Ed Process Int J

www.edupij.com

ISSN 2147-0901 (Print), 2564-8020 (Online)

EDUCATIONAL PROCESS
INTERNATIONAL JOURNAL

Entrepreneurship Education in Higher Institutes of Learning in South Africa: Challenges and Opportunities

Lawrence Vorvornator, Joyce Midiniso

Review Article

Cite this article: Vorvornator, L., & Midiniso, J. (2025). Entrepreneurship Education in Higher Institutes of Learning in South Africa: Challenges and Opportunities. *Educational Process: International Journal, 17*, e2025359. https://doi.org/10.22521/edupij.2025.17.359

Received May 11, 2025
Accepted June 24, 2025
Published Online August 9, 2025

Keywords: Higher education, Entrepreneurship, Unemployment rate, Inequality, Poverty.

Author for correspondence:
Lawrence Vorvornator
vorlaw@gmail.com
University of Zululand, South Africa

Abstract

Background/purpose. The paper explores entrepreneurship education opportunities and challenges in South Africa universities. South Africa's historical legacy of inequality, poverty, and unemployment forced authorities to introduce entrepreneurship curricula in universities to inculcate entrepreneurial skills regardless of racial background to solve social problems. However, numerous challenges surround the successes of entrepreneurial education in higher institutions.

Materials/methods. The study is grounded in the Change Points approach to explore entrepreneurial education opportunities and challenges in South African universities. Entrepreneurship education literature review where search strings generated 1,395 hits. After screening, 1,340 articles were excluded, and 55 articles were selected for review and included in the write-up.

Results. Challenges identified range from shallow curricula that contradict market demands to leadership incompetence in delivering curriculum content, mismanagement, and embezzlement, resulting in a lack of funds to provide practical entrepreneurship skills. Historically disadvantaged universities' environments are also not conducive to entrepreneurial learning. We argue that despite massive investment in resources, staff, and infrastructure, the entrepreneurship education outcomes are unfavourable; entrepreneur graduates are 'half-baked', lack innovative and creative skills, undertake 'copycat' businesses, and become job seekers rather than job creators. They contribute to existing unemployment, inequality, and poverty. The paper therefore recommends curricula redesign to produce the skills needed in the labour industry. Higher institutions' management should provide leadership skills to lecturers, financial management and auditing should be strengthened, and industries and universities should collaborate to 'produce' quality entrepreneurs.

Conclusion. The paper believes that implementing such measures can help reduce the current 34.7 percent unemployment rate.

1. Introduction

The paper examines the opportunities and challenges of entrepreneurship education in higher education institutions in South Africa. Entrepreneurship has become critically important to various economies around the world, including those on the African continent (Sarkar et al., 2017; Ajide & Soyemi, 2022). This is due to the significant contributions that entrepreneurial activities have made to these economies, creating job opportunities and thereby reducing high unemployment and poverty rates, which have become a common feature in some economies. Entrepreneurial activities contribute to an increase in a nation's economic growth and development (Agbim, 2020).

Despite the important roles played by entrepreneurs, ongoing debates persist regarding the definition of an entrepreneur or what entrepreneurship entails (Vrbka, 2020). While some scholars examine entrepreneurship as the ability to take risks beyond what is usually encountered to start a business (Salikin et al., 2014), others assert that an entrepreneur is an individual, who can set up a business, and/or willingness to take a financial risk with the hope to make profits (Agbim, 2020). This implies that an individual should be innovative, take risks, and accurately predict the market mechanism (demand and supply) to produce goods and services in short supply, thereby meeting market demands. This study's focus on areas such as simulation-based learning, project-based learning, and gamification to equip students at higher education institutions is what sets it apart from similar research. Because, the traditional classroom set-ups where teaching and learning always concentrate on the formal curricula over lived their stay (Vaithianathan et al., 2024).

The paper adopts the Change Points approach by Weiss (1995) to explain the opportunities and challenges in entrepreneurship education in South Africa's higher institutions of learning. The Change Points approach explores significant process of thinking through challenges such as unemployment, poverty and inequality, document programmes, and interventions, about how it will work, the people it will benefit, and the conditions, that is required to produce quality entrepreneur graduates who will contribute to the South Africa's economy (Jones & Rosenberg, 2022). The Change Points approach is typically designed in phases of program development, based on evidence, beliefs, and assumptions (Jones & Rosenberg, 2022).

In Africa, as elsewhere, entrepreneurship is recognized as an "engine for innovation'', job creation, and enhancement of economic growth and development (Kwaku Amoah, 2018). Hongbo et al.'s (2018) study revealed that 98 percent of domestic entrepreneurs in Côte d'Ivoire contributed to 18 percent of the country's gross domestic product (GDP) and accounted for 20 percent of job opportunities. Nuwagaba (2015), cited in Amoah et al. (2023), argued that entrepreneurship transforms Tanzania's economy from a command to a market economy.

Amoah et al. (2023) further noted that domestic entrepreneurs in Tanzania contributed 60 percent of the nation's GDP and created jobs in the economy. This reduces unemployment and improves people's living standards. In South Africa, the government considers domestic entrepreneurship as a means to achieve the National Development Plan's (NDP) goals and objectives by 2030 (Moholwana, 2015). This is revealed by NDP's record that entrepreneurship is targeted to create 90 percent of the nation's jobs by 2030 (Mohalwana, 2021).

Despite entrepreneurship's contribution to the nation's economy, entrepreneurs face challenges such as lack of funding, lack of friendly business environment, poor access to markets, legal and regulatory environment, lack of business management skills, tax burden, cultural differences, and inaccessibility to start-up capital (Korsi, 2022; Fatoki,2013; Khosa & Kalitanyi, 2015; Tengeh & Asoba, 2016).

The South African government recognised the importance of entrepreneurship education as a viable solution to the challenges of inherited apartheid and the current unprecedented

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

unemployment rate, and introduced entrepreneurship curricula at the nation's higher education institutions (Department of Higher Education and Training, 2015). Entrepreneurship education at universities aims to equip citizens with entrepreneurial skills, create jobs, reduce poverty and inequality, improve economic growth and development, and enhance the balance of payments (BOP). The improved BOP is a situation where a nation's export exceeds its import. Resources and manpower were provided to instill entrepreneurship skills in the students (Ngote et al., 2016).

However, over three decades, poverty, inequality, and unemployment rate are still endemic. As of 2022, Statistics South Africa reported that the unemployment rate in the country was 34.7 percent, and 32.1 percent in the third quarter of 2024 (Statistics South Africa, 2024). This sparks outrage and debates across the country, prompting a nationwide assessment of the impacts of entrepreneurship education in higher institutions. What challenges are affecting entrepreneurial education in higher institutions, before it cannot achieve its mandate? And what are the opportunities available for the government to tap into and address the challenges to achieve its goals? This study aims to examine the available opportunities and challenges faced by entrepreneurship education at the higher institutions of South Africa.

Apart from the empirical academic contributions to the existing body of knowledge, the paper will benefit the industry players, South African government, and policy practitioners to formulate policies to promote effective delivery of entrepreneurial education in higher institutions; which will have positive effects on South Africa's economy regards to job creations, and economic growth and development in the long run. The paper is structured as follows: theoretical framework, literature review, and methodology. Thereafter, results, discussions, conclusion and suggestions. The next section presents the theoretical framework of the study

2. Theoretical Framework

The paper adopts the Change Points approach by Weiss (1995) to explain the opportunities and challenges in entrepreneurship education in South Africa's higher institutions of learning. The Change Points approach explains the process of thinking through challenges, documenting programs and interventions to determine how they will work, the people they will benefit (citizens), and the conditions (resources, staff, and infrastructure) required to make them successful (Jones & Rosenberg, 2022). The theory of change is typically designed in phases of program development, based on evidence, beliefs, and assumptions (Jones & Rosenberg, 2022). Some theories of change aim to address practical situations (such as unemployment, poverty, and inequality) and are scientifically tested, inform us about how to positively influence people's behaviors.

Change Points approach embodies two characteristics. First, everyday life, such as poverty, unemployment, and inequality, does not present itself as a series of discrete moments; it is a changing point that is not simply given by empirical reality. Rather, they are identified as analytically and pragmatically as potential issues that need to be addressed. Secondly, the Change Points are interconnected rather than disjointed across space and time. This implies that what happens in one moment of action helps bring the needed different possibility at another moment. Therefore, to make a logical conclusion, it can be established that the Change Points approach produces an unworkably complex web of connections.

The change point approach contains 'explanatory power'; this means it explains why particular actions will lead to specific outcomes (Reinholz & Andrews, 2020). The change points approach indicates how a programme is supposed to work out and achieve its expected goals. However, it does not explain how and why a particular programme will bring about change.

The Change Points approach helps in more effective program delivery and assesses the merits and demerits, and its ability to evaluate outcomes you want to achieve. It is a programme that assists

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

in justifying government or philanthropic spending, and communicates outcomes to the stakeholders (Church & Rogers, 2006). It elaborates on the set of conditions, activities and processes that can bring the expected outcomes; and can be tested, and interrogated through evaluation. It provides the opportunities to engage with the programme staff, implementors, and beneficiaries to:

- formalise strategies, knowledge, and experiences
- to explore the shared vision of the entire programme
- and, to identify the key enablers and barriers to achieve success (Aromatario et al., 2019; Funnell & Rogers, 2011).

Change Points approach is employed to exemplify how such programmes might move beyond the individuals to attend to social and material constituent of practices (Southerton et al., 2011). It aims to express a shift in governmental understanding of situations from ‘'the expression of an individual's values and attitudes'’ to ‘'the observable expression of [a] social phenomenon'’ (Spurling et al., 2013, p. 47). Of particular note was a recognition of systematic interdependencies practices, and the production and consumption (market mechanism), and wider socio-political, cultural, economic, and material developments, which entails demand. This approach is informed by the practice theories, and in this paper, we engage in critical debates about the challenges inherited from the apartheid government (unemployment, poverty, and inequality) with practice theory (entrepreneurship education in higher institutions in South Africa), to solve the problems (Keller et al., 2016). Therefore, the Change Points approach is deemed appropriate to provide the necessary explanation and solutions to the challenges inherited from the apartheid government, as well as to evaluate the resources invested in higher institutions for entrepreneurship education and their possible outcomes.

Recognising the challenges inherited from the apartheid government by the first Black South African government, they realise the need to adopt the Change Points approach to address these challenges. Hence, the introduction of entrepreneurial education in higher institutions of learning aims to produce qualified graduate entrepreneurs who can add value to the economy. Are the resources invested and policies implemented making an impact on the entrepreneur graduates and the economy? Is entrepreneurship education in universities equipping students with the entrepreneurial skills they needed? These are the questions the paper aims to answer. The next section presents the literature review of the study.

3. Literature Review

Arguments and frame context of discourse about entrepreneurial education in South African universities are presented to put the study into perspective. The experiences of apartheid are indelible marks across all spheres of human endeavours in South Africa. This has affected the economy, infrastructural distribution, and human resources development since the marginalised group (Black South Africans) were denied mainstream education and economy (Crush, 2022). In 1994, with the ushering in of democracy, the inequality, poverty, and high unemployment inherited by the first Black South African government informed the education planners, stakeholders, and policymakers, who channelled resources to the nation’s economic growth and development (Ngote *et al*., 2016). Entrepreneurship education in higher education was considered a 'Change Point' and a viable option for equipping human resources and nation development. Regarding curricula, they were redesigned and resources were assembled to facilitate the rollout of entrepreneurship education across the nation (Department of Higher Education and Tertiary Education, 2016). In other words, South Africa realised the need to channel its resources to equip students with entrepreneurial skills in higher institutions to contribute meaningfully to the nation’s economy (Khosa & Khalitanyi,

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

2015). Hence, curricula and programs were put in place to facilitate the take-off of entrepreneurship education across the nation (Crush *et al.,* 2015).

However, the programme faced challenges such as a lack of human resources, inadequate infrastructural development, improper curriculum delivery, and embezzlement, among others (Tengeh, 2013). Because the entrepreneurs who graduate do not contribute to the economy by creating jobs. There is an instead a surge in the unemployment rate, at 34.7 percent (Statistics South Africa, 2022).

In other words, the sub-standard entrepreneurs are produced by nation's higher institutions. This has contributed to the high youth unemployment in the country, as graduate entrepreneurs add to the existing number of unemployed graduates. This has been a concern, as large resources and funds are channeled into entrepreneurship education, yet the results are minimal, make it worthwhile to investigate. Below are the arguments for entrepreneurial education opportunities and challenges in higher institutions in the existing literature:

Opportunities for Entrepreneurs' Education in Higher Institutions

The opportunities are the possible outcomes that result from the effective operation of an entrepreneurial education system in South Africa's higher institutions.

Entrepreneurship Is the Main Driver of the Nation's Economy

Entrepreneurship education is considered a key driver of unemployment reduction, inequality, and poverty in Africa. According to Kwaku Amoah (2018) and Apenteng and Doe (2014), entrepreneurs on the African continent are noted to contribute approximately 70 percent of jobs and employment. Abor and Quartey's (2010) research conducted on entrepreneurs in Ghana revealed that entrepreneurs' GDP contributions to the nation's economy are 70 percent, and it is believed that about 92 percent of Ghanaian businesses are made of SMEs. In the same publication, they asserted that 91 percent of SMEs, which are formal business entities, contributed between 52 and 57 percent to the nation's economy, with an employment generation rate of 61 percent (Abor & Quartey, 2010). It implies an effective entrepreneurship education contributes positively to any nation's economy. Therefore, South Africa's government decision for entrepreneurship education in higher institutions is a step in the right direction to equip citizens with entrepreneurial skills. This will enable citizens to contribute to the nation's economic growth and development, thereby reducing social ills inherited from the apartheid government.

Business Opportunities and Innovations

Wach's (2020) research reveals that entrepreneurs are noted for innovations and job creations. Kement (2021) defines innovation as the process of introducing new products into market mechanisms that are in short supply. However, the type of innovation businesses come out with depends on entrepreneurs' ability, skills and agility; also resources availability, and the firm's size, above all the environmental structures that is political and institutional structures (Kloosterman, 2010), since enterprises do not operate in vacuums' (Rath, 2006). It means that entrepreneurship education at higher institutions should be vibrant to equip learners with required entrepreneur skills and acumen. This means students should not be trained to operate 'copycat' businesses, but rather should be equipped to think outside the box; be originators and innovators of ideas to produce goods and services that are in short supply. It implies that diversification and intensification should be hallmarks for would-be entrepreneurs. Without the required skills in entrepreneurship, the economy may contract, resulting in unemployment, poverty, and higher inflation.

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

Entrepreneurs' Roles in Corporate Social Responsibilities (CSRs)

Entrepreneurs are found to undertake corporate social responsibility (CSR) services, such as donating computers, providing scholarships to brilliant but needy students, supporting sports events, building and constructing schools and bridges, implementing electrification projects, and extending clean piped water to deprived communities and towns (Ezzi et al., 2020). Ezzi et al. (2020) argue that the strong social responsibility of entrepreneurs leads to positive organisational performance, making enterprises competitive and vibrant in their communities and towns (Niu et al., 2022).

Considering the benefits of CSRs, managers strive to design benefits for enterprises' stakeholders, such as employees, in terms of skills development, remuneration, and professional development (Akimov et al., 2016), from the perspective of attractive employer value propositions (Samoliuk et al., 2021). Amaeshi et al's. (2016) research elaborated that formerly, the enterprises did not undertake CSRs as part of their operations. Because of that, most businesses collapsed since they were separated from communities and towns. However, since businesses incorporated CSRs as part of their business goals, the gap between communities and businesses is closed. Because the businesses realised that they are microcosms within a macrocosm. This means both businesses and the community are interdependent, or depend on each other in one way or another. Without community, businesses would not operate, and without businesses, the community would 'struggle' to get basic goods and services. Therefore, the decision by the Black South African government to produce quality entrepreneurs will, in the long run, assist the state in developmental projects, since the would-be entrepreneurs will extend their CSRs to the communities.

Entrepreneurs' Contributions to Economic Growth and Development

Economic growth and development have become the hallmarks of successive governments in both developing and developed nations (Orel et al., 2022). Economic growth refers to an increase in a nation's productivity, characterized by growth in GDP at a given time. Further, economic development encompasses the living standards of citizens, including their access to education, health, housing, water, and electrification (Orel *et al*., 2022). According to Kongolo's (2010) research, economic development is a process that improves economic, social, and human rights, as well as the welfare and well-being of people (Androniceanu et al., 2019). Muriithi's (2017) research reveals that economic development is a means and process designed to positively uplift the economic well-being of the indigenous. Muriithi (2017) further elaborated that economic development calls for job creation, innovation, economic diversification, and the creation of business opportunities and wealth.

Economic development is achieved through effective entrepreneurial education at higher institutions, enabling nations to produce entrepreneurs who can add value to the economy (Androniceanu et al., 2021). In situations where nations lack quality entrepreneurs, the economy declines, and it triggers unemployment, poverty, international migration, inequality, and inflation, among other problems. The inheritances from the apartheid government, which comprise poverty, unemployment, and inequality, the decision by the first Black government to implement entrepreneurship education in the higher institutions is to ensure positive contributions to the economy. Because the entrepreneurship education will equip students who are not likely to be redundant and job seekers, as was the case during the apartheid, but rather job creators and 'assets', to the nation.

Challenges Faced by Entrepreneurial Education in Higher Institutions

Challenges are obstacles that retard effective entrepreneurial education teaching and learning in South Africa's higher institutions. These range from inadequate infrastructural development, shoddy curricula, lack of competency among teachers, and personal gains on the part of managers.

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

Inadequate Infrastructure Development

The introduction of entrepreneurship education in higher institutions was not without challenges (Fatoki, 2014). Most of the challenges are related to infrastructural development, particularly in previously disadvantaged universities (Chreim et al., 2018). These universities lack the necessary resources and facilities to transfer entrepreneurship skills and conduct practical lessons (Duan et al., 2021). Entrepreneurship education lessons are delivered in a manner similar to traditional theory subjects. Vorvornator's (2022) research reveals that the practical aspect of entrepreneurial education, which could equip learners, was lacking because of inadequate infrastructure development on university campuses. Hardly are entrepreneurship education practices. At times, educators improvise resources for teaching purposes, which means that the actual entrepreneurship skills transferred to students are below the required standard. Entrepreneurship students graduate without acquiring skills in entrepreneurial practical approaches. They become 'liability' entrepreneurs who cannot innovate, lacking the skills to supply goods and services that are in short supply in the market. Some entrepreneur graduates, after completion, add to the existing unemployment rate. This negatively affects their contributions to the economy after they complete their studies.

Shoddy Curricula Implementation

Another Change Points approach to apartheid inherited poverty, inequality, and unemployment is the curricula. Research revealed that the curricula comprise the expected skills and knowledge to be taught, as well as what learners do in the programme of study (Azmat, 2012). Curricula serve as a guide and detailed programme that need to be implemented to equip students. This means that in-depth curriculum design, incorporating knowledge with appropriate methods of teaching and learning, may equip learners with the requisite skills (Azmat, 2012). The curricula designed for entrepreneurship education in South Africa's higher institutions are shallow, and they do not reflect many details about the needs of the market mechanism (demand and supply) (Azmat, 2012). This implies there is a mismatch between the market mechanism and entrepreneur graduates (products) which universities churn out (Cho et al., 2019).

This suggests that entrepreneur graduates often become 'half-baked', failing to meet the demands of the market environment, which leads to demand exceeding supply. Entrepreneurs' graduates also add up to the existing unemployed graduates in the economy who are seeking employment, instead of them (entrepreneurs' grandaunts) being job creators, but not job seekers. Many entrepreneurs graduate each year, but the market demands are not met because of poorly designed curricula. Entrepreneurship graduates often struggle to have a positive impact on the nation's economy, which can lead to economic decline instead of expansion. To address this, entrepreneurship education is implemented to achieve this goal (Cho et al., 2019).

Teachers Lack Competency Skills

Human resources competency to deliver curricula was another challenge (Ngota et al., 2016). Teachers and personnel employed to deliver the curriculum's content often lack the technical know-how, acumen, competency, and professional qualifications (Ngota et al., 2016). The lack of specialists and competent lecturers in the field of entrepreneurship education contributes to the low-quality productivity of students (Tengeh, 2013). Hence, it poses challenges to employers to employ the entrepreneurs' graduates to contribute meaningfully to South Africa's economy, let alone to start their own businesses. This implies that the resources and infrastructure investment in higher institutions to develop entrepreneurs to contribute to the economy becomes wasted. Entrepreneurs from higher institutions' grandaunts become a liability instead of assets that contribute to economic growth and development.

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

Personal Gains on the Part of Managers

The malfeasance, corruption, mismanagement, nepotism, and embezzlement of available funds and resources provided by the authorities and managers led to a lack of finances to provide practical entrepreneurial skills to students, which was also identified as a challenge (Robb & Fairlie, 2007; Vorvornator & Mdiniso, 2022). Managers of funds for entrepreneurial education projects at universities designed dubious avenues and siphoned state resources available for entrepreneurship education in higher institutions for their personal use (Robb & Fairlie, 2007). Teaching and learning were hindered since the resources needed for effective curriculum content delivery were not available (Holguin et al., 2007). Managers' acts of corruption and embezzlement have a negative impact on the future of citizens and the unborn generation. In comparing corruption and prostitution, it is observed that the act of prostitution is far less detrimental than corruption, as the consequences of prostitution affect individuals. In contrast, corruption can destroy communities, societies, and nations (Robb & Fairlie, 2007). What are the opportunities and challenges for entrepreneurship education in South African universities? The next section presents the methodology of the study.

4. Methodology

The study employs an entrepreneurial education literature review (LR) to examine the opportunities and challenges of entrepreneurship education in South African universities. Vartanian (2010, p. 21) explains that LR is ‘‘the process of accessing published secondary data. The definition depicts two distinct characteristics. This implies that the LR adopts only published data, not primary information. The published material is broadly used, consisting of journals, books, articles, organisational, and non-organisational reports (Maxwell, 2021). The second characteristic reveals that the LR is employed ‘‘in-house’’, not in the field (Vartanian, 2010. p. 11). This means data was collected from the existing literature.

Several search engines such as Google Scholars, JSTOR, Scopus, Web of Science, EBSCOhost, Research Gate, entrepreneurship websites such as Startup Grind, Young Entrepreneur Council (Y.E.C), and Business Council for International Understanding, and journals namely: Journal for Small Business Management, Family Business Review, Journal of business Ethics among others, and search terms namely: ‘entrepreneurs’, ‘entrepreneurship education’, ‘entrepreneurs’ opportunities’, ‘entrepreneurs’ challenges’, and ‘entrepreneurship higher institutions’, were employed.

The study identified 1,395 relevant publications; 1,384 of these were obtained through an electronic search, and 11 were identified through a backward and forward search. The inclusion and exclusion process was carried out through an assessment of eligibility criteria. This involves synthesizing the articles based on the entrepreneurship education, research objectives, and research questions for the study. Through an eligibility assessment, a total of 55 articles i.e. (1,395-1,340), were selected through the following criteria: a) the articles that concentrated on either entrepreneurs’ opportunities and challenges; b) focused on entrepreneurial education; c) published in 2008 or later; d) published in English (Creswell, 2013). The sixteen years were considered significant because they marked the phenomenon of the Great Depression, an unprecedented global economic meltdown. This was the period of high unemployment, housing prices and stocks plummeted, and the lives of millions were disrupted. Many scientific studies have been published to help economies recover from their downturn (Song & von Wachter, 2014).

Templier and Paré (2015) identify six steps in conducting LR, namely: a) identifying the objectives and research questions; b) finding the relevant articles; c) making an inclusion; d) exploring articles; e) data extracting, and f) data analysing. All articles considered not relevant were excluded through examining abstracts, full-text, languages, and methods that are not related to this study. After the eligibility check, we proceeded to the data extraction and analysis stage. Data extraction deals with coding relevant articles related to entrepreneurship education opportunities and challenges in South

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

African universities. We employed 'framework analysis', which is a methodological procedure that extracts and analyzes entrepreneurship education literature. Because, it provides a structured approach and guiding process that facilitates both the extraction and analysis of relevant data. The procedure Ritchie and Spencer (2002) described as "sifting, charting and sorting materials according to key themes and issues". In a specific term, the familiarisation process was conducted to gain in-depth knowledge about the importance of articles, identify a thematic framework, and categorise memos based on the concepts and ideas that emerged from the entrepreneurship education literature review. Indexing is achieved by sifting through information related to specific themes. Charting the information was used to sort out relevant headings and subheadings during the thematic framework stage (Creswell, 2013). Mapping and interpretation comprise gathering and analyzing all the criteria features of the dataset, and performing a synthesis of the information.

Several articles selected for the study employed a range of quantitative, qualitative, and mixed methodologies. A meta-analysis was not conducted for the quantitative and mixed research data because the research methods did not share the same variables. Textual information was mapped and coded accordingly by employing a framework analysis approach. The theories and LR present broader pictures, baseline information, and an understanding of the previous literature on entrepreneurship education opportunities and challenges in South African universities (Maxwell, 2021). Entreprenurship education LR helps to avoid duplication of existing works by authors. However, a limitation is that not all academic search engines were employed, so some existing literature may be inaccessible to us. Figure 1 shows the article selection procedure presented below.

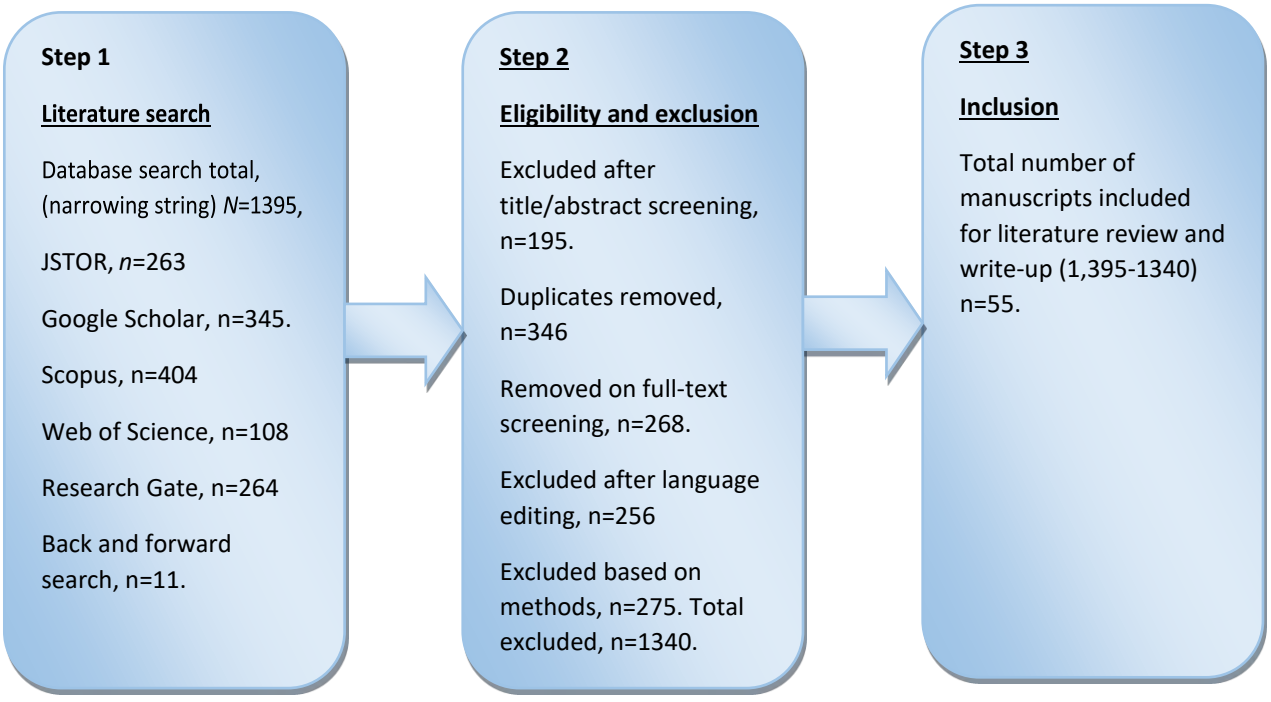

Figure 1. Articles Selection Procedure

5. Results

Findings on entrepreneurship education opportunities and challenges in South African higher institutions are presented in two folds, which consist of opportunities and challenges. The study's findings reveal that entrepreneurship education in higher institutions is a vital means of bringing about positive change in any nation, whether developed or developing, to improve its economy (Abor & Quartey, 2010). This means that without an effective entrepreneurial sector, the economy may experience stagnation or recession (Kloosterman, 2010). A recession is characterized by two

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

consecutive quarters of economic activity decline, which leads to higher prices, unemployment, and a decline in employment. Citizens become uncomfortable with unfavourable economic conditions, which could spark migration to another country.

Entrepreneurship education globally serve as a main economic driver in reducing unemployment and increasing employment (Apenteng & Doe, 2014). This is achieved through economic growth and development (Orel et al., 2022). Economic growth refers to an increase in the production of goods and services, whereas economic development is characterized by an improvement in people's living standards (Orel et al., 2022). This implies that economic growth is primarily concerned with productivity, while economic development focuses on access to quality water, education, health, and infrastructure development (Muriithi, 2017). Research indicates that nations with high per capita income have effective entrepreneurs who innovate, intensify and diversify to contribute significantly to the nation's economy (Abor & Quartey, 2010). This implies that for a nation to develop entrepreneurship education at the higher institutions, it needs to be taken seriously to equip human resources to overcome the challenges of poverty, unemployment, and inequality (Orel et al., 2022).

Wach (2020) and Kloosterman (2010) find that entrepreneurs' effective contributions to an economy depend on the socio-political institutions operating in the country. Kloosterman (2010) explained that unfavourable socio-politico institutions retard the entrepreneurs' innovation skills, whereas favourable socio-politico institutions trigger the innovation skills. This implies that authorities can create unfavourable conditions for entrepreneurs' innovations, thereby weakening the nation's economy. Unfavourable socio-political institutions lead to an increase in unemployment and a decrease in employment, inflation and economic decline (Kloosterman, 2010). This situation may spark citizens migration to other nations to seek greener pastures. Whereas favourable socio-political institutions improve economic prosperity, which leads to an increase in employment and a decrease in unemployment, a reduction in the prices of goods and services, as well as an increase in production (Kloosterman, 2010). This improves the citizens' living standard and attracts migrants from other nations to the economy (Rath, 2006).

Ezzi et al's (2020) research also reveals a friendly socio-politico institutional framework that leads to economic prosperity, enabling entrepreneurs to extend their CSRs to individuals, communities, and societies. Akimov et al's. (2016) research elaborated that workers' wages and salaries are increased to improve their living standards. The brilliant but needy students are sponsored to schools, and marginalised and disadvantaged individuals in societies are extended a helping hand through CSR initiatives. These individuals could have been a burden on the nation if the CSR's initiative had not been extended to them. Support for sporting events and infrastructure construction, which should have been the authorities' sole responsibility, is provided through CSR initiatives. This alleviates the nation's government's plight and enhances its economic development. The paper's findings reveal that entrepreneurial graduates' innovation and creativity skills pose challenges in the economy, as these skills are not typically imparted through teaching and learning in higher education institutions (Horvath et al., 2021). This affects the ability of entrepreneur graduates to think critically and create business opportunities in the real world as entrepreneurs (Horvath et al., 2021). Lack of innovativeness and creativity leads to 'copycat' businesses that do not add any economic value, but create a perfectly competitive markets that lead to high competition in the market.

Findings on Entrepreneurship Education Challenges

The study's findings on challenges identify that inadequate infrastructure development retards 'input' that needs to be delivered in the entrepreneurship educational set-up. This implies that, since there are no adequate resources and infrastructure, entrepreneurial practical activities need to be executed to equip students with entrepreneurship skills that are poorly taught (Chreim et al., 2018). Students are taught theories rather than practical skills, whereas labour industries and employers

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

need practical implementation of ideas rather than theory. Entrepreneur graduates complete higher institutions with a half-baked education for the labour industry. This makes it difficult for them to contribute their quota for economic growth and development. This results in a mismatch in the field of work, rendering entrepreneurship education redundant at higher institutions (Fatoki, 2014).

Teachers, who are the implementers of entrepreneurship education, often lack entrepreneurial practical skills during schooling days (Ngota et al., 2016). They went through the theory aspect of entrepreneurship education, as they did not have an idea about the practical approaches. In some instances, some educators did not have qualifications in entrepreneurship education before teaching. They were employed due to a shortage of personnel to implement entrepreneurship education in higher institutions. Others are employed due to nepotism, which affects their input in entrepreneurship education at higher institutions (Holguin et al., 2007).

Managers' actions and behavior in curriculum implementation significantly impact the effective delivery of entrepreneurship education in South Africa's higher education institutions. Due to inadequate probity and accountability, managers mismanaged funds allocated for the effective implementation of entrepreneurship education, by prioritizing self-interest (Ngota et al., 2016). We establish that despite massive investment in resources, staffs, and infrastructure to equip South Africans with entrepreneurial skills, the outcome is unfavourable. Entrepreneur graduates are 'half-baked', and they are job seekers rather than job creators, adding to the existing unemployment rate, inequality, and poverty.

Overall, the paper argues that entrepreneurship education at higher institutions has the potential to contribute to the economic development of both developed and developing nations, ultimately leading to improved living standards for citizens. However, challenges such as personal interests overriding organisational goals, policy implementors' and educators' incompetence, which lead to entrepreneurs' theories being taught over entrepreneurial practice, affect the quality of entrepreneur graduates churned out in South African higher institutions. This results in the demand of labour-intensive industries not being met. This leads to massive unemployment in the country and underdevelopment.

6. Discussion

Inherited apartheid legacies such as poverty, inequality, and unemployment in South Africa's first Black government led to the adoption of entrepreneurship education as a change point to achieve economic growth and development (Weiss, 1995). The democratic government assembled resources, designed policies, held conferences, and educated citizens on the need to embrace the programme; to achieve economic growth and development; improve citizens' living standards, and bridge the inequality gap. However, the implementation and execution were ineffective, which affects the quality of entrepreneurs' education quality in South Africa's universities

The Change Points approach is one of the theories that emphasizes on finding practical and pragmatic solutions to societal challenges (Jones & Rosenberg, 2022). It identifies the elements that can be available to achieve practical solutions to existing challenges. However, entrepreneurs' education in the higher institutions was also implemented as the normal traditional curricula, which entails rote teaching and learning, instead of practical skills training, project-based learning, and gamification. This prevented students from equipping themselves with entrepreneurial skills.

The Change Points also emphasized interconnected rather than disjointed actions. However, during the implementation and execution of entrepreneurship education, universities and industries did not collaborate to determine the manner in which the programme could be implemented to produce quality students. This leads to a mismatch in the entrepreneurship education quality

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

'production' from the universities to fill the skills shortage in the industry, hence, it leads to an increase in unemployment rate (Reinholz & Andrews, 2020).

The Change Points approach prioritizes effective delivery and the ability to evaluate and monitor projects. But there were instances where funds allocated for effective entrepreneur education teaching and learning were embezzled and mismanaged by individual's and officials. Moreover, people are employed without merits but rather based on mediocrity. This affects effective delivery of entrepreneurship education in the higher institutions, hence students are half baked in their completion of the course (Reinholz & Andrews, 2020).

The Change Points approach consists of formalized strategies, which explore shared visions of the entire programme and identify enablers and barriers to achieve the desired results (Southerton et al., 2011). These qualities were lacking in the entrepreneurial education implementation in South African universities. Entrepreneurial education was rolled out with shoddy curricula, incompetent lecturers, and some of the disadvantaged universities have inadequate infrastructure for effective take-off. Despite a formidable effort to adopt a Change Points approach to address apartheid's inherited challenges, entrepreneurial education was a failure from the outset, as the necessary measures were not implemented to serve as a basis for effective entrepreneurial education. (Reinholz & Andrews, 2020). All in all, ineffective adoption and implementation of the Change Points approach to solve inherited apartheid challenges led to massive resources investment with no desired results.

7. Conclusion

The paper explored entrepreneurship education opportunities and challenges in South African higher institutions. It is revealed that entrepreneurship education at universities is the key to any nation's economic prosperity. The study's findings reveal that effective entrepreneurship education enhances expansion in the economy, which affects economic growth and development; increases in the GDP, improves BOP, and people's living standard. Infrastructural development receives its fair share which attracts investors into the economy and makes the nation competitive on the global stage. Regards, employment increases, unemployment reduces, and inflation reduces. However, entrepreneurship education challenges in the higher institutions revealed that shoddy curricula designed by policymakers, a lack of competent personnel to implement entrepreneurship skills, and greedy managers who prioritize own welfare rather than the organization; squandered the university resources for personal gains, pose challenges for effective implementation of entrepreneurship education. The entrepreneur education at the universities with massive resources invested and policies implemented does not equip students with the entrepreneurial skills. Students complete entrepreneurial education, instead of being job creators they become job seekers. They end up contributing to the unemployment rate in the country. We argue that despite massive investment in resources, staff, and infrastructure to equip South African citizens with entrepreneurship skills, the outcome is unfavourable. Entrepreneurial grandaunts are 'half-baked', and they are job seekers rather than job creators, adding to the existing unemployment rate, inequality, and poverty.

8. Suggestions

The paper, therefore, recommends collaboration between labour industry and curricula planners to reflect the skills shortage needed in the labour industry. This would imply that universities would churn out entrepreneurs who will fill the supply gap in the labour industry without recreating redundancy. Higher education institutions' management should provide leadership skills and workshops to lecturers to equip them with entrepreneurial skills, to enhance effective teaching and learning. Additionally, financial management skills and auditing should be strengthened. The paper believes that with such measures in place, the current 34.7 percent unemployment rate among youths and graduates can be curbed in the country.

https://doi.org/10.22521/edupij.2025.17.359 Published online by Universitepark Press

Declarations

Author Contributions. (Vorvornator L.K.: Conceptualisation, original manuscript preparation, data analysis and literature review. Mdiniso J.M.: Reviewing, editing, and writing the methodology. All authors have read and approved the published on the final version of the article).
Conflicts of Interest. The authors declare no conflict of interest.
Funding. No funding received for writing this manuscript.

References

Abor, J., & Quartey, P. (2010). Issues in SME development in Ghana and South Africa. *International research journal of finance and economics*, *39*(6), 215-228.

Agbim, K. C. (2020). Government policy, financial inclusion and performance of SMEs in South Eastern Nigeria. *International Entrepreneurship Review*, *6*(2), 69-82. https://doi.org/10.15678/ier.2020.0602.05

Ajide, F. M., & Soyemi, K. A. (2022). Oil rent, entrepreneurial start-ups, and institutional quality: Insights from African oil-rich countries. *Entrepreneurial Business and Economics Review*, *10*(1), 35-49. https://doi.org/10.15678/eber.2022.100103

Amaeshi, K., Adegbite, E., & Rajwani, T. (2016). Corporate social responsibility in challenging and non-enabling institutional contexts: Do institutional voids matter?. *Journal of business ethics*, *134*, 135-153. https://doi.org/10.1007/s10551-014-2420-4

Amoah, J., Belas, J., Dziwornu, R., & Khan, K. A. (2022). Enhancing SME contribution to economic development: A perspective from an emerging economy. *Journal of International Studies*. https://doi.org/10.14254/2071-8330.2022/15-2/5

Amoah, S. K., & Amoah, A. K. (2018). The role of small and medium enterprises (SMEs) to employment in Ghana. *International Journal of Business and Economics Research*, *7*(5), 151-157.

Apenteng, S. A., & Doe, N. P. (2014). Social media & business growth: Why small/medium-scale enterprises in the developing world should take an advantage of it (A Case of the country Ghana). *IOSR Journal of Business and Management*, *16*(5), 76-80.

Aromatario, O., Van Hoye, A., Vuillemin, A., Foucaut, A. M., Crozet, C., Pommier, J., & Cambon, L. (2019). How do mobile health applications support behaviour changes? A scoping review of mobile health applications relating to physical activity and eating behaviours. *Public health*, *175*, 8-18. https://doi.org/10.1016/j.puhe.2019.06.011

Asoba, S. N., & Tengeh, R. K. (2016). Analysis of start-up challenges of African immigrant-owned businesses in selected craft markets in Cape Town. *Environmental Economics*, (7, Iss. 2), 97-105.

Azmat, F., & Zutshi, A. (2012). Perceptions of Corporate Social Responsibility Among Immigrant Entrepreneurs. *Social responsibility journal*, *8*(1), 63-76. https://doi.org/10.1108/17471111211196575

Chreim, S., Spence, M., Crick, D., & Liao, X. (2018). Review of female immigrant entrepreneurship research: Past findings, gaps and ways forward. *European Management Journal*, *36*(2), 210-222. https://doi.org/10.1016/j.emj.2018.02.001

Church, C., & Rogers, M. (2006). Designing for results. *Search for Common Ground, Washington*.

Cho, Y., Park, J., Han, S. J., Sung, M., & Park, C. (2020). Women entrepreneurs in South Korea: motivations, challenges and career success. *European Journal of Training and Development*, *45*(2/3), 97-119. https://doi.org/10.1108/ejtd-03-2020-0039

Creswell, J. W. (2013). Steps in conducting a scholarly mixed methods study.

Crush, J. (2022). Xenophobia denialism and the global compact for migration in South Africa. In *Governing Migration for Development from the Global Souths* (pp. 133-158). Brill Nijhoff. https://doi.org/10.1163/9789004522770_007

Crush, J., Chikanda, A., & Skinner, C. (2015). Migrant Entrepreneurship and Informality in South African Cities. *Mean Streets: Migration, Xenophobia and Informality in South Africa. Cape Town: SAMP, ACC and IDRC*, 1-24. https://doi.org/10.2307/j.ctvh8r45r.5

DHET(2016).https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://edhe.co.za/wpcontent/uploads/EntrepreneurialDevelopmentinSAUniversities2011towards2021DrEngelavanStaden.pdf&ved=2ahUKEwi1pZOZ_LSKAxUzBNsEHaNXGNcQFnoECDgQAQ&usg=AOvVaw3h_XbvrdcJp4LEJ. (Retrieved20/12/2024).

Duan, J., Yin, J., Xu, Y., & Wu, D. (2021). Should i stay or should i go? Job demands' push and entrepreneurial resources' pull in the return-home entrepreneurial intention of Chinese migrant workers. In *Entrepreneurship in China* (pp. 77-96). Routledge. https://doi.org/10.4324/9781003177838-5

Ezzi, F., Jarboui, A., & Zouari-Hadiji, R. (2020). CSR categories and R&D investment: the moderating role of Managerial emotional intelligence. *Management & Marketing*, *15*(1), 17-37. https://doi.org/10.2478/mmcks-2020-0002

Fairlie, R. W., & Robb, A. M. (2007). Why are black-owned businesses less successful than white-owned businesses? The role of families, inheritances, and business human capital. *Journal of Labor Economics*, *25*(2), 289-323. https://doi.org/10.1086/510763

Fatoki, O. (2013). The determinants of immigrant entrepreneurs' growth expectations in South Africa. *Journal of Social Sciences*, *37*(3), 209-216. https://doi.org/10.1080/09718923.2013.11893219

Haseeb, M., Hussain, H. I., Kot, S., Androniceanu, A., & Jermsittiparsert, K. (2019). Role of social and technological challenges in achieving a sustainable competitive advantage and sustainable business performance. *Sustainability*, *11*(14), 3811. https://doi.org/10.3390/su11143811

Holguin, J., Gamboa, E., & Hoy, F. (2007). 13 Challenges and opportunities for Hispanic entrepreneurs in the United States. *Handbook of research on ethnic minority entrepreneurship: A co-evolutionary view on resource management*, 195. https://doi.org/10.4337/9781847209962.00020

Hongbo, L., Lucien, K. A., Raphael, Y. K., & Boris, A. A. (2018). Contribution of Small Medium Enterprises (SMEs) to Economic Development: Comparative Study of China and Cote d'Ivoire. *International Journal of Academic Research in Business & Social Sciences*, *8*(11), 1896-1915. https://doi.org/10.6007/ijarbss/v8-i11/5393

Jones, R. S., & Rosenberg, J. M. (2022). Characterizing whole class discussions about data and statistics with conversation profile analysis. *The Journal of Mathematical Behavior*, *67*, 100996. https://doi.org/10.1016/j.jmathb.2022.100996

Keller, M. M., Hoy, A. W., Goetz, T., & Frenzel, A. C. (2016). Teacher enthusiasm: Reviewing and redefining a complex construct. *Educational Psychology Review*, *28*, 743-769. https://doi.org/10.1007/s10648-015-9354-y

Kement, Ü., Çavuşoğlu, S., Bükey, A., Göral, M., & Uslu, A. (2021). Investigation of the effect of restaurant atmosphere on behavioral intention. *Journal of Tourism and Services*, *22*(12), 222-242. https://doi.org/10.29036/jots.v12i22.245

Khosa, R. M., & Kalitanyi, V. (2015). Migration reasons, traits and entrepreneurial motivation of African immigrant entrepreneurs: Towards an entrepreneurial migration progression. *Journal of Enterprising Communities: People and Places in the Global Economy*, *9*(2), 132-155. https://doi.org/10.1108/jec-07-2014-0011

Kloosterman, R. C. (2010). Matching opportunities with resources: A framework for analysing (migrant) entrepreneurship from a mixed embeddedness perspective. *Entrepreneurship and regional development*, *22*(1), 25-45. https://doi.org/10.1080/08985620903220488

Kongolo, M. (2010). Job creation versus job shedding and the role of SMEs in economic development. *African journal of business management*, *4*(11), 2288.

Korsi, V. L. (2022). Do we go or do we stay? Drivers of migration from the Global South to the Global North. *African Journal of Development Studies*, *12*(1), 71-87. https://doi.org/10.31920/2634-3649/2022/v12n1a4

Maholwana, B. (2021). *Exploring relational and coopetitive dynamics in interfirm strategic alliances* (Master's thesis, University of Pretoria (South Africa)).

Maxwell, J. A. (2021). Why qualitative methods are necessary for generalization. *Qualitative Psychology*, *8*(1), 111.Muriithi, S. (2017). African small and medium enterprises (SMEs) contributions, challenges and solutions. https://doi.org/10.1037/qup0000173

Niu, G., Quinn, J., & Olinsky, A. (2022). Insurance Company Efficiency Analysis Through Data Envelopment Analysis (DEA) During COVID-19 Pandemic. In *Applications of Management Science* (Vol. 21, pp. 3-12). Emerald Publishing Limited. https://doi.org/10.1108/s0276-897620220000021001

Orel, M., Mayerhoffer, M., Fratricova, J., Pilkova, A., Starnawska, M., & Horvath, D. (2022). Coworking spaces as talent hubs: The imperative for community building in the changing context of new work. *Review of Managerial Science*, *16*(5), 1503-1531. https://doi.org/10.1007/s11846-021-00487-4

Rath, J. (2006, June). Entrepreneurship among migrants and returnees: Creating new opportunities. In *International Symposium of International Migration and Development, Turin*(pp. 28-30).

Reinholz, D. L., & Andrews, T. C. (2020). Change theory and theory of change: what's the difference anyway?. *International Journal of STEM Education*, *7*, 1-12. https://doi.org/10.1186/s40594-020-0202-3

Ritchie, J., & Spencer, L. (2002). Qualitative data analysis for applied policy research. In *Analyzing qualitative data* (pp. 173-194). Routledge. https://doi.org/10.4324/9780203413081_chapter_9

Salikin, N., Ab Wahab, N., & Muhammad, I. (2014). Strengths and weaknesses among Malaysian SMEs: Financial management perspectives. *Procedia-Social and Behavioral Sciences*, *129*, 334-340. https://doi.org/10.1016/j.sbspro.2014.03.685

Samoliuk, N., Bilan, Y., & Mishchuk, H. (2021). Vocational training costs and economic benefits: exploring the interactions. *Journal of Business Economics and Management*, *22*(6), 1476-1491. https://doi.org/10.3846/jbem.2021.15571

Sarkar, B., Ullah, M., & Kim, N. (2017). Environmental and economic assessment of closed-loop supply chain with remanufacturing and returnable transport items. *Computers & Industrial Engineering*, *111*, 148-163. https://doi.org/10.1016/j.cie.2017.07.003

Song, J., & Von Wachter, T. (2014, August). Long-term nonemployment and job displacement. In *Jackson Hole Economic Symposium Conference Proceedings Kansas City Federal Reserve Board*.

Southerton, D., McMeekin, A., & Evans, D. (2011). *International review of behaviour change initiatives*. The Scottish Government.

Spurling, N., McMeekin, A., Shove, E., Southerton, D., & Welch, D. (2013). Interventions in practice: re-framing policy approaches to consumer behaviour.

Statistics South Africa (2022). https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.statssa.gov.za/publications/P0211/Presentation%2520QLFS%2520Q4%25202022.pdf&ved=2ahUKEwifmMau97SKAxVAQPEDHSxUKu0QFnoECBgQAQ&usg=AOvVaw3En_Bvve-soYXMY05HH2li. (Retrieved 20/12/2024).

Statistics South Africa (2024). https://www.google.com/url?sa=t&source=web&rct=j&opi=89978449&url=https://www.statssa.gov.za/publications/P0211/Presentation%2520QLFS%2520Q2%25202024.pdf&ved=2ahUKEwjEp5DN97SKAxWZQvEDHYjHAqAQFnoECB0QAQ&usg=AOvVaw2Ys69tBRS4jsXjSDqXpQf0. (Retrieved 20/12/2024).

Templier, M., & Paré, G. (2015). A framework for guiding and evaluating literature reviews. *Communications of the Association for Information Systems*, *37*(1), 6. https://doi.org/10.17705/1cais.03706

Tengeh, R. (2013). Advancing the case for the support and promotion of African immigrant-owned businesses in South Africa. *Mediterranean Journal of Social Sciences*, *4*(2). https://doi.org/10.5901/mjss.2013.v4n2p347

Vaithianathan, V., Subbulakshmi, N., Boopathi, S., & Mohanraj, M. (2024). Integrating Project-Based and Skills-Based Learning for Enhanced Student Engagement and Success: Transforming Higher Education. In *Adaptive Learning Technologies for Higher Education* (pp. 345-372). IGI Global. https://doi.org/10.4018/979-8-3693-3641-0.ch015

Vartanian, T. P. (2010). *Secondary data analysis*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780195388817.001.0001

Vrbka, J., & Rowland, Z. (2020). Using artificial intelligence in company management. In *Digital Age: Chances, Challenges and Future 7* (pp. 422-429). Springer International Publishing. https://doi.org/10.1007/978-3-030-27015-5_51

Vorvornator, L. K., & Enaifoghe, A. (2024). South African migration policy on the Zimbabwean special permit renewal experience: Diplomacy of weapons for power. *Journal of Law and Sustainable Development*, *12*(8), e3514-e3514. https://doi.org/10.55908/sdgs.v12i8.3514

Vorvornator, L. K., & Mdiniso, J. M. (2022). Drivers of corruption and its impact on Africa development: Critical reflections from a post-independence perspective. *African Journal of Development Studies*, *2022*(si2), 295.

Wach, K. (2020). A typology of small business growth modelling: a critical literature review. *Entrepreneurial Business and Economics Review*, *8*(1), 159-184. https://doi.org/10.15678/eber.2020.080109

Wang, L., Akimov, A., & Prezhdo, O. V. (2016). Recent progress in surface hopping: 2011–2015. *The journal of physical chemistry letters*, *7*(11), 2100-2112. https://doi.org/10.1021/acs.jpclett.6b00710

Weiss, C. H. (1995). Nothing as practical as good theory: Exploring theory-based evaluation for comprehensive community initiatives for children and families. *New approaches to evaluating community initiatives: Concepts, methods, and contexts*, *1*, 65-92.

About the Contributor(s)

Lawrence Vorvornator, a PhD holder in Development Studies. Vorvornator is a lecturer at Department of Anthropology and Development Studies, University of Zululand South Africa and active contributor to academia. Serve as a member of International Academic Forum (IAFOR) in the USA.
Email: vorlaw@gmail.com / vorvornatorl@unizulu.ac.za
ORCID: https://orcid.org/0000-0002-4475-6665

Joyce Mdiniso, is an Associate Professor and Departmental head in the Department of Anthropology and Development Studies.
Email: mdinisoj@unizulu.ac.za
ORCID: https://orcid.org/0000-0001-9618-4956