

## The Role of Entrepreneurship Education in Higher Education Institutions



Thobeka Ncanywa<sup>1</sup>  & Noluntu Dyantyi<sup>1</sup> 

<sup>1</sup> Walter Sisulu University, South Africa.

### ABSTRACT

Entrepreneurship education affords people with skills that display the characteristics of risk-taking, being involved in making informed decisions, creativity and innovation. Entrepreneurship education can provide teaching approaches to changing problems into business opportunities to assist the university community in addressing graduate employability. In addition, it can provide post-COVID-19 pandemic solutions to their start-ups or existing businesses. The paper explores the role of entrepreneurship education in Higher Education Institutions by discussing the effective and sustainable teaching methods that can be used in entrepreneurship teaching, employing a qualitative thematic review methodology. The entrepreneurship ecosystem can be key when higher education institutions are engaged in the transformation process of offering entrepreneurship education to their community. This paper explores the following themes: entrepreneurial education needs in entrepreneurial institutions, stakeholders involved in the provision of entrepreneurship education, and a sustainable business model as a product of entrepreneurship education. The present paper recommends that universities adopt a participatory approach to teaching and learning entrepreneurship as this can play a crucial role in building their structures to be economically active. Furthermore, it addresses graduate unemployment; provides recovery strategies to reboot businesses in communities, especially after the COVID-19 pandemic; and how to position themselves as entrepreneurial institutions.

Correspondence

Thobeka Ncanywa

Email: [tncanywa@wsu.ac.za](mailto:tncanywa@wsu.ac.za)

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### INTRODUCTION

Higher Education Institutions (HEIs), including South Africa, are in the process of transforming into entrepreneurial institutions. The HEIs are improving curriculums in the programmes offered as part of creating an ecosystem enabling entrepreneurial institutions. This curriculum transformation is a multifaceted process that involves changing teaching strategies, academic offerings, language usage, services to support staff and impactful deliveries to students that incorporates entrepreneurship

education.<sup>1</sup> Teaching strategies on entrepreneurship education are instrumental in successfully implementing the transformation, especially in addressing issues emanating from the COVID-19 pandemic.<sup>2</sup> Entrepreneurship education teaches the following characteristics: creativity, innovation, risk-taking, initiator, and strategy, which are catalysts for producing active participants in identifying opportunities and making decisions among others in the organisation.<sup>3</sup>

For a successful curriculum transformation in the provision of entrepreneurship education, HEIs should consider executive roles at different levels. The executive roles shall include sustainability into their core strategies as organisations that consider environmental factors, climate change and social impact tend to outperform those that do not.<sup>4</sup> The executive role in the entrepreneurship ecosystem entails developing team skills, capabilities, and empowering leadership. Leaders need to set simple, measurable, achievable, realistic, and time-bound goals. The set goals should reflect the triad of people, environment and profit while focusing on creating sustainable impact and implementing sustainable practices.<sup>5</sup> As most businesses collapsed during the COVID-19 era, entrepreneurs should engage in recovery strategies to rebuild their businesses during the planning phase. There should be a differentiation between short, mid, and long-term goals that refer to teaching and learning, research, and community engagement as the core business of HEIs.<sup>6</sup> HEIs need to identify the most important goals and prioritise their implementation. The HEIs must be flexible when necessary and be able to adjust plans to achieve goals but not change the set goals.<sup>7</sup>

HEIs encounter challenges ranging from producing unemployable graduates to accessing digital platforms and producing research that is not entirely innovative and not impactful to society, among several things.<sup>8</sup> On the other hand, these institutions need to be transformed to cater to the needs of the people and reach communities with high-quality programs.<sup>9</sup> The teaching and learning methods must equip HEIs community with effective entrepreneurial skills such as changing societal problems into sustainable opportunities, saving resources, overcoming barriers, and producing research about societal and environmental needs. Incorporating entrepreneurship education into the traditional curriculum should produce multi-skilled graduates that are either easily employed or able to run sustainable businesses. Teaching entrepreneurship after the pandemic invites scholars to come up with

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<sup>1</sup> Christopher S. Hayter, "A Trajectory of Early-Stage Spinoff Success: The Role of Knowledge Intermediaries within an Entrepreneurial University Ecosystem," *Small Business Economics* 47, no. 3 (October 21, 2016): 633–56, <https://doi.org/10.1007/s11187-016-9756-3>; Tobias Kesting, Thomas Clauss, and Aurel Moussa, "Entrepreneurial University: A Stakeholder-Based Conceptualisation of the Current State and an Agenda for Future Research," *International Journal of Technology Management* 77, no. 1/2/3 (2018): 109, <https://doi.org/10.1504/IJTM.2018.10012950>.

<sup>2</sup> Shouvik Sanyal and Mohammed Wamique Hisam, "The Role of Business Incubators in Creating an Entrepreneurial Ecosystem: A Study of the Sultanate of Oman," *Indian Journal of Commerce & Management Studies* IX, no. 3 (September 1, 2018): 09, <https://doi.org/10.18843/ijcms/v9i3/02>.

<sup>3</sup> Kesting, Clauss, and Moussa, "Entrepreneurial University.;" T. Ncanywa, "Entrepreneurship and development agenda: A case of higher education in South Africa." *Journal of Entrepreneurship Education*, 22(1), (2019): 1-11.

<sup>4</sup> Peter Bradley, Glenn Parry, and Nicholas O'Regan, "A Framework to Explore the Functioning and Sustainability of Business Models," *Sustainable Production and Consumption* 21 (January 2020): 57–77, <https://doi.org/10.1016/j.spc.2019.10.007>.

<sup>5</sup> Magnus Klofsten et al., "The Entrepreneurial University as Driver for Economic Growth and Social Change - Key Strategic Challenges," *Technological Forecasting and Social Change* 141 (April 2019): 149–58, <https://doi.org/10.1016/j.techfore.2018.12.004>.

<sup>6</sup> Piera Centobelli et al., "Exploration and Exploitation in the Development of More Entrepreneurial Universities: A Twisting Learning Path Model of Ambidexterity," *Technological Forecasting and Social Change* 141 (April 2019): 172–94, <https://doi.org/10.1016/j.techfore.2018.10.014>.

<sup>7</sup> Klofsten, et.al. "The entrepreneurial university as a driver for economic growth and social change-Key strategic challenges." 149-158.

<sup>8</sup> Marco A. Coral and Augusto E. Bernuy, "Challenges in the Digital Transformation Processes in Higher Education Institutions and Universities," *International Journal of Information Technologies and Systems Approach* 15, no. 1 (January 1, 2022): 1–14, <https://doi.org/10.4018/IJITSA.290002>.

<sup>9</sup> National Development Plans Vision 2030, 2022. <https://www.gov.za/issues/national-development-plan-2030> [Accessed on 13 April 2022]

strategies that can be applied to entrepreneurship education. Hence, through a qualitative thematic review, this paper explores the role of entrepreneurship education in HEIs by discussing the effective and sustainable teaching methods and strategies that can be used to inculcate entrepreneurship. The paper is structured into four sections. Apart from the introduction, the paper focuses on a theoretical literature review, findings and discussions, and a conclusion and recommendations.

## THEORETICAL LITERATURE REVIEW

This paper aims to explore the role of entrepreneurship education in HEIs by discussing the effective and sustainable teaching methods and strategies that can be used to teach entrepreneurship in the post-COVID-19 era. It explores this process by combining the social network theory, knowledge spillover theory of entrepreneurship and stakeholder theory. The social network theory originated from William Dunn in 1983 and stated that a successful entrepreneurial university should create an ecosystem that connects businesses with their social contacts to acquire social capital.<sup>10</sup> The social network theory focuses on the relationships between entrepreneurs and societies on how to obtain resources to start up or continue their businesses. This could benefit the institutions because the knowledge acquired from entrepreneurship education can be disseminated to relevant businesses and inform services tackling social change. In the post-COVID-19 era, communication means should be blended by utilising all digital platforms such as emails, social media, cellphones and physical visits. The social change component contributes to the institutions' community engagement and subsequently strengthens partnerships.

In addition to the connectivity of the social network theory, the knowledge spillover theory of entrepreneurship confirms that there can be spillover effects of knowledge generation from institutions to firms.<sup>11</sup> The entrepreneurship education generated from other firms and institutions spill over to enhance the performance of entrepreneurial firms.<sup>12</sup> This theory was developed by Alfred Marshall in the 1800s and it entails the context of where the institution exists should be taken into consideration.<sup>13</sup> The context includes the location of the institution, strategic entrepreneurship, and relationships between institutions.<sup>14</sup> Institutions that actively teach entrepreneurship education have a purpose of stimulating economic activities by sharing their knowledge production with stakeholders that need so. Hence, the knowledge spillover theory links to stakeholder theory.

The stakeholder theory came from Freeman in 1984.<sup>15</sup> Clauss et al. suggest the schematic diagram shown in Figure 1 of the entrepreneurial university's stakeholders in the entrepreneurial ecosystem.<sup>16</sup> Figure 1 shows that an entrepreneurial university ecosystem comprises stakeholders such as researchers, students, the economy and society (communities, government, firms), and

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<sup>10</sup> Kesting, Clauss, and Moussa, "Entrepreneurial university"; Elena Fuster et al., "The Emerging Role of University Spin-off Companies in Developing Regional Entrepreneurial University Ecosystems: The Case of Andalusia," *Technological Forecasting and Social Change* 141 (April 2019): 219–31, <https://doi.org/10.1016/j.techfore.2018.10.020>.

<sup>11</sup> Fuster, et.al. "The emerging role of university spin-off companies in developing regional entrepreneurial university ecosystems."

<sup>12</sup> David B. Audretsch and Albert N. Link, "Entrepreneurship and Knowledge Spillovers from the Public Sector," *International Entrepreneurship and Management Journal* 15, no. 1 (March 27, 2019): 195–208,

<https://doi.org/10.1007/s11365-018-0538-z>; Wolfgang Lattacher et al., "Knowledge Spillover in Entrepreneurial Emergence: A Learning Perspective," *Technological Forecasting and Social Change* 166 (May 2021): 120660, <https://doi.org/10.1016/j.techfore.2021.120660>.

<sup>13</sup> Pontus Braunerhjelm, Ding Ding, and Per Thulin, "The Knowledge Spillover Theory of Intrapreneurship," *Small Business Economics* 51, no. 1 (June 20, 2018): 1–30, <https://doi.org/10.1007/s11187-017-9928-9>.

<sup>14</sup> Jaime González-Masip, Gregorio Martín-de Castro, and Adolfo Hernández, "Inter-Organisational Knowledge Spillovers: Attracting Talent in Science and Technology Parks and Corporate Social Responsibility Practices," *Journal of Knowledge Management* 23, no. 5 (June 10, 2019): 975–97, <https://doi.org/10.1108/JKM-06-2018-0367>.

<sup>15</sup> González-Masip, Martín-de Castro, and Hernández. "Inter-organisational knowledge spillovers," 975-997; Vanessa Ratten, "Stakeholder Entrepreneurship: A Theory.," in *Stakeholder Entrepreneurship*, ed. Vanessa Ratten and Vitor Braga (Singapore: Springer Singapore, 2022), 7–18, <https://doi.org/10.1007/978-981-16-7091-6>.

<sup>16</sup> Kesting, Clauss, and Moussa, "Entrepreneurial University."

administrators.<sup>17</sup> These stakeholders of the ecosystem are coordinated in a way that there are interactions among them to exchange knowledge and skills on entrepreneurship education. Successful coordination is not always a direct interaction between the administrators and the firms, but connections can occur wherever commercial activities involve the entrepreneurial institution.<sup>18</sup>

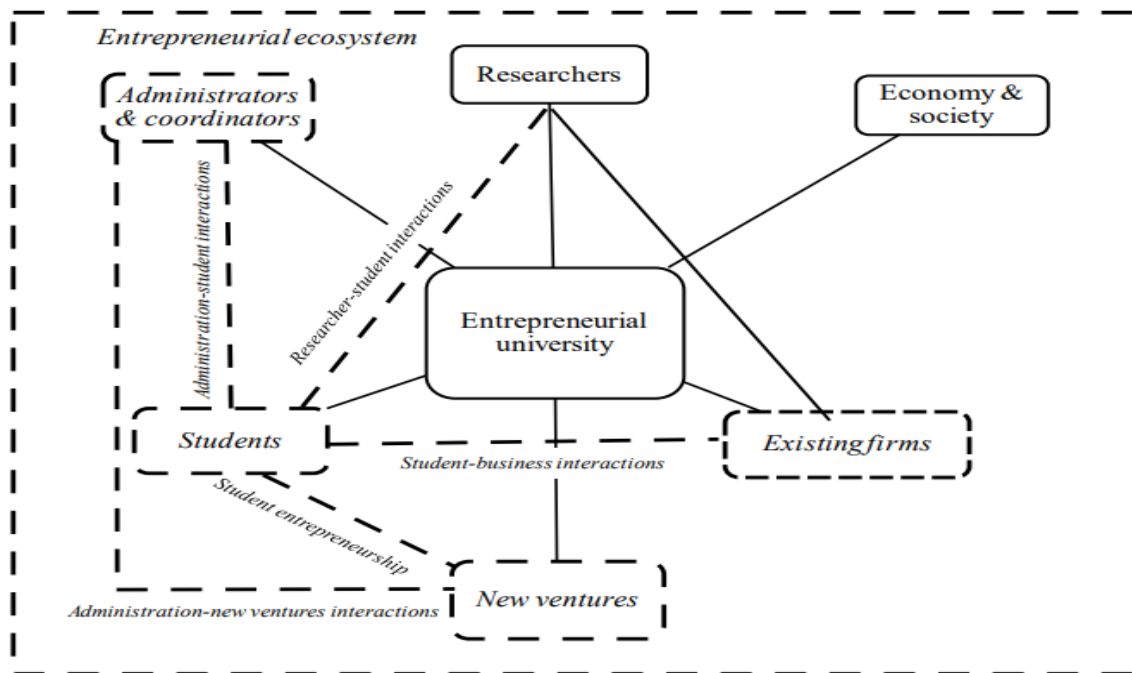


Figure 1: An entrepreneurial university ecosystem<sup>19</sup>

Consequently, the combination of social network theory and the knowledge spillover theory facilitates the use of effective teaching and learning strategies. This is done to deliver entrepreneurship education that builds business acumen. The provision of entrepreneurship education contributes to innovation development and promotes partnerships with entrepreneurial institution stakeholders such as the community, government, and firms.<sup>20</sup> On the note that the paper explores the role of entrepreneurship education in consideration of effective and sustainable teaching methods, a thematic content analysis. Based on the discussed theories, the following themes are derived: entrepreneurial education needs in entrepreneurial institutions, stakeholders involved in the provision of entrepreneurship education, and a sustainable business model as a product of entrepreneurship education.

## FINDINGS AND DISCUSSIONS

### Entrepreneurship Education

Entrepreneurship education is any pedagogical program that instils entrepreneurial aptitude and skills such as risk-taking, strategic thinking, and the ability to make informed decisions, creativity, and innovation.<sup>21</sup> Lessons are learnt from other countries on how to incorporate entrepreneurship education in HEIs, and lessons can be used in the post-COVI-19 era. For instance, in Malaysia, Ahmad et al.

<sup>17</sup> Kesting, Clauss, and Moussa, "Entrepreneurial University."

<sup>18</sup> Nathan Eagle, Michael Macy, and Rob Claxton, "Network Diversity and Economic Development," *Science* 328, no. 5981 (May 21, 2010): 1029–31, <https://doi.org/10.1126/science.1186605>.

<sup>19</sup> Kesting, Clauss, and Moussa, "Entrepreneurial University."

<sup>20</sup> Ben Spigel and Richard Harrison, "Toward a Process Theory of Entrepreneurial Ecosystems," *Strategic Entrepreneurship Journal* 12, no. 1 (March 2018): 151–68, <https://doi.org/10.1002/sej.1268>.

<sup>21</sup> Ncanywa, "Entrepreneurship and development agenda."1-11; Shiri M. Breznitz and Qiantao Zhang, "Entrepreneurship Education and Firm Creation," *Regional Studies* 56, no. 6 (June 3, 2022): 940–55, <https://doi.org/10.1080/00343404.2021.1878127>.

shared that some guidelines and policies should be formulated to build a strong entrepreneurial university; otherwise, existing activities are not formally coordinated.<sup>22</sup> Additionally, research and education on entrepreneurship have been found to promote academic tasks for technology innovation and transfer of knowledge in a Finnish university.<sup>23</sup> Therefore, entrepreneurship education is crucial in creating accessible, innovative solutions to society and the environment while generating income that contributes to economic growth.<sup>24</sup>

Entrepreneurial education transforms HEIs from traditional ways and has key structural reform in creating an entrepreneurial ecosystem that enables the entrepreneurial culture.<sup>25</sup> Based on the entrepreneurial university ecosystem displayed in Figure 1, the pillar of research informs that an entrepreneurial university develops entrepreneurship education courses. The teaching method of the courses depends on the target audience, socio-economic context, student needs, competencies, facilitator profile and generic objectives of developing specific techniques that increase the students' entrepreneurial potential.<sup>26</sup> The objectives must be clear for the individuals and the organisation. For instance, the organisational objectives must cater to cultural cognitive perspective, institutions' values, rules and incentives for the HEI and its stakeholders. The course increases the chance of new venture creation and survival by applying the acquired skill of handling liabilities, having a sense of initiative, effective communication, managing innovation and generating revenue for individuals. The course's facilitator, resources, duration and envisaged outcome suggests the course content and teaching method.<sup>27</sup>

### Course Content

The content of entrepreneurship education courses varies and there seems to be neither consensus nor best practice benchmark that facilitators reference, possibly due to the lack of a universal definition of entrepreneurship.<sup>28</sup> The course and training cannot be one-size-fit-all as students have different learning needs depending on their level of study, nascent or experienced and objectives. Some courses focus on high-level information such as intellectual property, business models, marketing, management and interpersonal skills. The course directly or indirectly teaches soft skills such as self-esteem, attitude, values and aptitude to recognise opportunities. The commonly taught areas in entrepreneurship are financing and marshalling of resources, marketing, idea generation/opportunity discovery, managing growth, business plan, organisation and team building, new venture creation, small business management, and risk and rationality, in descending order.<sup>29</sup>

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<sup>22</sup> Noor Hazlina Ahmad et al., "The Ecosystem of Entrepreneurial University: The Case of Higher Education in a Developing Country," *International Journal of Technology Management* 78, no. 1/2 (2018): 52, <https://doi.org/10.1504/IJTM.2018.093935>.

<sup>23</sup> Katja Lahikainen et al., "Challenges to the Development of an Entrepreneurial University Ecosystem: The Case of a Finnish University Campus," *Industry and Higher Education* 33, no. 2 (April 4, 2019): 96–107, <https://doi.org/10.1177/0950422218815806>.

<sup>24</sup> Jacinto Jardim, Ana Bárto, and Andreia Pinho, "Towards a Global Entrepreneurial Culture: A Systematic Review of the Effectiveness of Entrepreneurship Education Programs," *Education Sciences* 11, no. 8 (August 2, 2021): 398, <https://doi.org/10.3390/educsci11080398>.

<sup>25</sup> Jardim, Bárto, and Pinho, "Towards a global entrepreneurial culture."

<sup>26</sup> Ernest S. Mwasalwiba, "Entrepreneurship Education: A Review of Its Objectives, Teaching Methods, and Impact Indicators," *IEEE Engineering Management Review* 52, no. 1 (February 16, 2010): 20–47, <https://doi.org/10.1108/00400911011017663>.

<sup>27</sup> Jardim, Bárto, and Pinho, "Towards a global entrepreneurial culture."

<sup>28</sup> Fatima Sirelkhatim and Yagoub Gangi, "Entrepreneurship Education: A Systematic Literature Review of Curricula Contents and Teaching Methods," *Cogent Business & Management* 2, no. 1 (December 31, 2015): 1052034, <https://doi.org/10.1080/23311975.2015.1052034>.

<sup>29</sup> Mwasalwiba, "Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators"; Sirelkhatim, and Gangi, "Entrepreneurship education."

The sustainability of entrepreneurial firms depends on finance, social impact, government support and environmental index.<sup>30</sup> The other three pillars depend on finance and the availability of resources, thereby making it the cornerstone of business success. For example, one of the challenges that lead small businesses to fail within the first five years is lack of capital and difficulty in accessing loans for mediation in critical times.<sup>31</sup> Hence, finance is the most studied concept in entrepreneurship education. Marshalling finance and marketing business goes hand in hand since the business has to be known to secure funding. Business plans and risk identification coupled with contingency plans are overlooked acumens necessary in times of crisis. An immediate example is a COVID-19 pandemic, where small businesses closed due to no backup plans.<sup>32</sup> Entrepreneurship education needs to emphasise business growth and sustainability, whereby the business plan includes all the risks, how to overcome barriers, social value, and environmental impact.<sup>33</sup>

## Teaching Methods

The teaching methods must be designed with the intended outcome as to whether the trainees need training for, about, or entrepreneurship.<sup>34</sup> Learning entrepreneurship ‘for’ means teaching and training students to become entrepreneurs by equipping them with tools and mechanisms to start a new business venture. Students act role-play and pretend to be entrepreneurs in the learning method. Learning ‘about’ entrepreneurship is usually offered to HEIs stakeholders and policymakers about general knowledge and concertise them about their roles in entrepreneurship. On the other hand, HEI students who need training in entrepreneurship can be linked with local entrepreneurs to expose them to the real world, whereby they learn by doing. The students will also teach the entrepreneurs about the best practice principles they learnt from the HEIs while fulfilling the institutions’ community engagement work.<sup>35</sup> The ‘for’ teaching method is the most commonly reported at 60 per cent compared to ‘in’, which is less than 30 per cent.<sup>36</sup>

Teaching methods are broadly classified into traditional/passive and innovative/active. In the traditional method, a lecturer presents business terminologies, principles and concepts repeatedly until students respond to the mentioned learning outcomes.<sup>37</sup> The traditional method is offered through exercises and projects that allow students to create a business plan. An innovative way is a participatory approach whereby students are given tasks to work on as groups. Students in the innovative method are given case studies, do collaborative learning with entrepreneurs, and are exposed to experiential learning in internships and learning by doing in incubator programmes. The innovative method is more

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<sup>30</sup> Ogujiuba Kanayo, Isaac Agholor, and Ebenezer Olamide, “Impact of Sustainable Entrepreneurship Indicators On SMEs Business Success in South Africa,” *Academy of Entrepreneurship Journal* 27, no. 4 (2021): 1–17, <https://www.abacademies.org/articles/impact-of-sustainable-entrepreneurship-indicators-on-smes-business-success-in-south-africa-11785.html>.

<sup>31</sup> Kanayo, Agholor, and Olamide, “Impact of sustainable entrepreneurship indicators on SMEs business success in South Africa.”; Bernard Bushe, “The Causes and Impact of Business Failure among Small to Micro and Medium Enterprises in South Africa,” *Africa’s Public Service Delivery and Performance Review* 7, no. 1 (January 24, 2019), 1-26, <https://doi.org/10.4102/apsdpr.v7i1.210>.

<sup>32</sup> Robert Fairlie, “The Impact of COVID-19 on Small Business Owners: Evidence from the First Three Months after Widespread Social-distancing Restrictions,” *Journal of Economics & Management Strategy* 29, no. 4 (October 27, 2020): 727–40, <https://doi.org/10.1111/jems.12400>.

<sup>33</sup> David McKenzie, “Identifying and Spurring High-Growth Entrepreneurship: Experimental Evidence from a Business Plan Competition,” *American Economic Review* 107, no. 8 (August 1, 2017): 2278–2307, <https://doi.org/10.1257/aer.20151404>.

<sup>34</sup> Mwasalwiba, “Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators”; Sirelkhatim, and Gangi, “Entrepreneurship education.”

<sup>35</sup> Mwasalwiba, “Entrepreneurship education: A review of its objectives, teaching methods, and impact indicators.”

<sup>36</sup> Sirelkhatim, and Gangi, “Entrepreneurship education.”

<sup>37</sup> Mwasalwiba, “Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators”; Martin Pech, Petr Rehor, and Michaela Slabová, “Students Preferences in Teaching Methods of Entrepreneurship Education,” *Journal on Efficiency and Responsibility in Education and Science* 14, no. 2 (2021): 66–78, <https://doi.org/10.7160/eriesj.2021.140201>.

effective as it focuses on self-knowledge than examination.<sup>38</sup> This literature review revealed that learning for entrepreneurship is the most common objective since the majority of entrepreneurship education students are HEIs students studying economics and business management.

During the COVID-19 era, technological platforms were used in HEIs to teach, and the teaching of entrepreneurship was not separated from the system. For instance, on online platforms, participants can be separated into groups and report back to the plenary to get the attention of the class. However, the traditional method is seen to be less effective. Hence, this study suggests that the teaching methods should incorporate a participatory approach to stimulate the entrepreneurial skills of HEI students. The learn-by-doing and experiential methods are ideal but limited to resource and opportunity availability. Students also prefer the innovative/active teaching method.<sup>39</sup>

Evaluating the effectiveness of entrepreneurship education involves research design on indicators for measuring impact, assessment tools and results implications for intervention. The indicators measuring the impact of entrepreneurship education are opportunity discovery, opportunity exploration, entrepreneurship, creativity capacity, social problem solving and entrepreneurship intention.<sup>40</sup> HEIs are contributors to local economic development in their immediate communities and graduates tend to start their businesses in the region they graduated. Entrepreneurship education can positively influence HEIs in the form of alumni retention and producing multi-skilled employable graduates. The alumni will form strong partnerships with their alma mater, which subsequently increases awareness about the institution, opportunities for expert coaching and experiential learning, and demand for studies.<sup>41</sup>

## Stakeholders for Entrepreneurship Education

### *Academics*

Academics provide entrepreneurship courses to students and communities as a community engagement activity. Academics play a vital role in rolling out entrepreneurship education since they are experts who develop the curriculum. Academics are key components of the entrepreneurship system shown in Figure 1, particularly given that the efficiency of teaching entrepreneurship lies with them based. For instance, Muscio and Ramaciotti attest that the provision of entrepreneurship education can influence students' intentions to start a business.<sup>42</sup> This provides an alternative plan for students in case they become unemployed when they complete their studies. Academics provide entrepreneurial skills to students and encourages them to be able to shape their entrepreneurial decisions.<sup>43</sup> There should be training to empower academics to provide entrepreneurship education.

Entrepreneurship education should be provided by academics who are trained in the mode of entrepreneurship delivery.<sup>44</sup> For instance, entrepreneurship can be taught practically, where students "learn by doing." The practical approach exposes students to developing problem-solving and creativity skills. The most common assessment method is when students can write a business plan essential for funding and marketing the business at the end of the course.<sup>45</sup>

<sup>38</sup> Pech, et. al. "Students preferences in teaching methods of entrepreneurship education."

<sup>39</sup> Pech, et. al. "Students preferences in teaching methods of entrepreneurship education."

<sup>40</sup> Breznitz, and Zhang, "Entrepreneurship education and firm creation."

<sup>41</sup> Sophie Fischer et al., "A Brief Review of Our Agile Teaching Formats in Entrepreneurship Education," *Sustainability* 14, no. 1 (December 27, 2021): 251, <https://doi.org/10.3390/su14010251>.

<sup>42</sup> Alessandro Muscio and Laura Ramaciotti, "How Does Academia Influence Ph.D. Entrepreneurship? New Insights on the Entrepreneurial University," *Technovation* 82–83 (April 2019): 16–24, <https://doi.org/10.1016/j.technovation.2019.02.003>.

<sup>43</sup> Hardy Rahim et al., "Entrepreneurship Education in Malaysia: A Critical Review.," *Journal of Technology Management and Business* 02 (January 1, 2015): 2289–7224.

<sup>44</sup> Richard Mandel and Erik Noyes, "Survey of Experiential Entrepreneurship Education Offerings among Top Undergraduate Entrepreneurship Programs," *Education + Training* 58, no. 2 (February 8, 2016): 164–78, <https://doi.org/10.1108/ET-06-2014-0067>; Marie Gubbins, Denis Harrington, and Peter Hines, "Social Support for Academic Entrepreneurship: Definition and Conceptual Framework," *Journal of Management Development* 39, no. 5 (June 12, 2020): 619–43, <https://doi.org/10.1108/JMD-11-2019-0456>.

<sup>45</sup> Gubbins, Harrington, and Hines, "Social support for academic entrepreneurship: Definition and conceptual framework."

A good entrepreneurship course should show students how to formulate a business plan that provides best practices to empower students on the best marketing strategies. Marketing strategies can be when business owners capitalise on a product/service that is unique, high quality, low-priced, satisfies other needs of the target audience or a combination of these. The marketed product must be tested before the business starts and compared with the competitors to identify a competitive advantage.<sup>46</sup> This would show that delivery will be on time and it would overcome problems. In the business plan, there should be a description of advertisement plans, promotion activities and enrichment of target groups. These include digital and new technologies, brochures, flyers, and particularly word-of-mouth. A written plan should be created and maintain relationships to retain customers, which can be documented in a people's book. Customer satisfaction through positive word of mouth can reduce the cost-of-service delivery. Trained entrepreneurs apologise when in the wrong, build trust, and are polite, courteous and respectful.<sup>47</sup>

### **Students**

Students in HEI are primary stakeholders and the backbone of the business as they are paying clients. Most HEI students are youth under the age of thirty-five who are the country's future. The current economic state of South Africa, has an unemployment rate at a staggering 35.3 per cent, with 66.5 per cent of the 35.3 per cent being the youth, which makes it difficult to find employment. The unemployment rate sadly includes graduates from the HEIs who depend mostly on formal employment as prospects for income after completing their studies. The country generally depends on the government for job creation even though it is recognised that small, medium and micro enterprises (SMMEs) create more than a quarter of jobs in South Africa, contribute 90 per cent to the global economy, and make up 90 per cent of African businesses.<sup>48</sup> However, SMMEs are vulnerable and more than 70 per cent fail in the first 5-7 years due to a lack of sustainable business models, among many reasons.<sup>49</sup> Sustainable business models are informed by entrepreneurial knowledge and enable the entrepreneurship ecosystem as outlined by the knowledge spillover and stakeholder theories.

Traditional university programmes do not incorporate entrepreneurship in the teaching and learning activities. As a result, HEI students complete their studies and graduate with minimal to no knowledge of entrepreneurship, including postgraduate students that undertook research worth commercialisation. The challenge is acknowledged and addressed during the transition to entrepreneurial university whereby the institutions participate in the Entrepreneurship Development in Higher Education (EDHE) initiative led by Universities South Africa organisation.<sup>50</sup> The EDHE programme trains university stakeholders on entrepreneurship and their 2022 theme was "Commercialisation of Research," which speaks to the entrepreneurial university transition. Additionally, there is Enactus South Africa, which is a non-profit organisation that trains university students to be entrepreneurial leaders who use innovations and business to improve the world.<sup>51</sup> The Enactus South Africa programme has 27 HEIs participating in various outreach projects and business

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<sup>46</sup> Gubbins, Harrington, and Hines, "Social support for academic entrepreneurship: Definition and conceptual framework."

<sup>47</sup> McKenzie, "Identifying and spurring high-growth entrepreneurship; Gubbins, Harrington, and Hines, "Social support for academic entrepreneurship: definition and conceptual framework."

<sup>48</sup> Musah S. Akugri, Daniel A. Bagah, and Joseph K. Wulifan, "The Contributions of Small and Medium Scale Enterprises to Economic Growth: A Cross-Sectional Study of Zebilla in the Bawku West District of Northern Ghana.," *European Journal of Business and Management* 7, no. 9 (March 31, 2015): 262–74, <https://www.iiste.org/Journals/index.php/EJBM/article/view/21207>; Paul Saah, "The Impact of Small and Medium-Sized Enterprises on the Economic Development of South Africa," *Technium Social Sciences Journal* 24, no. 1 (October 9, 2021): 549–61, <https://techniumscience.com/index.php/socialsciences/article/view/3734>.

<sup>49</sup> Bushe, "The causes and impact of business failure among small to micro and medium enterprises in South Africa."

<sup>50</sup> Entrepreneurship Development in Higher Education (EDHE)., "Background on EDHE Programme," 2022, <https://edhe.co.za/about/>. Accessed on 24 March 2022].

<sup>51</sup> Enactus South Africa, "About - South Africa," 2022, <http://www.enactusza.org/about/>. [Accessed on 07 April 2022].



concepts that solve societal challenges.<sup>52</sup> Creating an entrepreneurial ecosystem for HEI students not only trains them to be creative, innovative and strategic in identifying profitable solutions to societal problems, but addresses unemployment and poverty and relieves the sense of dependence on government.<sup>53</sup>

Entrepreneurship ecosystem at HEIs enables student-run businesses to instil the concept of circular economy as they will graduate knowing they can trade services and products amongst themselves and surrounding communities.<sup>54</sup> Students, as recipients of entrepreneurship education, are cornerstones that interact with all the stakeholders of an entrepreneurial ecosystem, as shown in Figure 1. The knowledge spillover theory directly speaks to students who benefit from the education shared and the results of the application of entrepreneurship education speak to social network theory since their business ventures impact the institutions and society. For instance, a salon will provide beauty services, specialised cleaning services for weaves/sneakers, cafeteria and provide refreshments while farmers supply for the cafeteria. The entrepreneurship ecosystem shown in Figure 1 enlightens students to value overlooked skills such as hairdressing, farming and cleaning.<sup>55</sup> If a graduate chooses the corporate career route, they can still run the business as an extra source of income and employ others for day-to-day operations.

The years of experience accumulated in entrepreneurship while in university could deepen students' understanding of the service or product they are rendering.<sup>56</sup> In so doing, they could formulate research concepts on improving the product or service with consideration of Sustainable Development Goals, National Development Plans, serving communities, sustainability of the SMMEs, and environmental impact. The HEIs in rural areas have many under-explored business opportunities, given the challenges and lack of services that speak to the needs of the communities.<sup>57</sup> Students trained in entrepreneurship might be compelled to apply their knowledge to start businesses in their communities instead of feeling obligated to migrate to big cities seeking employment. Consequently, the economic activities in the rural areas can improve and subsequently improve the quality of life due to a sustainable entrepreneurship ecosystem.

### ***Firms and Society***

The efficient teaching and learning of entrepreneurship need collaboration with other parties outside the institution to partnerships with stakeholders such as firms and society to strengthen the process. For instance, student entrepreneurs can have a significant impact on developing their business ventures by being mentored by existing entrepreneurs. The partnerships integrate activities between businesses, government and HEIs. For example, the EDHE programme under the Department of Higher Education and Training seeks to change the teaching and learning landscape by creating platforms to support entrepreneurship activities.<sup>58</sup> The government-initiated project contributes to building strong collaborations among academics and linking universities to the private sector and potential investors.

Linking HEIs with firms and other social partners have a sustainability impact on both the institutions and the communities that they serve.<sup>59</sup> For instance, firms attached to HEIs can invest huge amounts of money if programmes directly impact the industrial production as stipulated by the social network theory. This also creates new opportunities for graduates produced by institutions, resulting in skilled graduate employment and job creation. Moreover, both HEIs and firms remain relevant to address societal needs and make a valuable impact with the investment they offer. HEIs use innovation to sustain their teaching and learning and continue to grow, in line with knowledge spillover theory.

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<sup>52</sup> Enactus South Africa. Background on Enactus South Africa. (2022).

<sup>53</sup> Bushe, "The causes and impact of business failure among small to micro and medium enterprises in South Africa."

<sup>54</sup> Saah, "The impact of small and medium-sized enterprises on the economic development of South Africa." 549.

<sup>55</sup> Clauss, Moussa, and Kesting, "Entrepreneurial University."

<sup>56</sup> Bushe, "The causes and impact of business failure among small to micro and medium enterprises in South Africa."

<sup>57</sup> Clauss, Moussa, and Kesting, "Entrepreneurial university."

<sup>58</sup> Entrepreneurship Development in Higher Education (EDHE). Background on EDHE Programme. (2022).

<sup>59</sup> Spigel, and Harrison, "Toward a process theory of entrepreneurial ecosystems."

Several examples of activities that can emanate from the relations range from including industry peers on review processes of universities, mentors in work integrated learning, and academics being involved in industry space in activities such as board members, consultants, and speakers. The partnerships can result in new degrees being born, such as postgraduate diplomas and degrees in innovation and entrepreneurship. Some firms and other partnerships need to engage in formal agreements like signing memorandums of understanding or agreement.

Public research had a significant impact on both large firms and start-ups. It was suggested in their paper that partnerships were established through research publications, published reports, meetings, consultations, and the exchange of informal information. Partnerships and collaborations could enhance growth and sustainability in start-ups.

### **Administrators**

The provision of entrepreneurship education involves several administrators ranging from institutional management, technology transfer officers, officers and lawyers. The institution leadership in management should have the technical expertise to lead an entrepreneurial institution and be flexible to adjust where necessary. In the implementation phase, leaders need to recognise that there will be a cultural change in the institution. This affects structures, and leadership needs to find ways to report changes to the institutions' formal reporting structures and concertise the entire community that there will be changes in processes, systems, roles, and relationships. Transformational changes should improve the quality of offerings in the institution.

There should be new structures formed for the entrepreneurship process to be effective.<sup>60</sup> Provision of entrepreneurship needs structures such as centres of entrepreneurship and innovation, technological transfer offices, institutes of entrepreneurship, and incubators, among others. These structures should promote the participation of entrepreneurship activities and have platforms to link institutions with the private sector to increase partnership agreements. In addition to technology transfer officers, there should be commercialisation managers or officers and lawyers specialising in contracts.<sup>61</sup> Top management should have a deputy vice-chancellor or senior director responsible for innovation. There could be new firms within the universities that are entities assigned to generate revenues for universities.<sup>62</sup> In addition, other universities in South Africa own hospitals used to train students, conduct research, and generate revenues for the university. Universities can also offer new degrees and diplomas in programmes such as entrepreneurship, innovation management, and others as they see fit in their environments. The programmes with entrepreneurship education need to be provided with proper infrastructure and be offered by qualified human resources to teach entrepreneurship.

### **A Business Model**

In the process of entrepreneurship teaching and learning, many scholars attested that institutions should train academics on how to design a sustainable business plan.<sup>63</sup> The business plan aims to equip participants with entrepreneurship skills that are essential in curbing graduate unemployment, promoting the commercialisation of research, and reducing the failure of cooperatives/SMMEs. Entrepreneurship education can be taught in short courses whereby students populate a business plan

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<sup>60</sup> Fuster, et.al. "The emerging role of university spin-off companies in developing regional entrepreneurial university ecosystems."

<sup>61</sup> Martin Pech, Petr Rehor, and Michaela Slabová, "Students Preferences in Teaching Methods of Entrepreneurship Education.," *Journal on Efficiency and Responsibility in Education and Science* 14, no. 2 (2021): 66–78, <https://doi.org/10.7160/eriesj.2021.140201>.

<sup>62</sup> Sirelkhatim and Gangi, "Entrepreneurship Education: A Systematic Literature Review of Curricula Contents and Teaching Methods."

<sup>63</sup> Alexandre Joyce and Raymond L. Paquin, "The Triple Layered Business Model Canvas: A Tool to Design More Sustainable Business Models," *Journal of Cleaner Production* 135 (November 2016): 1474–86, <https://doi.org/10.1016/j.jclepro.2016.06.067>. Gubbins, Harrington, & Hines; "Social support for academic entrepreneurship: definition and conceptual framework."

that can be summarised in a business model canvas found in Figure 2.<sup>64</sup> The items covered in the template empowered students not only with entrepreneurship skills to start their ventures, but with sustainability measures such as identifying and dealing with challenges (Negative Impact). For instance, the sustainable business model allows for devising alternative solutions in case the initial plan does not work. The impact of COVID-19 that led to many SMMEs closing could have been minimised through interventions such as collaboration and partnerships or value propositions. Value propositions encourage entrepreneurs to diversify by adopting a series of income-generating activities that are social- and environmentally responsible.

Figure 2 summarises modules that capacitate participants to have a sustainable business plan that can be used to start a business and source funding. The course content entails the following modules:<sup>65</sup>

- Ideation where ideas are derived from problems to sustainable business opportunities,
- Opportunity development that deals with the owner’s strengths, social resources, creativity, and vision statement,
- Planning and implementation to craft goals, development plans, and personal initiatives
- Marketing strategies,
- Finance management and budgeting,
- Budgeting (cash and capital budget, income and expenditure budget),
- Book-keeping,
- How to overcome barriers and manage risk in a business and
- Sustainable business plan and registration of the business.

<b>Problem</b>		<b>Opportunity/Solution</b>		
<b>Vision &amp; Mission</b>				
<b>Sustainable Partnership</b>	<b>Sustainable Value Creation</b>	<b>Value Proposition</b>		<b>Relationships</b>
	<b>Sustainable Resources</b>	<b>Social Value</b>	<b>Environmental Value</b>	<b>Sustainable Channels</b>
<b>Cost Structures &amp; Additional Costs</b>			<b>Revenue &amp; Sustainable Benefits</b>	
<b>Negative Impact</b>			<b>Positive impact</b>	
<b>Customer Segments &amp; Beneficiaries</b>				

**Figure 2: A business model template**

Source: <https://step-training.com/about-step/#the-concept>

<sup>64</sup> McKenzie, “Identifying and spurring high-growth entrepreneurship”

<sup>65</sup> <https://step-training.com/about-step/#the-concept>. Accessed on 29 May 2022

Figure 2 shows a business canvas template derived from the sections of the short course explained above and therefore, linking a business canvas to a business plan creates the business model.<sup>66</sup> The business canvas is a picture representing questions that assist in clarifying the idea and value creation process.<sup>67</sup> The sustainable business model converts ideas into realities by pushing an entrepreneur to think about the specifics of the business to achieve the set goals. Best practice for compiling the business plan is to design modules based on the different parts of the template. The teaching approach is to allow participants to form groups according to their different needs. For instance, the first row in Figure 2 entails how the identified problem can be used to identify solutions as opportunities to start a business, so participants are grouped according to the similarity of the identified problems. The groups identified at the beginning continue until a business plan is produced. The practical approach allows participants to be creative thinkers as they design various sections within modules.

To explore a sustainability-oriented business model, the business canvas explains how an organisation can generate value by considering economic, environmental, and social issues together in an entrepreneurship ecosystem. Formulating a business model canvas supports the development and communication of the business plan in a holistic and integrated manner.<sup>68</sup> Integrating the economic, environmental and social aspects in formulating a business plan supports creativity and innovation in building a more sustainable business model. For instance, in Figure 2 sustainable value creation is linked with the operational plans, value proposition, relationships, customer segments, and beneficiaries linked with the marketing plan, cost structures, revenues and sustainable benefits connected with a financial plan.

The sustainable business model explains how relations among stakeholders engage through marketing plans that include unique and diversified products.<sup>69</sup> There should be revenue streams and key activities designed to generate income to sustain the functions and operations of the business. Every start-up implies taking risks and thinking about potential critical risks in the financial plan helps to deal with the risks when they happen. The complete business model plans registration and the type of business involved. This practical approach in designing business plans assists participants not only in starting businesses but in creating an entrepreneurial mindset that can assist in their future endeavours.

## CONCLUSION AND RECOMMENDATIONS

This paper explored the role of entrepreneurship education in Higher Education Institutions (HEIs) by discussing the effective and sustainable teaching methods and strategies that can be used to teach entrepreneurship, especially in the post-COVID-19 era. The qualitative thematic review methodology is employed to achieve this aim. The entrepreneurship ecosystem can be key when Higher Education Institutions are engaged in the transformation process of offering entrepreneurship education to their community. The paper explored the following themes: Entrepreneurial education needs in entrepreneurial institutions, stakeholders involved in the provision of entrepreneurship education, and a sustainable business model as a product of entrepreneurship education.

The identified stakeholders in entrepreneurship education are students, academics, administrators, firms and society. The students and academics are responsible for the teaching and learning of entrepreneurship education. On the other hand, administrators, including executive management, shall facilitate the rollout of entrepreneurship education by creating a conducive ecosystem. The firms and society, including the government, have the resources and experience

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<sup>66</sup> Sergio Sparviero, "The Case for a Socially Oriented Business Model Canvas: The Social Enterprise Model Canvas," *Journal of Social Entrepreneurship* 10, no. 2 (May 4, 2019): 232–51, <https://doi.org/10.1080/19420676.2018.1541011>.

<sup>67</sup> Joyce and Paquin, "The Triple Layered Business Model Canvas: A Tool to Design More Sustainable Business Models."

<sup>68</sup> Joyce, and Paquin, "The triple layered business model canvas," 1474-1486.

<sup>69</sup> Boris Fritscher and Yves Pigneur, "Visualizing Business Model Evolution with the Business Model Canvas: Concept and Tool," in *2014 IEEE 16th Conference on Business Informatics (IEEE, 2014)*, 151–58, <https://doi.org/10.1109/CBI.2014.9>.

necessary for effective entrepreneurship education that yield impactful, sustainable businesses through mutually beneficial partnerships. The role of academics in creating an entrepreneurship ecosystem in HEIs is to include entrepreneurship as community engagement in their duties and teach entrepreneurship using a “learn by doing” practical approach. The outcome of the course is a completely sustainable business model that speaks to profit generation, and environmental and social impact. Students trained in entrepreneurship could become innovative, strategic thinkers and creative in devising profitable solutions to societal problems. The taught sustainable business model and enabling entrepreneurship ecosystem will ensure thriving students’ businesses that address graduate unemployment, improve quality of life, instil circular economy concepts and produce internationally competitive multi-skilled graduates. The entrepreneurship ecosystem can be strengthened by sharing knowledge and forming partnerships with firms and society.

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## ABOUT AUTHORS

Prof. Thobeka Ncanywa is currently an Academic Professor at the Walter Sisulu University, South Africa. She holds a PhD in Economics. Her research focuses on Teaching and learning, Entrepreneurship Education and Economics.

Dr. Noluntu Dyantyi is a Research Manager at the Walter Sisulu University in South Africa. She holds a PhD in Chemistry. Her research focuses on Chemistry, Entrepreneurship and Commercialisation of research.