Massachusetts Institute of Technology, 2024). These systems blend theoretical instruction with practical application, enabling graduates to adapt to market challenges and seize entrepreneurial opportunities. Bratitsis et al. (2025) note that China has responded by embedding experiential methods, including virtual simulations, to foster student engagement. These approaches create dynamic learning environments and support start-up success despite structural resource limitations. Such reforms align with global best practices that have proven effective in producing self-sufficient graduates.

While global best practices offer a valuable guide for transforming entrepreneurial education, this study foregrounds South African empirical evidence to contextualise selected international approaches rather than replicate them wholesale. For instance, the Massachusetts

Institute of Technology integrates technology, start-up incubators, and venture capital exposure, demonstrating how structured ecosystems enhance innovation (Massachusetts Institute of Technology, 2024). Similarly, German universities prioritise industry alignment and practical training (Vujovic & Baloutsos, 2024). In China, Bratitsis et al. (2025) found that simulations and digital business models equipped students with tangible experience, boosting entrepreneurial performance. These approaches support resource-efficient yet impactful skill acquisition and market preparedness. Such practices also reflect the influence of Human Capital Theory, which links investments in education to national competitiveness. Lv et al. (2021) argue that entrepreneurial education, when implemented with an experiential focus, yields greater innovation, resilience, and job creation. Farrell et al. (2022) confirm that nations with structured entrepreneurship programmes benefit from strong start-up ecosystems. This model may offer South Africa a pathway to foster home-grown innovation, reduce reliance on imports, and support sustainable export-oriented enterprises.

South Africa's entrepreneurial education landscape

Entrepreneurial education in developing countries reveals notable disparities compared to developed countries. Lose and Cheteni (2024) and Farrell et al. (2022) highlight that many South African institutions still rely on theory-heavy models, limiting students' readiness for employment or enterprise. The entrepreneurial intention theory, as explored by Nguyen (2023), emphasises shaping entrepreneurial motivation; however, in South Africa, these intentions often lack support due to a lack of mentorship, networks, or practical training (Nguyen & Nguyen, 2024). In South Africa, entrepreneurial education has been adopted as a policy response to severe youth unemployment, which currently exceeds 45% (Stats SA, 2024; Sathyanand et al., 2025). Despite curriculum inclusion, implementation remains weak and theory-heavy. However, Musariwa and Tinonetsana (2023) affirm that students lack opportunities for experiential engagement, leaving them underprepared for business realities. Government schemes such as the National Student Financial Aid Scheme (NSFAS) and the National Research Foundation (NRF) have aimed to support entrepreneurship. However, their impact is hindered by administrative challenges and corruption (Omoniyi & Bongani, 2022). Moreover, although many students report high entrepreneurial intent, Nguyen and Nguyen (2024) caution that this rarely translates into actual ventures due to systemic weaknesses and limited institutional support.

The key challenges in South Africa's current entrepreneurial education include poor alignment with industry expectations and reliance on outdated methods. Iddris et al. (2022) and Lose and Cheteni (2024) highlight the need for curriculum reform that includes problem-solving, creativity, and collaboration. Although countries like China and Brazil have successfully implemented the triple helix model, which integrates universities, industry, and government, South Africa has yet to do so effectively (Farrell et al., 2022; Sathyanand et al., 2025). Strengthening triple helix model collaborations could create a more robust entrepreneurial support structure.

Entrepreneurial education and business success

Effective entrepreneurial education significantly increases the likelihood of business success. Gallegos and Valencia-Arias (2024) note that, beyond technical knowledge, students must develop confidence and resilience. In SA, however, new ventures frequently collapse within their early years, underscoring gaps in systemic and curricular support. Bridging the gap between classroom content and real-world experiences through mentorship, incubators, and industry networks is vital. Bratitsis et al. (2025) show that real-world integration in education helps students transition into sustainable ventures. This reinforces the value of experiential models, which should be embedded across South African institutions.

The literature consistently shows that entrepreneurial education can promote innovation, reduce unemployment, and support economic development. Successful models balance theory with practical learning,

bolstered by supportive entrepreneurial ecosystems. South Africa must address structural inefficiencies and embed frameworks like human capital theory and entrepreneurial intention theory to ensure that intentions translate into impactful action. While the study references global best practices from countries such as the United States, China, and Brazil, the intention is not to replicate these models but rather to contextualise selected approaches suitable for the South African higher education landscape. These include structured business incubator programmes, mentorship networks, innovation hubs, and cross-sector partnerships that have demonstrated positive results in fostering students' entrepreneurial competencies.

IV. THEORETICAL FRAMEWORK

Human Capital Theory

Initially developed by Becker (1964), Human Capital Theory posits that investment in education increases individuals' skills, productivity, and economic potential. This theory is relevant to the present study as entrepreneurial education represents a form of human capital investment aimed at enhancing graduates' employability, innovative capacity, and economic participation. In the South African context, where graduate unemployment remains high, Human Capital Theory provides a valuable lens for evaluating whether current entrepreneurial education practices adequately equip students with market-relevant skills and competencies. Within the context of entrepreneurship education, Human Capital Theory suggests that equipping students with relevant competencies such as opportunity recognition, critical thinking, and problem-solving enhances their ability to participate in and contribute to the economy. In SA, however, the potential of Human Capital Theory is undermined by curricula that remain heavily theoretical and disconnected from real-world entrepreneurial challenges. As Farrell et al. (2022) and Lv et al. (2021) argue, entrepreneurial education that fails to embed practical learning weakens the intended human capital gains. This study uses Human Capital Theory to assess whether South African universities are truly preparing graduates with the skills and support structures necessary for entrepreneurial activity.

Entrepreneurial Intention Theory builds on Ajzen's Theory of Planned Behaviour, focusing on how attitudes, perceived behavioural control, and social norms shape an individual's intention to start a business. This theory is relevant to the present study because it helps explain why entrepreneurial intentions developed through university education do not consistently translate into entrepreneurial action. Within the South African higher education context, Entrepreneurial Intention Theory enables analysis of how limited institutional support, mentorship, and experiential learning constrain graduates' ability to act on entrepreneurial intentions. It is widely used in entrepreneurship studies to explain why specific individuals pursue entrepreneurship while others do not, despite similar educational backgrounds. In this study, Entrepreneurial Intention Theory helps to interrogate the disconnect between student motivation and business creation. Nguyen and Nguyen (2024) and Lose and Cheteni (2024) illustrate how strong entrepreneurial intentions are often not realised when institutional support, confidence, and resources are lacking. Entrepreneurial Intention Theory thus explains why South African graduates may express a strong interest in entrepreneurship but fail to act on it.

Framework Synthesis

Together, Human Capital Theory and Entrepreneurial Intention Theory offer a dual lens: Human Capital Theory examines the capabilities developed through education. At the same time, Entrepreneurial Intention Theory explores the motivational and behavioural pathways toward entrepreneurship. When combined, they help evaluate whether entrepreneurial education provides both the practical capacity and intentional momentum needed to foster graduate-led ventures. These frameworks also underpin the conceptual model (Figure 2) presented in the Findings section, which illustrates how entrepreneurial intention, education, and capacity converge to

influence action.

V. OBJECTIVE OF THE STUDY

This study examines how entrepreneurship education in South African universities can be redesigned to support graduate employability and sustainable venture creation better. It further evaluates how experiential learning, structured mentorship, and strengthened university-industry collaboration can improve entrepreneurial competencies among students within South Africa's socio-economic context.

VI. METHODS

Research approach

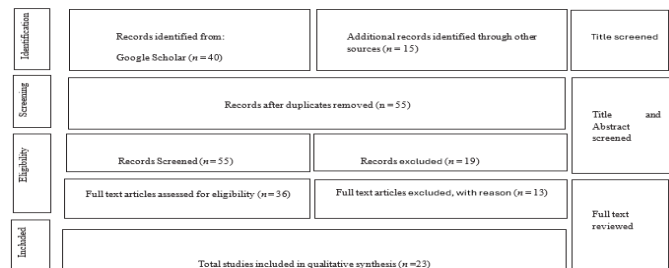
This study employed a qualitative approach to evaluate the state of entrepreneurial education in South African universities. Given the limited availability of in-depth empirical studies on the South African context, this research adopted an exploratory design. The goal was to understand how entrepreneurial education influences student outcomes, intentions, and skills development. This design allowed for the identification of gaps between theory and practice in existing programmes. The analysis was guided by the human capital theory and entrepreneurial intention theory, discussed earlier. These frameworks enabled an evaluation of how education influences entrepreneurial competence, intentions, and success (Nguyen, 2023; Maziriri et al., 2022).

Research design

The exploratory design enabled examination of patterns, challenges, and progress in South African entrepreneurial education. The review focused on real-world applicability, identifying best practices for industry integration, mentorship development, and practical programme enhancement, and uncovering perceptions, barriers, and success factors related to entrepreneurial education. The approach enabled the synthesis of stakeholder perspectives from the academic and policy literature and facilitated the interpretation of how educational frameworks affect student outcomes.

Although the PRISMA framework is traditionally associated with systematic reviews in medical and empirical research, this study applied an adapted selection and screening process suitable for qualitative desktop-based thematic analysis. This adaptation was appropriate given the study's exploratory aim and reliance on secondary sources to synthesise patterns across entrepreneurial education literature. This modified approach ensured transparency in how sources were identified, assessed for relevance, and ultimately included in the review. As illustrated in Figure 1, 55 sources were initially considered. Of these, 36 were assessed for eligibility, and 23 were included in the final thematic synthesis. These studies provided comprehensive insights into South Africa's entrepreneurial education landscape, alongside international examples from institutions such as Massachusetts Institute of Technology (United States), Tsinghua University (China), Technical University of Munich (Germany), and the University of São Paulo (Brazil) (Vujovic & Baloutsos, 2024; Massachusetts Institute of Technology, 2024).

Figure 1: PRISMA Flow Diagram (Source: Adapted from Page et al., 2021).



Data collection instruments

The research design was informed by scholarly literature published

between 2020 and 2024. This ensured that the study remained relevant to current socio-economic and institutional contexts. Secondary data was collected through a targeted desktop review of databases such as Google Scholar, Scopus, and national education portals. The search focused on peer-reviewed journal articles, government reports, and academic publications that addressed entrepreneurship education, youth employability, and challenges in graduate transition.

During this stage, several recurring issues were identified in the literature. These included inadequate mentorship opportunities, limited access to experiential learning, weak collaboration between universities and industry, and systemic policy barriers. These early insights were not treated as final themes but instead served to inform the design of the analytical framework used later in the study.

Data analysis

A qualitative thematic analysis was applied to synthesise insights across the selected literature. This method enabled a detailed analysis of how different elements within the education system influenced entrepreneurship outcomes. The selected sources provided valuable insights into South Africa's challenges in entrepreneurial education. They offered comparisons with global institutions such as Massachusetts Institute of Technology in the United States, Technical University of Munich in Germany, and Tsinghua University in China (Vujovic & Baloutsos, 2024; Massachusetts Institute of Technology, 2024).

While some recurring issues had already emerged during the literature review phase, including concerns around mentorship, experiential learning, and university-industry linkages, the thematic analysis involved a more formal process of coding. This led to the development of four final themes that shaped the structure of the findings section. These themes were the mismatch between theory and practice, the lack of stakeholder collaboration, the absence of adequate institutional support structures, and concerns regarding graduate readiness. An inductive approach guided the analysis and was conceptually linked to Human Capital Theory and Entrepreneurial Intent Theory. This process helped to demonstrate how educational investments influence employability, entrepreneurship, and broader economic outcomes.

VII. RESULTS

This section presents the thematic findings generated through qualitative synthesis of the selected literature. The analysis revealed four core themes shaping the effectiveness of entrepreneurial education in SA: entrepreneurial intentions, entrepreneurial capacity for business success, innovation, and sustainability. These themes reflect systemic gaps in current educational practice and serve as a framework for evaluating the challenges and opportunities for reform.

Entrepreneurial intentions: Bridging the gap between knowledge and action

South Africa's entrepreneurial education fails to translate theoretical knowledge into actionable entrepreneurial intentions effectively. Despite universities' efforts to incorporate entrepreneurship into curricula, the persistent gap between intention and action remains glaring (Nguyen & Nguyen, 2024). Students emerge with academic knowledge but lack the exposure, confidence, and mentorship required to develop a genuine entrepreneurial mindset.

Global evidence suggests that structured ecosystems, such as the triple helix model, which foster collaboration among universities, industry, and government, are instrumental in nurturing entrepreneurial intentions and supporting ventures from inception to execution (Farrell et al., 2022). In South Africa, however, fragmented and isolated efforts limit the ability to create a conducive environment for entrepreneurial growth. Without such structural collaboration, the entrepreneurial intentions cultivated in South African universities often dissipate before they materialise into entrepreneurial action, perpetuating high unemployment rates and economic stagnation.

The conceptual model in Figure 2 emerged from the thematic

analysis of literature, including Nguyen and Nguyen (2024), and illustrates how entrepreneurial education plays a catalytic role in transforming entrepreneurial intentions into entrepreneurial action. The model synthesises the sequential relationship between four interlinked components: Entrepreneurial Intention, Entrepreneurial Education, Entrepreneurial Capacity, and Entrepreneurial Action.

Figure 2: Conceptual model of the influence of entrepreneurial education on intentions and capacity (Adapted from Nguyen & Nguyen, 2024)



This conceptual framework captures the progression of entrepreneurial development. Beginning with entrepreneurial intention, which refers to an individual's motivation or willingness to start an entrepreneurial venture, followed by entrepreneurial education, which acts as an intermediary, equipping individuals with the necessary skills, knowledge, and mindset to realise their intentions. Next, entrepreneurial capacity represents the competencies and capabilities developed through education that enable individuals to identify opportunities and innovate. Lastly, entrepreneurial action is taken, resulting in a tangible outcome: individuals apply their capacity to create businesses or innovative projects. This progression underscores the importance of education in bridging the gap between intention and action, fostering practical capabilities essential for entrepreneurial success.

Entrepreneurial capacity and business success: confronting the high failure rate

Widespread early-stage business closures reflect a systemic inability to provide students with the practical tools needed to succeed. While universities impart foundational business knowledge, this is insufficient in the face of real-world challenges such as market competition, resource constraints, and regulatory complexities. In stark contrast, global leaders such as the Massachusetts Institute of Technology have demonstrated the transformative impact of robust support systems, including incubation centres, mentorship programmes, and access to capital (Massachusetts Institute of Technology, 2024). These interventions empower students to bridge the gap between theoretical understanding and practical entrepreneurship, resulting in higher rates of business success. South Africa's universities must match these models by embedding business incubation and mentorship into entrepreneurial programmes. The absence of such initiatives perpetuates a disconnect between education and practical entrepreneurship, leaving graduates ill-equipped to build sustainable businesses and drive economic growth.

Innovation: Overcoming the constraints of traditional pedagogy

Innovation is a critical component of entrepreneurship, yet South Africa's traditional lecture-based teaching methods stifle creativity and problem-solving capabilities (Bratitsis et al., 2025). This pedagogical inertia not only limits students' ability to apply entrepreneurial knowledge to real-world scenarios but also undermines their potential to contribute to innovation-driven industries. Globally, experiential learning methods such as project-based learning and design thinking have revolutionised entrepreneurial education, fostering creativity and equipping students to address complex challenges (Bratitsis et al., 2025). These models provide students with firsthand opportunities to develop, assess, and refine innovative solutions, bridging the gap between classroom theory and industry practice.

For South Africa to cultivate a culture of innovation, universities must overhaul outdated teaching methods and adopt experiential, student-centred approaches. Failure to do so will continue to leave the country trailing in global competitiveness, with a workforce ill-prepared for the demands of a rapidly changing economy.

Sustainability: Addressing a critical blind spot

Sustainability remains a neglected dimension of entrepreneurial education in South Africa, despite its growing importance in global entrepreneurship discourses. While South African universities focus

heavily on economic growth, they fail to integrate environmental and social sustainability into their curricula adequately (Sathyanand et al., 2025). This oversight undermines graduates' ability to align entrepreneurial ventures with broader developmental obligations, such as the United Nations Sustainable Development Goals.

Internationally, universities are increasingly embedding sustainability principles into entrepreneurship education, preparing students to create businesses that balance profitability with environmental stewardship and social impact (Bauman & Lucy, 2021). South Africa must urgently follow suit, adopting sustainability frameworks that empower students to tackle pressing societal challenges while building resilient, future-proof businesses.

The findings of this study reveal critical deficiencies in South Africa's entrepreneurial education system, where intentions remain unfulfilled and theoretical education fails to translate into practical entrepreneurial action. Additionally, business success is hindered by the absence of mentorship, incubation, and practical support systems. Furthermore, outdated teaching methods stifle innovation, limiting students' ability to solve real-world problems. Lastly, sustainability is neglected, depriving graduates of the tools to align entrepreneurship with global development goals.

These systemic failures render South Africa's entrepreneurial education ill-equipped to address the nation's socio-economic challenges, including youth unemployment and economic diversification. Urgent reform is needed to bridge the gaps between theory and practice, fostering a generation of entrepreneurs capable of driving innovation, business success, and sustainable development. The subsequent section critically discusses these findings through the lens of human capital theory and entrepreneurial intention theory, offering actionable recommendations to restructure entrepreneurial education in South Africa.

VIII. DISCUSSION AND IMPLICATIONS

Entrepreneurial education in South Africa has made commendable advances in addressing youth unemployment and fostering entrepreneurial intentions. However, the persistent gaps between theoretical knowledge, practical application, and systemic support continue to undermine its transformative potential. The findings of this study, supported by the literature, reveal several deficiencies that impede the restructuring of entrepreneurial education in line with global best practices. In particular, the failure to convert entrepreneurial intentions into capacity and action continues to exacerbate the country's high youth unemployment rate and the inability of graduates to turn academic knowledge into viable enterprises.

A key finding of this study is that entrepreneurial intentions among South African students remain theoretical. This is primarily due to the absence of institutional collaboration and systemic structures that support entrepreneurial development beyond the classroom. South African universities operate in relative isolation from industry and government, limiting opportunities for practical application and business incubation. In contrast, countries such as China and Brazil have successfully implemented the triple helix model, fostering synergy among academia, government, and industry. This model has been credited with creating a comprehensive entrepreneurial ecosystem that provides students with access to mentorship, funding opportunities, and practical training. The absence of such a collaborative model in South Africa is a central contributor to the disconnect between intention and implementation.

Further elaborating on this gap, it was found that South African institutions lack adequate experiential learning infrastructure, which is essential for translating knowledge into action. While global exemplars such as Massachusetts Institute of Technology and Tsinghua University offer well-established innovation hubs, business accelerators, and venture funds, South African universities often lack the equivalent structures. Without this foundational infrastructure, students remain underprepared to navigate the complexities of launching and sustaining

a business. Even where theoretical training exists, graduates encounter significant challenges when seeking resources or mentorship, as these ecosystems remain fragmented or inaccessible.

One recurring concern is the redundancy in entrepreneurial education that emphasises content delivery but neglects support mechanisms that enable application. For instance, it is widely acknowledged that South African start-ups face high failure rates. However, the key issue lies in the educational system's limited response through practical interventions such as mentoring programmes, innovation centres, and structured pathways from ideation to execution. The core issue is not merely the failure rate, but the educational system's inability to address it with tangible solutions, such as mentoring programmes, innovation centres, and structured pathways from ideation to execution. Thus, this discussion focuses on the broader systems required to counteract failure, rather than restating statistics.

From a theoretical perspective, Human Capital Theory and Entrepreneurial Intention Theory provide complementary frameworks for interpreting the limitations of South Africa's current approach and for explaining why entrepreneurial intentions often fail to translate into entrepreneurial action. Human Capital Theory holds that investment in education should enhance employability and productivity. However, in the context of entrepreneurial education, this investment often yields poor returns when practical learning is absent. For example, while students may graduate with sound academic credentials, they frequently lack competencies such as opportunity recognition, risk assessment, and resilience in the face of business failure. These competencies are not typically acquired through lectures alone, but through applied learning environments, mentorship, and iterative venture experience. Hence, Human Capital Theory holds only in entrepreneurial contexts when education encompasses these broader dimensions.

The entrepreneurial intention theory further supports this interpretation by emphasising the psychological readiness and motivational state required for entrepreneurship. While many South African students express entrepreneurial ambition, their intentions are rarely translated into business creation due to systemic constraints. The entrepreneurial intention theory believes that intention must be coupled with behavioural control, perceived feasibility, and access to resources for action to occur. South African universities often overlook these preconditions, focusing instead on theoretical instruction without addressing structural barriers.

Innovation, another pillar of successful entrepreneurship, remains stifled by outdated pedagogical methods in most South African institutions. Rather than fostering creativity, current curricula are often rigid and exam-driven. This stands in contrast to international standards, which use design thinking, challenge-based learning, and interdisciplinary projects to cultivate innovative, critical-thinking skills. Without adopting such practices, South African graduates will continue to fall behind in global entrepreneurship rankings.

Sustainability has also been identified as a critical blind spot. Internationally, entrepreneurship education is evolving to include themes such as environmental responsibility, inclusive development, and social impact. These dimensions are absent from South African entrepreneurship curricula. As Leal Filho et al. (2025) and Bratitsis et al. (2025) have shown, integrating the United Nations Sustainable Development Goals into business education equips students with the mindset needed to build ventures that are not only profitable but also socially and environmentally responsible.

Considering these findings, entrepreneurial education in South Africa requires a systemic overhaul involving coordinated action by universities, government, and industry to institutionalise experiential learning, mentorship, and entrepreneurial ecosystem partnerships. This must begin with integrating experiential learning, where students engage with real-world problems through internships, simulations, and university-linked start-ups. Universities must also institutionalise mentorship and support services that guide students beyond

graduation. Additionally, government and industry actors must partner more meaningfully with universities to build a comprehensive entrepreneurial ecosystem in line with the triple helix model.

In conclusion, this study reinforces the urgent need to reform entrepreneurial education in South Africa. By drawing on the theoretical insights of Human Capital Theory and Entrepreneurial Intention Theory and applying lessons from international best practice, South Africa's universities can create a more dynamic, inclusive, and responsive educational model. Such a model would not only reduce youth unemployment but also contribute to long-term economic resilience and innovation-led development.

IX. RECOMMENDATIONS

This study relied exclusively on secondary data and was therefore constrained by the availability and scope of existing literature. Despite this limitation, the study contributes by synthesising South African and international evidence to inform practical and policy-oriented reforms in entrepreneurial education. The absence of primary research or direct data collection limited the depth of the findings, as the study did not incorporate empirical evidence from surveys, interviews, or case studies (Anwar et al., 2021). This limitation may have affected the applicability of the results to specific institutions or programs within South Africa. Additionally, the focus on broad trends and challenges in entrepreneurial education might have overlooked unique circumstances or successful initiatives at individual universities. Future research could address these limitations by incorporating primary data collection through surveys or case studies of South African universities.

The findings of this study underscore the urgent need for further research to explore and address the persistent gaps in entrepreneurial education within South Africa's university system. One critical avenue involves empirical investigations of entrepreneurial ecosystems in South African universities. This study highlights the lack of robust structural support for entrepreneurship, including mentorship, funding, and incubation frameworks. Case study methods or comparative analyses could be employed to examine universities that have successfully implemented such systems, both locally and globally. These studies should prioritise identifying best practices in fostering systemic collaboration among academia, industry, and government, using models such as the triple helix model as benchmarks. In addition, longitudinal research tracking the outcomes of entrepreneurial graduates over time would provide deeper insights into the effectiveness of various support mechanisms in translating entrepreneurial intentions into successful ventures.

The integration of experiential learning and innovative teaching methodologies into entrepreneurship curricula also warrants deeper examination. This study identifies the dominance of traditional lecture-based pedagogies as a barrier. Future research might assess the impact of specific experiential methods. Examples include business simulations, project-based learning, and the use of digital tools within learning environments. Experimental studies comparing the entrepreneurial outcomes of students exposed to these methods with those of students who use conventional teaching approaches would offer actionable insights for curricular reform.

Sustainability in entrepreneurial education remains another under-researched domain. Despite the global shift towards embedding sustainability into entrepreneurship programmes, South African universities have been slow to adopt this trend. Future studies could explore how sustainability principles, including the United Nations Sustainable Development Goals, can be incorporated into entrepreneurship education in a contextually relevant manner. Comparative research focused on other developing countries could provide important lessons. In addition, longitudinal analysis could evaluate the long-term impact of sustainability-oriented entrepreneurial education on business success, innovation, and societal progress.

Further research is also needed to explore innovative and context-specific funding mechanisms for student-led ventures. While this study

identifies limited access to funding as a significant barrier, future studies could assess the feasibility of university-based venture funds and government-backed seed funding. Additional models might include crowdfunding platforms and impact investing strategies. In-depth qualitative research with students, educators, policymakers, and industry leaders would help uncover the barriers and enablers of funding access and entrepreneurial support at South African institutions.

Finally, future research should diversify its methodological approach. While this study primarily relied on desktop research, future investigations could incorporate primary data collection through surveys, interviews, and focus groups with students, academics, and ecosystem stakeholders. A mixed-methods approach that combines qualitative and quantitative perspectives would offer a more comprehensive understanding of the systemic, pedagogical, and contextual factors shaping entrepreneurial education in South Africa.

X. CONCLUSION

This study underscores the critical deficiencies in entrepreneurial education within South Africa's universities. It reveals a system that remains misaligned with the realities of fostering sustainable entrepreneurship and addressing the nation's persistently high youth unemployment rate. Although entrepreneurship is widely recognised as a catalyst for economic growth, the disconnect between academic learning and entrepreneurial outcomes continues to limit graduates' ability to launch sustainable ventures. This disconnection between academic learning and entrepreneurial outcomes limits the system's ability to generate viable business ventures, thereby weakening the broader national goal of inclusive economic development.

The study's findings highlight the urgent need for a systemic overhaul of entrepreneurial education. South African universities must move beyond traditional lecture-based approaches and instead implement experiential learning models that prioritise practical application, critical thinking, and innovation. Furthermore, the absence of institutional support systems, such as mentorship programmes, university-linked incubators, and accessible seed funding, leaves graduates without the tools required to succeed in competitive entrepreneurial environments. Without these foundational resources, students' entrepreneurial intentions cannot be translated into meaningful business action.

This study calls for decisive reform to entrepreneurial education in South Africa. Restructuring must include integrating experiential learning strategies, adopting an innovation-focused teaching approach, and establishing supportive, collaborative entrepreneurial ecosystems. Aligning with global best practices means adopting pedagogical models that combine theory and applied learning, strengthening institutional partnerships, and ensuring education systems are responsive to industry needs and sustainability goals. Only by addressing these systemic shortcomings can universities unlock the entrepreneurial potential of South African youth and contribute meaningfully to inclusive national development.

XI. CONFLICTS OF INTEREST

There are no conflicts of interest in this study.

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