



# Entrepreneurship Education in Instilling an Entrepreneurial Mindset as an Alternative Towards Job Creation: A Systematic Literature Review

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## ABSTRACT

The escalating global youth unemployment rate, coupled with limited exposure to entrepreneurship education, exacerbates socio-economic challenges. This study thus explored how cultivating entrepreneurial mindsets through education can contribute to job creation. Using a systematic literature review approach, the study examined research published from 2014 to 2024, sourcing data from Google Scholar, EBSCOhost, ProQuest, Scopus, and Web of Science. Out of 1250 articles identified, 15 qualitative studies were selected for thematic analysis based on their relevance to the research objectives. It was found that limited exposure to entrepreneurship education significantly hampers efforts to attract youth to entrepreneurial activities. A lack of foundational knowledge of entrepreneurship reduces young people's ability to respond to socio-economic challenges creatively, including recognising and acting on opportunities for self-employment. The review concluded that entrepreneurship education is critical in shifting students' mindsets towards embracing entrepreneurship, enhancing job creation, and economic participation. Furthermore, the study emphasises that entrepreneurship education fosters essential cognitive characteristics such as creativity, risk-taking, and problem-solving skills crucial for successful entrepreneurial actions. Without integrating entrepreneurship education into higher education curricula, particularly at the undergraduate level, youth unemployment in South Africa is likely to persist. The study underscores the importance of mindset transformation in motivating youth to engage in entrepreneurial endeavours, and advocates for the inclusion of practical, experience-based education to bridge the gap between theory and practice.

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## INTRODUCTION

High unemployment threatens the socioeconomic equilibrium, particularly in South Africa. Addressing youth unemployment in particular needs an entrepreneurial perspective. To address this plight, government policy supports entrepreneurship as an alternative measure to reduce unemployment. However, being an entrepreneur requires learning certain skills and theoretical knowledge, including a mindset change. Research has revealed that interest in entrepreneurship is drawn when students

participate in entrepreneurship education to develop skills and cognitive qualities that shape their mindset to become aware of entrepreneurial opportunities.<sup>1</sup> Since the government cannot create jobs for new job seekers, knowledge of entrepreneurship is needed. Entrepreneurship is a fundamental driver of social and economic development that can play a key role in reducing the high unemployment rate among young graduates and bringing a balancing effect to the socioeconomic challenges of the country.<sup>2</sup> Entrepreneurial education emphasises enterprise as a process of becoming, which is associated with economic development and linked with employment.<sup>3</sup>

There is a lack of employment opportunities to absorb the youth into the formal employment sector. Mseleku indicates that youth unemployment challenges exacerbate the socioeconomic situation in South Africa.<sup>4</sup> However, South African youth have an entrenched belief in formal employment. The problem regarding unemployment is also compounded by limited exposure to entrepreneurial elements in the curriculum of undergraduate studies. Limited exposure to entrepreneurship education in the initial years of education means that when young graduates complete their studies, they will lack the competencies to create self-employment to mitigate the high unemployment rate and poor economic growth.<sup>5</sup> Dzomonda and Fatoki argue that most students who leave higher education institutions do not pursue entrepreneurial ventures because entrepreneurship is only introduced at a postgraduate level, and is generally given less attention.<sup>6</sup> This creates unpreparedness among students in exploring business ventures after receiving their qualifications.<sup>7</sup>

To address mindset change, students' thinking needs to be swayed to new ways of looking at employment and navigating into the new reality of entrepreneurship undergirded by education. Mseleku adds that the challenge of youth unemployment requires a mindset change regarding old thinking patterns and beliefs about formal employment as the only source of job creation.<sup>8</sup> The implication is that the acquisition of new knowledge creates an internal stimulus that affects cognitive levels to influence mindset change, thus highlighting the necessity of entrepreneurship to attract young graduates to entrepreneurial opportunities. To that effect, an entrepreneurial education background would play a huge role in influencing students' cognitive thinking. Audretsch supports the idea of mindset change as an internal cognitive level that induces entrepreneurial decisions to alter the narrative of youth unemployment and thus affect South Africa's sluggish economic growth.<sup>9</sup> Scholars indicate that entrepreneurship as an academic discipline encompasses theory, but most importantly, it develops an entrepreneurial spirit and mode of thinking that attracts interest in entrepreneurial activities.<sup>10</sup> In entrepreneurship education, the knowledge transmitted develops attitudes, ways of thinking, and behavioural elements displayed by entrepreneurs, which in turn can impact regional growth strategies.<sup>11</sup> Thus, the inclusion of entrepreneurship education into academic programmes of different disciplines

<sup>1</sup> Gabriela Boldureanu et al., "Entrepreneurship Education through Successful Entrepreneurial Models in Higher Education Institutions," *Sustainability* 12, no. 3 (2020): 1267.

<sup>2</sup> Heliona Miço and Jonida Cungu, "Entrepreneurship Education, a Challenging Learning Process towards Entrepreneurial Competence in Education," *Administrative Sciences* 13, no. 1 (2023): 22.

<sup>3</sup> A. Valerio, B. Parton, and A. Robb, *Entrepreneurship Education and Training Programs around the World: Dimensions for Success* (The World Bank, 2014).

<sup>4</sup> Zethembe Mseleku, "Post-University Training for Jobless Market: The Experiences of Graduates in a Work Experience Programme," *Academic Journal of Interdisciplinary Studies* 11, no. 5 (September 2, 2022): 86, <https://doi.org/10.36941/ajis-2022-0127>.

<sup>5</sup> Prinesha Naidoo, "South Africa's Unemployment Rate Is Now Highest in the World," *The Capital News* 44, no. 36 (2021): 15.

<sup>6</sup> Obey Dzomonda and Olawale Fatoki, "The Role of Institutions of Higher Learning towards Youth Entrepreneurship Development in South Africa," *Academy of Entrepreneurship Journal* 25, no. 1 (2019): 1–11; Riccardo Fini et al., "Rethinking the Commercialization of Public Science: From Entrepreneurial Outcomes to Societal Impacts," *Academy of Management Perspectives* 32, no. 1 (February 2018): 4–20, <https://doi.org/10.5465/amp.2017.0206>; Gerard George et al., "Bringing Africa In: Promising Directions for Management Research," *Academy of Management Journal* 59, no. 2 (April 2016): 377–93, <https://doi.org/10.5465/amj.2016.4002>.

<sup>7</sup> Shofia Mahshunah, "Hubungan Antara Self Efficacy Dengan Intensi Berwirausaha (Penelitian Pada Siswa Kelas XII SMK Ibu Kartini Semarang)" (Universitas Negeri Semarang, 2010).

<sup>8</sup> Zethembe Mseleku, "Youth High Unemployment/Unemployability in South Africa: The Unemployed Graduates' Perspectives," *Higher Education, Skills and Work-Based Learning* 12, no. 4 (July 15, 2022): 775–90, <https://doi.org/10.1108/HESWBL-06-2021-0114>.

<sup>9</sup> David B. Audretsch, "From the Entrepreneurial University to the University for the Entrepreneurial Society," *The Journal of Technology Transfer* 39, no. 3 (June 6, 2014): 313–21, <https://doi.org/10.1007/s10961-012-9288-1>.

<sup>10</sup> Alexandros Kakouris and Panagiotis Liargovas, "On the about/for/through Framework of Entrepreneurship Education: A Critical Analysis," *Entrepreneurship Education and Pedagogy* 4, no. 3 (2021): 396–421.

<sup>11</sup> Kakouris and Liargovas, "On the about/for/through Framework of Entrepreneurship Education: A Critical Analysis."

can influence students' cognitive levels by stimulating interest in entrepreneurial ventures. Using a systematic literature review, this study examines how the capacity of entrepreneurship education in higher education can cultivate an entrepreneurial mindset for young graduates to venture into entrepreneurship activities.

The significance of entrepreneurship education alluded to above makes it incumbent upon higher education curricula to accommodate entrepreneurship education in various programme offerings for students to have a firm background of entrepreneurship knowledge that develops a mindset of self-efficacy and enterprise.<sup>12</sup> This implies that exposing young graduates to entrepreneurship education can foster innovation and alter mindsets. Entrepreneurship education creates a foundation to shape students' attitudes by developing innovative skills, creativity, and a mindset for self-employment. The significance of entrepreneurship education is backed by Bandura's social learning theory. It involves a self-efficacy mindset, attitude, and behaviour that highlight changes as cognitive schemas associated with thinking patterns that can change or replace old thinking patterns with new ones.<sup>13</sup> This means that new knowledge acquired in entrepreneurship education plays a role in influencing self-efficacy. Similarly, Nabi et al. point to the evidence demonstrating that undergraduate entrepreneurship education enhances the development of an entrepreneurial mindset.<sup>14</sup> However, most undergraduate programmes in most undergraduate studies in South African universities do not embed entrepreneurship modules in their programmes.

Notwithstanding the value ascribed to it, some scholars point to the inadequacy related to entrepreneurship education.<sup>15</sup> This raises concerns and calls for a rethinking of how to increase entrepreneurship education and its inclusion in the curriculum of various programmes in higher education. The logic behind inclusion stems from the idea that entrepreneurship education is necessary to change the outlook of the current unemployment figures in South Africa, as demonstrated in the national statistics. The Quarterly Labour Force Survey statistics showed unemployment standing at 32.5% in the last quarter of 2020 in South Africa.<sup>16</sup> These unfavourable statistics confirmed the elevated level of unemployment among young people aged between 15 and 35 years.<sup>17</sup> It is clear that an increased emphasis on entrepreneurship education in the higher education curriculum is necessary to improve the prospects of young graduates.<sup>18</sup> There are precedents elsewhere. For example, in Indonesia, entrepreneurial knowledge has been made a significant aspect of the curriculum.<sup>19</sup> The implication is that an entrepreneurial education background is vital for attaining knowledge and skills that can change one's thinking around exploring entrepreneurship ventures. Entrepreneurs are perceived as change agents capable of taking risks and withstanding uncertainties.<sup>20</sup> A widely held principle of entrepreneurship education is its significance in developing self-efficacy and resilience among students with regard to taking risks and facing the future with boldness.<sup>21</sup> Therefore, a multidisciplinary approach and integration of entrepreneurship in various programmes is needed to extend the influence of entrepreneurship education.

<sup>12</sup> M. H. Morris and E. Liguori, *Annals of Entrepreneurship Education and Pedagogy-2016* (Edward Elgar Publishing, 2016).

<sup>13</sup> Albert Bandura, "Self-Efficacy: Toward a Unifying Theory of Behavioral Change.," *Psychological Review* 84, no. 2 (1977): 191.

<sup>14</sup> Ghulam Nabi et al., "The Impact of Entrepreneurship Education in Higher Education: A Systematic Review and Research Agenda," *Academy of Management Learning & Education* 16, no. 2 (June 2017): 277-99, <https://doi.org/10.5465/amle.2015.0026>.

<sup>15</sup> Syed Zamber Ahmad, Abdul Rahim Abu Bakar, and Norita Ahmad, "An Evaluation of Teaching Methods of Entrepreneurship in Hospitality and Tourism Programs," *The International Journal of Management Education* 16, no. 1 (2018): 14-25.

<sup>16</sup> Statistics South Africa, *Quarterly Labour Force Survey: Statistics Release P0211* (Pretoria: South Africa, 2021).

<sup>17</sup> Statistics South Africa, *Quarterly Labour Force Survey: Statistics Release P0211*.

<sup>18</sup> Amaka Cordelia Egele, "Skills Acquisition in Business Education and Career Performance of Self-Employed Graduates of B. Sc (Ed.) in Kano State, Nigeria," *Policy Making*, 2021, 898.

<sup>19</sup> Ari Saptono et al., "Does Entrepreneurial Education Matter for Indonesian Students' Entrepreneurial Preparation: The Mediating Role of Entrepreneurial Mindset and Knowledge," *Cogent Education* 7, no. 1 (January 1, 2020), <https://doi.org/10.1080/2331186X.2020.1836728>.

<sup>20</sup> James Bessen, "Toil and Technology: Innovative Technology Is Displacing Workers to New Jobs Rather than Replacing Them Entirely," *Finance & Development* 52, no. 001 (2015): 16.

<sup>21</sup> O. Thongpravati, N. Birdthistle, and S. Kaya, "The Impact of Science, Technology and Engineering Entrepreneurship Education: A Study of Entrepreneurial Self-Efficacy and Intentionality of PhD Students in Technology Innovation," in *Social Entrepreneurship for Innovation, Value Creation, and Economic Growth*, ed. R. Wehner and E. Akçaoğlu (WIBF Conference Proceedings: Würzburg International Business Press., 2024), 96-101.

This study is relevant in examining the role of entrepreneurship education curricula in instilling an entrepreneurial mindset among students and using entrepreneurship education to increase entrepreneurial initiatives associated with taking actions that result in employment creation responses. The research question in this literature review study is guided by the PICO framework as outlined by Stern et al.<sup>22</sup> This framework ensures that the research question is clear, specific, and linked to the study context. Population (P): Higher education students; Interest (I): Entrepreneurship Education; and Context (Co): development of entrepreneurial mindsets and job creation of the study.

## THEORETICAL PERSPECTIVES

Theoretical underpinnings anchoring the study include Bandura's (1977, 1982) self-efficacy social learning theory and some of the principles of Audretsch's knowledge spillover theory of entrepreneurship.<sup>23</sup> Bandura's cognitive development theory highlights the importance of social orientation by which human behaviour is acquired and influences thought or intellectual processes.<sup>24</sup> This adds weight to the study's focus on mindset change as influenced by entrepreneurial education and as a social orientation process, exposing young graduates to entrepreneurship. Arguably, social orientation is connected to internal processes of a self-efficacy disposition to change behaviour, attitudes, and thought processes in adaptation to the external world situation.<sup>25</sup> This implies that self-efficacy and mindset change are key constructs that contribute to young prospective graduates considering entrepreneurship as an alternative to bridge the unemployment gap. This also means that self-efficacy can influence entrepreneurial intentions and create a belief system that impacts attitude change and a leaning toward enterprise initiatives. Since job vacancies are few and accommodate only a few graduates, it becomes significant that knowledge of entrepreneurship must reach many students.

Audretsch's knowledge spillover theory of entrepreneurship thus becomes relevant in further developing cognitive skills for students to use entrepreneurship opportunities to their advantage.<sup>26</sup> The assumption of Audretsch's theory illuminates the idea that knowledge is the driver of entrepreneurial activity that generates economic growth. The knowledge offered through entrepreneurship education leads to its application, an assumption that entrepreneurs recognise opportunities and apply their new knowledge to venture into entrepreneurial activities to produce or create enterprises.<sup>27</sup> The theory further assumes that an individual's motivation and attraction to entrepreneurship activities are mostly not externally induced or motivated by family histories. Rather, it mostly stems from an internal motivation of knowledge acquired on entrepreneurship, which inspires the drive to explore enterprise and translates into an investment when used in entrepreneurial environments.<sup>28</sup> This means that knowledge is spread and commercialised to create entrepreneurial activities. This theory is relevant in this literature review as it foregrounds knowledge as a critical factor in producing entrepreneurs, making entrepreneurial education a starting point for developing an entrepreneurial mindset. Applying entrepreneurial learning theories to this study is crucial as it orients students on how entrepreneurship education facilitates the acquisition of an entrepreneurial disposition and mindset change.

## LITERATURE REVIEW

The value of entrepreneurship education lies in its immersion in educational theories that develop an intellectual skills mindset and influence mind change, contributing to the success of entrepreneurs.<sup>29</sup> Research indicates that entrepreneurship education has been an old subject of debate in different institutions and countries since the beginning of the century, with the aim of cultivating entrepreneurial

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<sup>22</sup> Cindy Stern, Zoe Jordan, and Alexa McArthur, "Developing the Review Question and Inclusion Criteria," *AJN The American Journal of Nursing* 114, no. 4 (2014): 53–56.

<sup>23</sup> David B Audretsch, "The Knowledge Spillover Theory of Entrepreneurship and Economic Growth," in *The Emergence of Entrepreneurial Economics* (Emerald Group Publishing Limited, 2005), 37–54.

<sup>24</sup> Albert Bandura, "Self-Efficacy Mechanism in Human Agency.," *American Psychologist* 37, no. 2 (1982): 122.

<sup>25</sup> Bandura, "Self-Efficacy Mechanism in Human Agency."

<sup>26</sup> Audretsch, "The Knowledge Spillover Theory of Entrepreneurship and Economic Growth."

<sup>27</sup> Audretsch, "The Knowledge Spillover Theory of Entrepreneurship and Economic Growth."

<sup>28</sup> Audretsch, "The Knowledge Spillover Theory of Entrepreneurship and Economic Growth."

<sup>29</sup> Olof Zaring, Ethan Gifford, and Maureen McKelvey, "Strategic Choices in the Design of Entrepreneurship Education: An Explorative Study of Swedish Higher Education Institutions," *Studies in Higher Education* 46, no. 2 (2021): 343–58.

attitudes among learners.<sup>30</sup> Entrepreneurship education generates factual knowledge about entrepreneurship that can be applied in real life for the youth to become entrepreneurs who can contribute to economic development.<sup>31</sup> Thus, Mohapeloa maintains that entrepreneurship education needs to be pushed enough to produce more graduates who possess entrepreneurial competencies to create jobs for themselves instead of all waiting vulnerably for employment in the formal sector.<sup>32</sup> Entrepreneurship education familiarises students with real social aspects underpinned by theoretical principles to develop cognitive schemas that motivate them to take risks to sustain their livelihood and to bridge the challenge of unemployment and poverty.<sup>33</sup> The ability to adapt to changing times is needed, whereby technological advancement places a demand for knowledge and skills relevant to the present.<sup>34</sup> This makes it necessary to include entrepreneurship education in the curriculum to navigate 21st-century complexities. It is also necessary to expose students to external complexities that stimulate decision-making to pave the way for change in how employment is viewed.

The link between unemployment, poverty, and poor economic growth cannot be ignored. According to Munoz et al., they contribute to the rising crime rate, gender abuse conflicts, poverty, and the increased government budget for social grants to support the needy.<sup>35</sup> Hence, it is necessary to integrate entrepreneurship education into the curricula of various programmes in higher education. Kakouris and Liargovas differentiate between three types of entrepreneurship education, all with a different focus: one focusing on aspects of economic management, the other on experiential management that fosters entrepreneurial abilities through observation and learning, and the third focusing on attitude change and enterprise.<sup>36</sup> This implies that entrepreneurship education must deliver a curriculum rich in content and theoretical knowledge, translating into practice to strengthen cognitive levels. Likewise, Morselli, cited in Rambe, asserts that educational programmes rooted in human agency theories drive entrepreneurship education to cultivate logic, creativity, motivation, problem-solving, and innovative capabilities among young graduates.<sup>37</sup> This implies that entrepreneurship education contributes to mindset change and, coupled with the practical application of knowledge, creates a trajectory toward creating youth employment. The claim that improved intellectual skills influence the success of entrepreneurs by way of mindset change, including the practical application of knowledge and skills, is supported by the view of the value of entrepreneurship education as immersed in educational theories, which must be accompanied by application.<sup>38</sup> In the same vein, Jones et al. contend that the preparation and cultivation of an enterprising spirit must start with basic education and undergraduate qualifications to change young graduates' trajectories.<sup>39</sup>

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- <sup>30</sup> Alain Fayolle and Benoit Gailly, "The Impact of Entrepreneurship Education on Entrepreneurial Attitudes and Intention: Hysteresis and Persistence," *Journal of Small Business Management* 53, no. 1 (January 2015): 75–93, <https://doi.org/10.1111/jsbm.12065>; Andreas Rauch and Willem Hulsink, "Putting Entrepreneurship Education Where the Intention to Act Lies: An Investigation Into the Impact of Entrepreneurship Education on Entrepreneurial Behavior," *Academy of Management Learning & Education* 14, no. 2 (June 2015): 187–204, <https://doi.org/10.5465/amle.2012.0293>.
- <sup>31</sup> Ida Lindh and Sara Thorgren, "Entrepreneurship Education: The Role of Local Business," *Entrepreneurship & Regional Development* 28, no. 5–6 (May 26, 2016): 313–36, <https://doi.org/10.1080/08985626.2015.1134678>; Haifeng Qian, Zoltán J. Ács, and Roger R. Stough, "Regional Systems of Entrepreneurship: The Nexus of Human Capital, Knowledge and New Firm Formation," in *Global Entrepreneurship, Institutions and Incentives* (Edward Elgar Publishing, 2015), <https://doi.org/10.4337/9781784718053.00023>.
- <sup>32</sup> MME 'Tshidi' Mohapeloa, "Developing an Entrepreneurial Mindset within the Social Sector: A Review of the South African Context," in *Science, Technology and Innovation in BRICS Countries* (Routledge, 2020), 142–49, <https://doi.org/10.1201/9781003008774-12>.
- <sup>33</sup> Thobile Radebe and Makhosazana Vezi-Magigaba, "Challenges in Developing and Supporting Entrepreneurship Education: A Case Study of the University of Zululand," *Journal of Entrepreneurial Innovations* 2, no. 1 (2021), <https://doi.org/10.14426/jei.v2i1.929>.
- <sup>34</sup> Paul Jones et al., "A Tale of Two Universities: Graduates Perceived Value of Entrepreneurship Education," *Education+ Training* 59, no. 7/8 (2017): 689–705.
- <sup>35</sup> Pablo Muñoz et al., "Reorienting Entrepreneurial Support Infrastructure to Tackle a Social Crisis: A Rapid Response," *Journal of Business Venturing Insights* 14 (2020): e00181.
- <sup>36</sup> Kakouris and Liargovas, "On the about/for/through Framework of Entrepreneurship Education: A Critical Analysis."
- <sup>37</sup> Patient Rambe, "The Flipped Classroom Effect on Entrepreneurship Education: Applying Critical Pedagogy in Digital Environments," in *Delivering Entrepreneurship Education in Africa* (Emerald Publishing Limited, 2023), 1–31, <https://doi.org/10.1108/978-1-83753-326-820231001>; Daniele Morselli, "The Assessment of Entrepreneurial Education," in *The Change Laboratory for Teacher Training in Entrepreneurship Education: A New Skills Agenda for Europe*, (Springer Nature, 2019), 17–36, [https://doi.org/10.1007/978-3-030-02571-7\\_2](https://doi.org/10.1007/978-3-030-02571-7_2).
- <sup>38</sup> Zaring, Gifford, and McKelvey, "Strategic Choices in the Design of Entrepreneurship Education: An Explorative Study of Swedish Higher Education Institutions,"<sup>39</sup>
- <sup>39</sup> Jones et al., "A Tale of Two Universities: Graduates Perceived Value of Entrepreneurship Education."

## **METHODOLOGY**

This literature review preferred a qualitative approach to analyse the influence of entrepreneurship learning at universities in promoting an entrepreneurial outlook and tackling youth unemployment. A literature review was employed to develop a clear synthesis to determine the impact of entrepreneurship education on the employment prospects of young people in higher learning institutions. Using this method allowed the study to collect and assess qualitative and quantitative information from a range of studies. The methodology also encompassed a search strategy, and the criteria used in reviewing literature are indicated below.

### **Search Strategy**

A comprehensive search was conducted across multiple academic databases to identify relevant studies on entrepreneurship education and youth unemployment. The following databases were searched: Google Scholar, EBSCOhost, ProQuest, Scopus, and Web of Science.

Search terms through Boolean operators used in the study included “entrepreneurship education” AND “youth unemployment”; “entrepreneurial mindset” AND “higher education”; “curriculum” AND “entrepreneurship” AND “job creation”; and “entrepreneurial education” AND “graduates” AND “employment opportunities”.

### **Inclusion Criteria**

Searches were restricted to peer-reviewed articles published in English between 2014 and 2024. Studies focusing on the South African context and other developing countries with similar socio-economic challenges were prioritised. The inclusion criteria were established to ensure the review focused on relevant studies: those involving undergraduate students in higher education, particularly those enrolled in entrepreneurship education; the implementation or effectiveness of entrepreneurship education and its role in developing entrepreneurial mindsets and competencies; research conducted within the context of higher education institutions in South Africa or other countries with similar socio-economic challenges related to youth unemployment; and peer-reviewed qualitative, quantitative, and mixed-methods studies and systematic reviews on entrepreneurship education and its impact on job creation. The outcomes comprised studies that evaluated the role of entrepreneurship education in instilling entrepreneurial mindsets, influencing decision-making, and fostering job creation or self-employment among graduates.

### **Exclusion Criteria**

Criteria for excluding studies were set to guarantee that only essential and sound research was included. Research outside the scope of higher education was rejected. Works that provided only personal opinions or analyses instead of empirical findings were excluded to verify that each chosen study rested on actual data. Additionally, non-peer-reviewed articles, editorials, and conference papers were excluded to preserve the integrity and reliability of the sources and studies not published in English were excluded from the analysis.

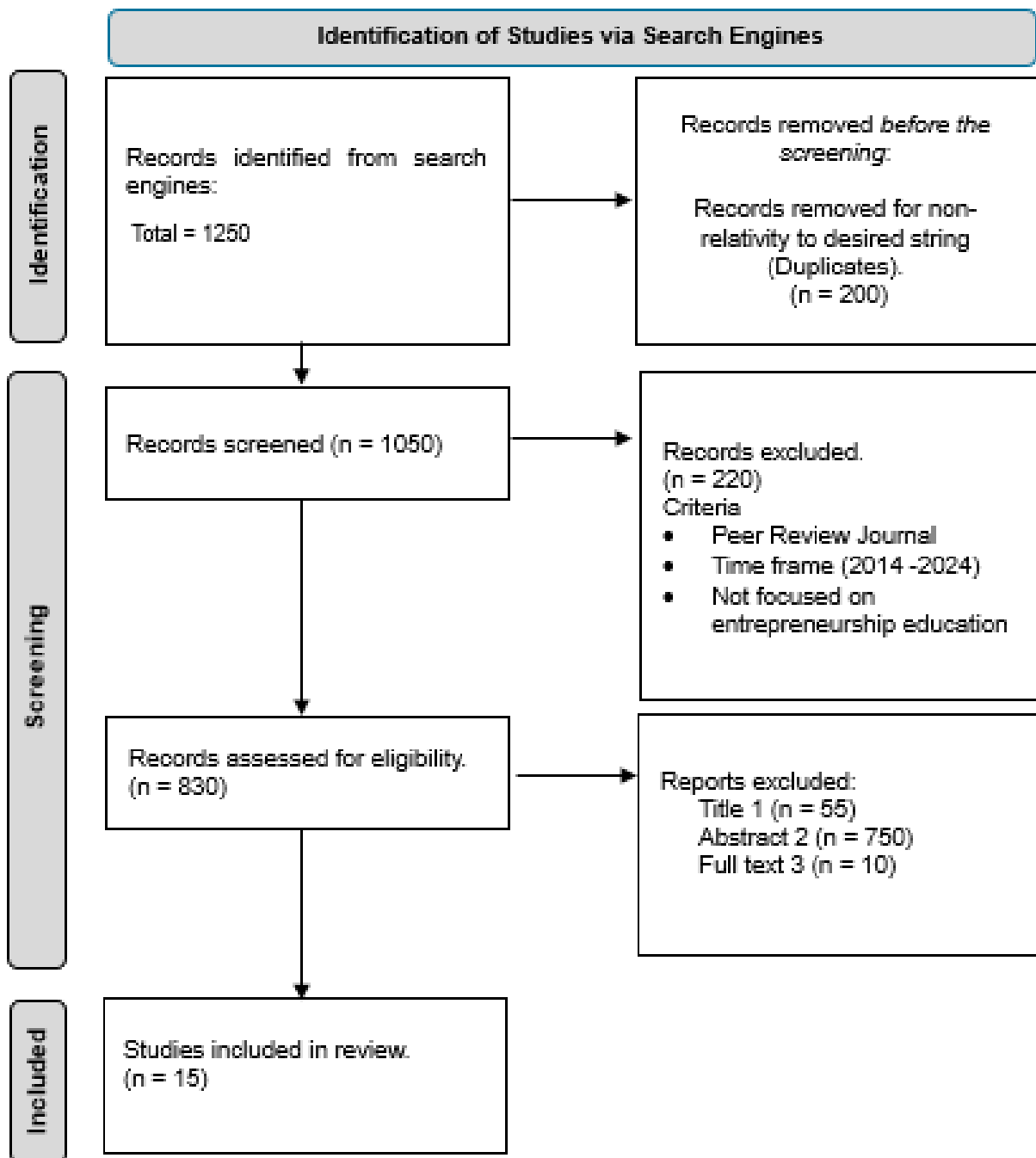


Fig. 1: Study selection using the PRISMA framework

**Data Extraction, Synthesis, and Quality Assessment**

A data extraction form was created to capture key information from the selected studies systematically. The extracted information included the author(s) and year of publication, the research objectives, and the key findings related to entrepreneurship education and its impact. Additionally, the form collected outcomes-related data on developing an entrepreneurial mindset and job creation. Thematic analysis was employed to analyse qualitative data from the selected studies effectively. A set of themes emerged related to common patterns addressing the research focus and assessing the role of entrepreneurial education in influencing change in mindset as a building block in developing the resilience and self-efficacy needed for enterprise-related personal development. The review included quality appraisal criteria to ensure reliability by including relevant studies pertinent to the review. A summary of concepts translated into findings is summarised below and presented in detail in the paragraphs that follow.

**Table 1: Data Extraction and Analysis of the Articles**

<b>Author(s) &amp; Year</b>	<b>Aim of the study</b>	<b>Methodology</b>	<b>Key findings</b>
Valerio et al. (2014)	To explore the role of entrepreneurship education and job creation.	Mixed-method approach	Education for entrepreneurship is helpful for the economic growth of a country, but is occasionally not sufficiently implemented.
Morris & Liguori (2016)	To evaluate the implementation of entrepreneurship education in major universities.	Case study	Entrepreneurial education is available, but integration into other disciplines remains low, limiting its potential to develop entrepreneurial skills.
Erkkilä (2015)	To examine the distinctions between enterprise and entrepreneurship education and their roles in higher education.	Literature review and case studies	Entrepreneurship education emphasises cognitive development, whereas enterprise education focuses on practical business management skills.
Daspit et al. (2023)	To investigate how entrepreneurship education develops cognitive skills for exploring entrepreneurial opportunities.	Survey and thematic analysis of entrepreneurship graduates from US universities.	Entrepreneurship education empowers students to identify and capitalise on business opportunities, leading to increased entrepreneurial activities.
Assaad & Levison (2013)	To analyse the socio-economic barriers, including lack of education, that limit entrepreneurship and contribute to youth unemployment in Africa.	Qualitative research using focus groups	Entrepreneurship education can reduce youth unemployment by equipping individuals with the skills and mindset to start their businesses.
Mseleku (2022)	To examine the correlation between the teaching of entrepreneurship and the unemployment rate in the South African context	Quantitative study using regression analysis	Entrepreneurial mindset development correlates with a significant reduction in the unemployment rate as students are empowered to create jobs for themselves.
Qian et al. (2013)	To investigate how entrepreneurial education affects job creation and economic growth	Systematic review	Entrepreneurship education creates long-term job opportunities by encouraging innovation and establishing small businesses.
Lindh & Thorgren (2016)	To study the role of entrepreneurship education in enhancing cognitive flexibility and risk tolerance among students.	Qualitative longitudinal study	Increased cognitive flexibility among students leads to higher business creation and job generation rates.
Bessen (2015)	To investigate the extent to which entrepreneurship equips students to take risks in a business setting	Case studies and interviews with entrepreneurs who completed higher education entrepreneurship programmes.	Graduates with entrepreneurial education are more likely to start businesses and create jobs due to their improved risk management abilities.

Fini et al. (2016)	To understand why there is less focus on entrepreneurial education at the undergraduate level while there is evidence of such a programme shaping entry-level entrepreneurial mindsets.	Mixed-methods research involving interviews with students and educators.	Early entrepreneurship education can cultivate entrepreneurial mindsets at a young age, leading to higher job creation rates among graduates.
Pedrini et al. (2017)	The purpose of this paper is to assess the effect of an Entrepreneur Education Programme (EEP) on the antecedents of entrepreneurial intention in the context of Ghana.	Quantitative	Practical experience during education enhances students' confidence and ability to create jobs through entrepreneurship after graduation.
Thaba-Nkadimene et al. (2024)	To study the importance of starting entrepreneurship education at the undergraduate level to foster job creation among youth.	Qualitative case study methodology	Early exposure to entrepreneurship fosters self-employment and helps reduce youth unemployment by equipping students with the mindset and skills to create jobs.
Mlambo et al. (2024)	To identify gaps in the entrepreneurship education curriculum that limit its effectiveness in fostering job creation and economic growth	Systematic review	The paper presents a rationale based on the contextualised enhancement of the stock on the current practice of the teaching of entrepreneurship education at the primary and high school level in South Africa to achieve socioeconomic development with the added advantages of dealing with social ills such as poverty, inequality among others and most importantly, youth unemployment.
Morselli & Morselli (2019)	To analyse how educational programmes rooted in human agency theories drive entrepreneurship education and its outcomes.	Qualitative analysis through interviews	Students exposed to human agency theories are more likely to create innovative businesses, contributing to job creation and economic growth.
Ratten (2020)	To examine the theoretical underpinnings of entrepreneurship and the impact on the learning of entrepreneurship in higher education.	Literature review of entrepreneurship education	Theoretical perspectives equip students with problem-solving and decision-making skills, fostering job creation through entrepreneurial activities.

## PRESENTATION OF FINDINGS

Four key themes emerged through the analysis of the 15 articles using thematic analysis: entrepreneurial mindset development; curriculum design and integration; practical skills and real-world application; and socio-economic impact and job creation. These themes offer a comprehensive understanding of the role of entrepreneurship education in fostering entrepreneurial mindsets and contributing to job creation, particularly within higher education contexts.

## Mindset Development

The study highlights the critical role that entrepreneurship education plays in shaping cognitive and affective traits such as creativity, problem-solving, risk-taking, and resilience. Research by Lindh and Thorgren and Valerio et al. has shown that successful completion of a course in entrepreneurship improves grades in terms of students' cognitive flexibility and decision-making.<sup>40</sup> These traits are fundamental because decision-making involves many risks and dilemmas, especially in entrepreneurship. That is why students trained in entrepreneurship education are more suitable to become job makers; they are better armed to see opportunities, monitor risks, and create something new. Building on this argument, Daspit et al. note that this mindset development is pivotal in enabling students to reflect and act on strategic decision-making, innovation, and business opportunities.<sup>41</sup> This theme supports the idea that entrepreneurial education is not only about acquiring business content knowledge but rather about developing a heuristic mindset that prepares students for the complexities of creating and sustaining businesses.

## Curriculum Design and Integration

There are shortcomings in how entrepreneurship education is structured and integrated within higher education. Fini et al., Mlambo et al. and Ratten have accused universities of starting entrepreneurship education very late and commonly at the postgraduate level, thus missing the opportunity to foster students' entrepreneurial skills at a younger age.<sup>42</sup> An idea from the literature is that entrepreneurship education must be mainstreamed into undergraduate and, if possible, into any mainstream curriculum. Morselli and Morselli report that integrating entrepreneurship education with other disciplines enables students to improve their creativity, reasoning, and problem-solving.<sup>43</sup> Without this early and comprehensive integration, many students graduate without the entrepreneurial skills necessary to create businesses. This theme calls for curriculum reforms emphasising entrepreneurship education at all higher education levels, ensuring students are equipped with entrepreneurial competencies before they complete their studies.

## Practical Skills and Real-World Simulation

Another crucial aspect is linking theory to practice, which can be done through service learning and work-integrated learning (WIL). The limitation to this is pointed out by Pedrini et al. and Thaba-Nkadimene et al., who caution that students come out of the classroom to start their businesses inadequately prepared because some universities offer little, if any, entrepreneurship education modules to instil enterprise spirit or behaviour.<sup>44</sup> The implication is that practice-oriented mechanisms or other forms of incubation are not used extensively. Entrepreneurship education needs to be used to intensify entrepreneurship mindsets. According to Bessen and Qian et al., entrepreneurship education should ensure students get assignments and projects based on theoretical knowledge through which they can solve entrepreneurial problems simulated in real environments.<sup>45</sup> This theme underscores the need for higher education institutions to integrate Entrepreneurship activities into experiential learning activities,

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<sup>40</sup> Lindh and Thorgren, "Entrepreneurship Education: The Role of Local Business"; Valerio, Parton, and Robb, *Entrepreneurship Education and Training Programs around the World: Dimensions for Success*.

<sup>41</sup> Joshua J. Daspit, Corey J. Fox, and S. Kyle Findley, "Entrepreneurial Mindset: An Integrated Definition, a Review of Current Insights, and Directions for Future Research," *Journal of Small Business Management* 61, no. 1 (January 2, 2023): 12–44, <https://doi.org/10.1080/00472778.2021.1907583>.

<sup>42</sup> Riccardo Fini et al., "Student Entrepreneurship: Demographics, Competences and Obstacles," 2016; V. Ratten, *Entrepreneurship as Empowerment: Knowledge Spillovers and Entrepreneurial Ecosystems* (Emerald Publishing Limited, 2020).

<sup>43</sup> Morselli, "The Assessment of Entrepreneurial Education."

<sup>44</sup> Kgomotlokoa Linda, "Examining the Level of Entrepreneurship Education and Development within the South African Higher Education: Towards Entrepreneurial University," *International Journal of Research in Business and Social Science* (2147- 4478) 13, no. 5 (August 20, 2024): 794–802, <https://doi.org/10.20525/ijrbs.v13i5.3558>; Matteo Pedrini, Valentina Langella, and Mario Molteni, "Do Entrepreneurial Education Programs Impact the Antecedents of Entrepreneurial Intention?," *Journal of Enterprising Communities: People and Places in the Global Economy* 11, no. 03 (July 10, 2017): 373–92, <https://doi.org/10.1108/JEC-12-2016-0043>.

<sup>45</sup> Bessen, "Toil and Technology: Innovative Technology Is Displacing Workers to New Jobs Rather than Replacing Them Entirely"; Qian, Acs, and Stough, "Regional Systems of Entrepreneurship: The Nexus of Human Capital, Knowledge and New Firm Formation."

to enable students to apply entrepreneurship skills and knowledge as preparation towards launching their ventures.

### **Socio-Economic Impact and Job Creation**

Studies by Assaad and Levison and Mseleku draw clear connections between entrepreneurship education and youth unemployment reduction.<sup>46</sup> These studies suggest that entrepreneurship education empowers graduates to become job creators rather than job seekers, which is crucial in economies with high unemployment rates, such as South Africa. Qian et al. further highlight that entrepreneurship education contributes to economic development by fostering the creation of small and medium-sized enterprises (SMEs), which are significant drivers of employment.<sup>47</sup> This theme demonstrates that entrepreneurship education not only benefits individual students but also has the potential to positively impact national economies by generating new businesses and job opportunities. The findings also indicate the huge capacity wielded by entrepreneurship education to bridge the challenge of unemployment by decreasing the vulnerability of young graduates while instilling virtues of confidence, adaptation, decision-making, and risk-taking to change the face of poverty and unemployment.

These four themes – entrepreneurial mindset development, curriculum design and integration, practical skills and real-world application, and socio-economic impact – offer a comprehensive understanding of how entrepreneurship education influences job creation and economic development. The analysis suggests that for entrepreneurship education to be effective, higher education institutions must focus on early integration and provide practical learning opportunities that foster a change in mindset to encourage innovation and risk-taking. These changes can significantly address youth unemployment and promote sustainable economic growth.

### **DISCUSSION**

The review showed that instilling entrepreneurship knowledge and skills captures students' mindsets and attracts their interest in entrepreneurship ventures that are pertinent to growing the local economy. To reduce unemployment among young graduates, it is prudent that entrepreneurship education should be included in various higher education programmes. This will help to attract a large pool of students to become aware of government initiatives to grow the economy, including attraction to and awareness of entrepreneurship opportunities. Stimulating an entrepreneurial attitude and interest through curriculum intervention should thus be a focal area. This implies introducing entrepreneurship education as a compulsory foundational core curriculum module in undergraduate programmes to stimulate considerable interest in entrepreneurship. Since education and research are needed to contribute to innovation, the academic grounding of theories underpinning entrepreneurship education also becomes relevant in anchoring a deeper foundation for scientific knowledge and nourishing an entrepreneurial mindset among students to solve the unemployment challenge amongst the youth with reference to South Africa.

The research indicates that improvements can be made to boost the success of entrepreneurship education within higher education. This can be done by prioritising entrepreneurship education for undergraduates to support and enhance students' entrepreneurial thinking and skills from the start of their studies and across multiple domains. Also, the focus on linking entrepreneurship with different sectors will cultivate creativity and innovation through this integration. The review also highlighted the need to promote practical learning activities through incubation centres, WIL, and service-learning modules to bridge the divide between academic learning and real-world skills because students acquire the skills and confidence required to begin effective enterprises through these opportunities. Incubation centres may also be used for the simulation of WIL activities and for preparing students before the actual work placement. Similarly, policymakers and higher education institutions should work together to reform entrepreneurship curricula by addressing gaps in real-world business training and ensuring that

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<sup>46</sup> Ragui Assaad and Deborah Levison, "Employment for Youth: A Growing Challenge for the Global Community," *Background Research Paper for United Nations High Level Panel on the Post-2015 Development Agenda*, 2013; Mseleku, "Post-University Training for Jobless Market: The Experiences of Graduates in a Work Experience Programme."

<sup>47</sup> Qian Liu, Susan Geertshuis, and Rebecca Grainger, "Understanding Academics' Adoption of Learning Technologies: A Systematic Review," *Computers & Education* 151 (July 2020): 103857, <https://doi.org/10.1016/j.compedu.2020.103857>.

entrepreneurship education fosters entrepreneurial mindsets and tangible job creation outcomes. Considering what the review reflected on, higher education can play a pivotal role in addressing youth unemployment and driving sustainable economic development through entrepreneurship.

Although the spillover theory indicates that knowledge used in entrepreneurial ventures is externally induced, students coming from families that have pursued entrepreneurial activities are, to some extent, attracted to entrepreneurship. However, it must be emphasised that exposure to knowledge on entrepreneurship creates a fertile foundation for exploring entrepreneurship opportunities. This review fueled the idea of building entrepreneurship education into service learning and Work-Integrated learning modules to expose the harsh realities of the world outside the walls of the classroom. Though students meet the harsh realities of unemployment after graduating, entrepreneurship education has the potential to mitigate the risk. This includes the extent to which entrepreneurial education and theory- and practice-linked curricula impact society. The studies in this review indicate that students benefit from opportunities to reflect on their learning, especially when involved in real-life entrepreneurial activities. Reflection enables students to assess their decision-making processes critically, understand the outcomes of their actions, and refine their entrepreneurial strategies; this aligns with the theoretical emphasis on experiential learning as a cycle that involves action, reflection, and adjustment. Incorporating structured reflection exercises into entrepreneurship curricula can enhance students' ability to learn from their experiences and become more adaptable and innovative entrepreneurs.

This supports the claim that early exposure to entrepreneurship education is crucial for fostering an entrepreneurial mindset, which has implications for the timing and structure of learning in entrepreneurial learning theory. Several studies pointed to the delayed introduction of entrepreneurship education in higher education, often only at the postgraduate level, limiting the development of entrepreneurial skills during the formative years of undergraduate education. Entrepreneurial learning theory suggests that entrepreneurial skills are best developed over time through repeated exposure to both theoretical concepts and practical applications. The review implies that earlier and more consistent exposure to entrepreneurship education, starting at the undergraduate level, is essential for fully developing entrepreneurial capabilities and fostering long-term entrepreneurial success.

## **RECOMMENDATIONS**

To strengthen the role of entrepreneurship education in cultivating an entrepreneurial mindset and promoting job creation, several key measures are proposed. At the policy level, entrepreneurship education must be made a compulsory foundational module across all undergraduate programmes, guided by a standardised national framework that clearly defines learning outcomes, practical components, and assessment strategies. Also recommended is strong Government–university–industry partnerships to provide students with real business challenges, mentorship, and funding opportunities. From a curriculum perspective, entrepreneurship should be introduced early in undergraduate studies and increase in complexity throughout the academic journey, with strong multidisciplinary integration across fields such as engineering, agriculture, management and health sciences.

Pedagogically, teaching should prioritise simulation, problem-based learning, and real-world case studies. Experiential learning must be broadened through WIL, linked to entrepreneurship, campus-based incubation hubs, and competitive student seed-funding schemes. Additionally, capacity building should be extended to continuous professional development for educators in entrepreneurship pedagogy, robust mentorship networks with experienced entrepreneurs, including post-graduation support programmes that will help graduates sustain and scale their ventures. Monitoring and evaluation can be done through graduate tracking systems and impact assessment frameworks measure entrepreneurship education's contribution to SMME growth, employment, and innovation. Finally, short programmes must be developed for disadvantaged youth, coupled with community-based entrepreneurship projects, to ensure that entrepreneurship serves as both an economic and social development tool. The belief is that, these measures may help shift graduates from job seekers to job creators.

## CONCLUSION

This systematic review examined the role of entrepreneurship education in shaping an entrepreneurial mindset as an alternative response to rising youth unemployment. The review highlighted the significance of mindset change, which includes motivating young people to engage in entrepreneurial endeavours, to stop relying only on formal employment. The review also found that instilling entrepreneurship knowledge and skills at the undergraduate level plays a critical role in fostering self-efficacy, risk-taking, creativity, and problem-solving, core attributes needed for entrepreneurial success. The findings highlighted that when students are exposed to entrepreneurship education early in their academic journey, their mindset shifts from one of job-seeking to one that embraces self-employment and opportunity recognition. This shift is essential in the South African context, where formal employment opportunities are limited, and unemployment remains a persistent socioeconomic challenge. The study concludes that integrating entrepreneurship education into various undergraduate programmes, especially through practical, real-world activities like Work-Integrated Learning and Service Learning, strengthens the link between theory and practice. This enhances students' readiness to navigate the entrepreneurial landscape post-graduation. In doing so, entrepreneurship education contributes not only to individual empowerment but also to broader economic development through job creation. Therefore, the inclusion of entrepreneurship education in the core curriculum is vital in transforming students' perspectives and equipping them with the competencies necessary to become future job creators rather than job seekers.

## Suggestions for Future Studies

Currently, the research on entrepreneurship education is not integrated into most of the undergraduate programmes, preventing a broader expansion of entrepreneurship education from reaching a wide range of students and thus enabling them to possess the disposition to self-efficacy that could contribute to replacing old ways of thinking about employment with new ways of creating employment. For entrepreneurship to gain more ground, incubation centres in higher institutions of learning must be used effectively to simulate real entrepreneurship initiatives to orientate and expose students to other practical dimensions of enterprise. Service learning and WIL activities must also be effectively linked to entrepreneurial education to enhance the development of an entrepreneurial spirit and a mind shift that could replace the old practices of job seeking with job creation.

## Limitations

This systematic review had several limitations, including not drawing on studies in languages other than English, which might have hindered the analysis. Concentrating solely on peer-reviewed sources also reduced the acceptance of grey literature such as reports or unrecorded studies that could offer further knowledge. This analysis examined studies released between 2014 and 2024 and therefore missed critical research from years prior that might have contributed to historical significance.

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