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## FRONTIERS OF ENTREPRENEURSHIP EDUCATION: INTERDISCIPLINARITY NEED REVEALED BY A CASE STUDY

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**Abstract.** In light of the global recognition of the importance of entrepreneurship, research is crucial for examining various aspects of the role of entrepreneurial education. This study considers education as an essential driver of entrepreneurial behaviour and looks into emerging frontiers for strengthening entrepreneurship curricula. The study aims to outline the future frontiers of entrepreneurship education development. The study employed a qualitative research approach, collecting data through a focus group discussion with academics at a selected university in the Western Cape. The authors found that entrepreneurship education is shifting from a narrow focus to one that spans multiple disciplines. It was revealed that the interdisciplinary perspective of entrepreneurship is growing, and all students in institutions of higher education, including those in the arts and engineering disciplines, benefit from entrepreneurship education. The authors recommend an interdisciplinary perspective and encourage all higher education specialities to include entrepreneurship studies.

**Keywords:** entrepreneurship; education; university; self-employment; interdisciplinary perspective

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### 1. Introduction

Solving the problem of scarcity of goods and services is an enduring economic problem that has attracted consideration across diverse fields globally. Goods and services are the essential components of life and can be exchanged through trade, thereby resulting in the accumulation of wealth and forming a basis for economic development.

This study takes the perspective that education as a basic function of society aims to facilitate better, adequate or improved provision of goods and services through the creation, sharing and distribution of critical knowledge, skills, attitudes, competencies and capabilities for production (Obaje, 2023; Qwabe, Ngibe & Bingwa, 2025). Labour has always been identified as an essential factor of production. As a factor for production, labour implies the availability of people with the proper knowledge and skills to contribute to the production of goods and services which are needed and wanted by society. Within these arguments, entrepreneurship education offers a rich perspective that highlights the need to ensure that people possess the exceptional capability to recognise opportunities, capitalise on situations, and create enterprises to meet the needs and wants of society (Najera-Sanchez et al., 2023). Entrepreneurship education is recognised as relevant across various disciplines, and the demand- and supply-side dimensions of entrepreneurship can be distinguished (Najera-Sanchez et al., 2023; Qwabe et al., 2025). The purpose of this paper is to explore entrepreneurship practices in higher education institutions and assess their multidimensionality. A specific question was: What are the trends in the development

of entrepreneurship education? Entrepreneurship has become a central economic activity in many economies worldwide, and entrepreneurship education is primarily viewed as a key driver and enabler of successful business doing (Mahmudin, 2023; Jardim & Sousa, 2023). Research has shown that entrepreneurship education can help individuals assess and unlock their entrepreneurial potential, enabling them to make informed decisions and take initiatives that promote entrepreneurial behaviour (Bogdea et al., 2024). A review of the development of entrepreneurship education reveals that the phenomenon originated in the United States of America before spreading to the United Kingdom (UK), and subsequently to Europe and the rest of the world (Jardim & Sousa, 2023; Liguori et al., 2024). Major entrepreneurial inventions have fueled revolutions throughout history. For instance, the steam engine was a key component of the Industrial Revolution in the UK, while the computer has been central to the present technological revolution. Entrepreneurship fundamentals should be offered to a broad range of scientists and practitioners across different disciplines, enabling their findings to be commercialised (Yermachenko et al., 2023; Taib et al., 2025).

## **2. Literature review**

### **2.1. The concept of entrepreneurship**

Entrepreneurship as a discipline emerged from observations that some individuals, who manage to identify and exploit opportunities, satisfy human needs profitably. Entrepreneurship is defined as the recognition and identification of an idea that can add value to society and effectively turn this idea into value-adding actions (Ojogbo, Idemobi & Ngige, 2016; Obaje, 2023). Tegtmeier (2023) emphasised that the success of entrepreneurial thought has been dynamic, depending on the context. The concept of entrepreneurship was initially perceived in terms of recognising opportunities and capitalising on them to start and manage an enterprise successfully. There is now growing recognition that entrepreneurship is a multidisciplinary field (Niebuhr, Tegtmeier & Brem, 2017).

### **2.2. Entrepreneurship education**

Despite being perceived in many ways, entrepreneurial education can be defined as the process of deliberately stimulating and facilitating the development of entrepreneurial activity (Ojogbo et al., 2016). Early in the development of entrepreneurial education, entrepreneurial students were considered to be exceptionally talented; later, it was agreed that entrepreneurial education can lead to the development of entrepreneurial intentions (Ojogbo et al., 2016; Tegtmeier, 2023). The personality and cognitive disposition of an individual, as considered within the social environment, form a starting point for this perspective and can be the foundation for appreciating the role of higher education in entrepreneurship development (Rakib et al., 2020; Stam & Van de Ven, 2021; Jeet, 2023).

The strength of personality and cognitive disposition, as opposed to the social environment, raises the question: What is more significant in entrepreneurial development —human cognitive strength, the environment, or genetics? Essentially, it is about inborn personal traits or the environment. In this study, the focus is on entrepreneurship education as a tool for developing businesspeople. Entrepreneurship has been a fundamental engine for economic growth, creating employment, promoting economic development, and reducing socio-economic inequalities in our societies over the years (Ncanywa & Dyantyi, 2022; Neethling, 2024; Manchidi, 2025).

In recognition of this, higher educational institutions have found it necessary to initiate entrepreneurship courses. Still, despite these initiatives from universities as well as various other actions from the government and key stakeholders, the level of entrepreneurship in South Africa and many other nations remains unsatisfactory (Nieuwenhuizen et al., 2016). In South Africa, youth unemployment remains high, and entrepreneurship ventures continue to experience a high rate of failure within the first few years of operating (Mabungela & Davids, 2024). The focus of this study is on institutions of higher education and their role in addressing this problem.

Previous studies (for instance, Omoniyi & Bongani, 2022) have emphasised the need for new approaches in entrepreneurship education, focusing on strengthening students' practical exposure. It has also been suggested that more funding and learning infrastructure need to be secured, and entrepreneurship education should shift from conventional approaches to more creative learner-centred models (Ojogbo et al., 2016; Tegtmeier, 2023). Entrepreneurship education is shifting ideologically. Hoffman (2020) pointed out that there is a need for new approaches to the teaching and learning of entrepreneurship to better realise the desired entrepreneurial outcomes. Supporting entrepreneurship has evolved into the act of creating an environment that inspires entrepreneurship through measures that stimulate cognitive, emotional, physical, and psychosocial desire and motivation to unlock and ignite the entrepreneurial potential of individuals (Ndofirepi, 2020; Lose & Cheteni, 2024). Where entrepreneurial, inborn characteristics can be part of an individual, unlocking them to actual activity may be a function of the university. It has been observed that many institutions of higher education have established departments of entrepreneurship and have started offering entrepreneurship modules (Dlamini, 2024). This is in sharp contrast to the apartheid era, when knowledge to start and grow enterprises was reserved for the whites only (Hoffman, 2020). Contemporary strategies in entrepreneurship education are becoming increasingly critical these days (Olutuase, Brijlal, & Yan, 2023). Despite the rise in entrepreneurship education, the need to achieve the required levels of actual entrepreneurial activity remains an unachieved goal (Gazi et al., 2024). New dimensions to teaching and learning entrepreneurship are emerging. They are necessary, given that students with entrepreneurial education require a holistic approach that considers the emotional intelligence, physical strength, desire, and empowerment needed to become entrepreneurs (Dlamini, 2024; Olutuase et al., 2023). Essentially, the university environment may need to be transformed to facilitate the realisation of entrepreneurial activity (Lose & Cheteni, 2024; Omodan, 2024). While attempts have been made to promote entrepreneurship, the need remains for more targeted actions that truly unleash an individual's entrepreneurial potential, creating an appreciation of trends in the growth of entrepreneurship essential (Omodan, 2024). The current situation in universities is quite effective in fostering an appreciation for entrepreneurship and a sensitivity to the need for entrepreneurial thinking (Dlamini, 2024). Mu and Zhao (2024) and Mugunzva and Manchidi (2024) argue that technological revolutions also have new implications for transforming the nature of entrepreneurial education in the era of emerging phenomena such as artificial intelligence. Despite numerous studies in the area, there remains a need to anticipate the future frontiers of entrepreneurship education development.

#### *Objectives of the study and research purpose*

In view of the above arguments, the purpose of this study was to explore the research question: What are the emerging trends in entrepreneurship education development that allow for the accomplishment of current practices in education?

### **3. Methodology**

This study followed the qualitative research approach within the constructive paradigm to explore the views of entrepreneurship lecturers and academics on trends in entrepreneurship education at the university. Qualitative data were collected from the perspective that reality is found in the experiences of people and how they perceive it (Busetto, Wick, & Gumbinger, 2024). Qualitative research provides in-depth data on a phenomenon. It is based on the belief that knowledge is subjective and is inherent in the minds of people. Participants in the focus group discussion were deemed to be senior entrepreneurship lecturers in the Department of Business and Economic Management Sciences with more than ten (10) years of teaching entrepreneurship. The Head of the Department (HOD) of Business and Economic Sciences was contacted, and a discussion was held regarding the nature of the study. The HOD welcomed the study, indicating that the department was in the process of transforming its entrepreneurship course and conducting a situational analysis. His presence added to the study's importance, as he guides the transformation of the department. The HOD committed to full cooperation in aiding the study. A focus group observer guide was prepared for use by the HOD. The observation guide was provided for recording notes and non-verbal communication cues that indicate the emphasis of points discussed in the study. The HOD

emphasised the need to ensure that the study was conducted at a time and place that was suitable for the personal and professional needs of the participants. In view of this requirement, there was consensus to hold the focus group discussion during lunchtime at the mini-university conference room. The participants were provided with refreshments and lunch by the university after authorities realised that research was of interest to the Entrepreneurship Department.

The fifty-minute focus group discussion was moderated and facilitated by a senior lecturer in the department, with the researcher serving as the recorder. To ensure that data was effectively collected, the moderator was coached by research experts at the university to conduct the facilitation role expertly. Written notes were made by the researcher on the responses to the research questions. At the same time, the observer recorded the nature of group interactions and the non-verbal cues during the data collection process. Every participant was first required to give responses to the research question before further discussions were made on key responses. The process was completed once the key responses were clear and the final results were unanimous. The collection of data respected the concept of thematic data saturation, which occurs when no new emerging ideas are identified (Hancock et al., 2016). The demographic details of the respondents are provided in Table 1.

**Table 1.** Biographical information of the respondents

	Gender	Racial group	Age range	Title
1	Male	African	20-25	HOD
2	Female	African	25-30	Senior lecturer
3	Female	African	20-30	Lecturer
4	Female	Asian	30-35	Researcher
5	Male	Coloured	25-30	Senior lecturer
6	Male	Coloured	25-30	Lecturer
7	Male	White	20-50	Senior lecturer
8	Male	African	20-25	Lecturers

As shown in Table 1, most of the participants, the respondents, were male and African. The majority were Senior Researchers in the Department of Business and Economic Sciences

#### 4. Data analysis

The data notes that were written during the focus group discussions were analysed using the method of constant comparison. This method involves an initial stage of open coding where data is reduced to small units and each unit is coded. This is followed by axial coding, where codes are grouped into categories, and the final stage involves developing themes for the codes. During open coding, data which was deemed necessary was identified and quoted before a code was assigned. Table 2 presents the analysis schema observed in this study.

**Table 2.** Responses to the focus group question: What are the trends in entrepreneurship education development that could facilitate the rising quality of present-day entrepreneurship education transformation?

	Quote	Non-verbal cues	Open coding	Axial coding	Theme
R1	Entrepreneurship was once a less favoured subject; the mindsets of learners were more aligned with being employed rather than pursuing self-employment or starting their own business. Over the years, registration for the course has increased, and changes in attitudes have been noted.	Leaning back on the chair and changing the tone of voice at the beginning of each sentence	Student mindset shift	Psychologica l	Acceptance
R2	Despite having been poorly accepted for study, the value of entrepreneurship is growing. Initially, entrepreneurship was viewed as a field primarily for business majors, and our current entrepreneurship curriculum is designed for business students only. Currently, there is a growing need for entrepreneurship among non-business majors.	Raising of voice and emphasis, along with hands and body gestures, were evident. Clapping of hands from other participants	From narrow to broad appreciation	Wide relevance	Interdisciplinary perspective

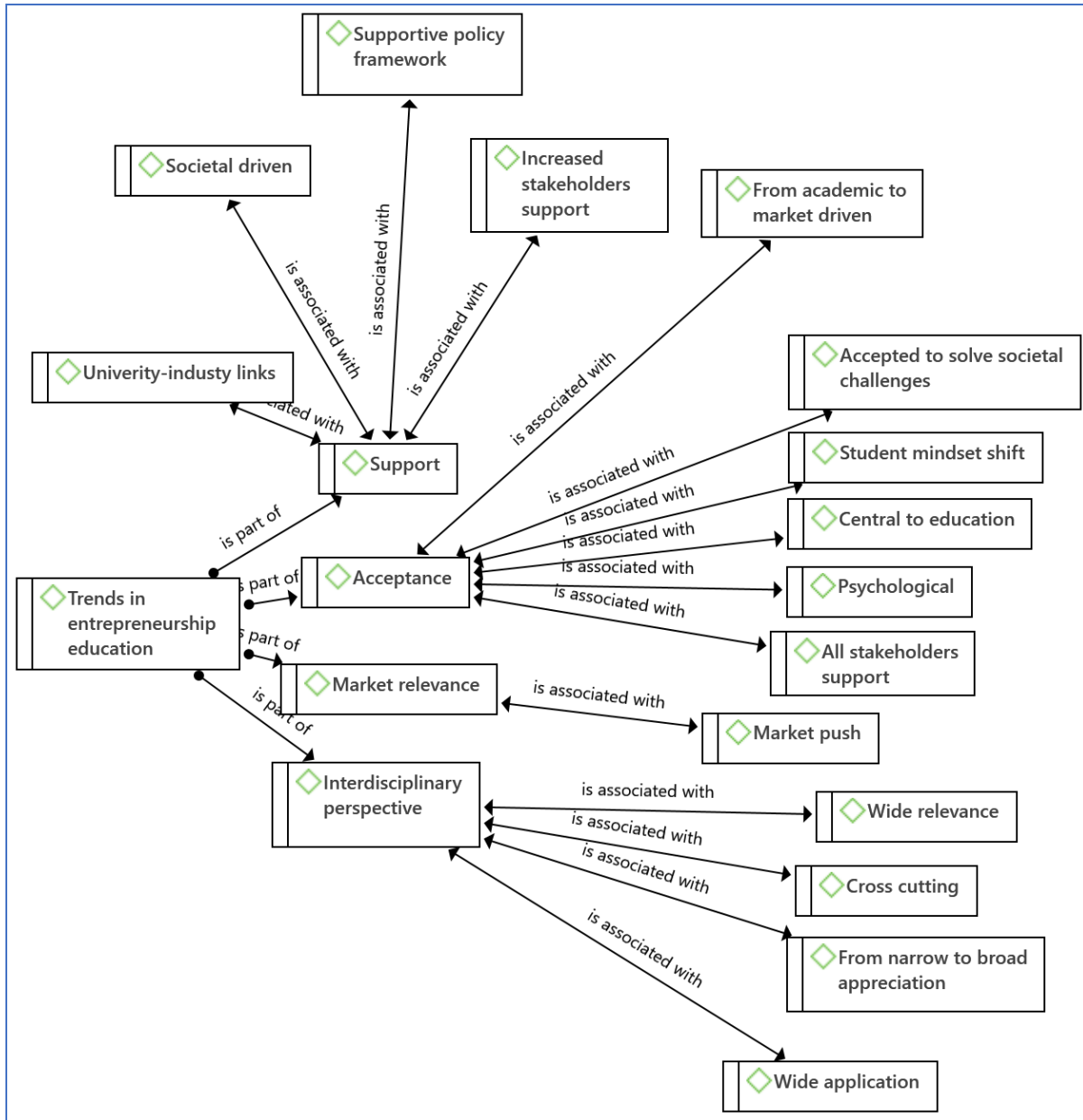
R3	When entrepreneurship was introduced, it was welcomed by those who knew they were not strong in academic subjects and believed they could only benefit from hands-on entrepreneurship. At that time, the unemployment rate was not as high as it is now, so everyone thought entry into the job market would be easy. As unemployment continues to rise, entrepreneurship is gaining relevance.	Nodding of heads. Hand clapping	Accepted to solve societal challenges	Market push	Acceptance
R4	In recent years, a new question has emerged in entrepreneurship education: Do lawyers need entrepreneurship education? What about engineers? Do they need entrepreneurship education? What about labour nurses and so on? This question shows the growing recognition that entrepreneurship education is for all, no matter their discipline of focus."	Clapping of hands	Wide application	Market relevance	Interdisciplinary
R5	The business incubation phenomenon should be inspired by individuals across various disciplines, not just entrepreneurs, and government efforts to strengthen entrepreneurial activities should benefit all individuals across these disciplines. The multidisciplinary perspective of growing entrepreneurship is a phenomenon that has emerged in recent years, not previously existing.	Applause and nodding of heads	Cross cutting	Central to education	Interdisciplinary
R6	Entrepreneurship education was initially developed primarily from the perspective of academics, rather than addressing the need to solve societal problems. Over the years, this perception has shifted; people in society now view entrepreneurship as a key to solving their problems.	Applause from all participants was heard, with clapping of hands and side conversations increasing. There was evidence of high support.	From academic to market-driven		Societal driven
R7	The realisation at the beginning that entrepreneurship as a course is being poorly taken led to the need to advance measures to improve it, such as creating university-industry links	Applause and nodding of heads	University-industry links	Supportive policy framework	Support
R8	Currently, being a successful entrepreneur is highly admired, and technological advancements have made it easier to facilitate entrepreneurial activity compared to the early days of entrepreneurship. Additionally, government policies in support of entrepreneurship education and entrepreneurial practices have increased, making it more favourable to be an entrepreneur.	Applause from all participants was heard, with clapping of hands and side conversations increasing. There was evidence of high support.	Increased stakeholders support	All stakeholders support	Support

Table 2 illustrates the findings in this study. It has been established that entrepreneurship has undergone shifts and exhibits notable dynamism over the years. It emerged as a poorly supported discipline, reserved for academically weak students who may be more oriented towards practical and hands-on activities. Now the situation has changed, and there is now significant acceptance of the essence and role of entrepreneurship.

This trend signifies an ideological change which promotes entrepreneurship. The study also shows that there has been a shift from entrepreneurship as a discipline within the business faculty to its broader acceptance, which is relevant across disciplines. This interdisciplinary approach involves introducing entrepreneurship education across various disciplines, fields, and faculties. Entrepreneurship is rapidly becoming a discipline of study for all. The results, which support the strengthening of an interdisciplinary perspective, are found in Omodan (2024). The author advocates for the growing relevance and adoption of interdisciplinary approaches in management sciences. Firos and Aziz (2020) state that entrepreneurship education has become compulsory in higher education institutions in Malaysia, and the results of this study support the adoption of such a policy in the South African context. Similarly, Rankhumise, Letsoalo and Nguza-Mduba (2020) recommend making entrepreneurship education available to all undergraduate students. The study also observes a shift from being university-driven to market-driven, as societal pressure for increased entrepreneurial activity grows. Multiple stakeholders from society, industry, and government have contributed to the development of improved stakeholder networks and links, fostering successful entrepreneurial education. Support for entrepreneurship has also taken a significant stride, with various government, industry, and societal initiatives providing incubation support through a

supportive framework, as well as through structures such as incubators and supportive government policies in both educational and non-educational systems. As a result, funding and infrastructure for entrepreneurial development have increased. Figure 1 summarises the results of the study.

Figure 1. Trend in entrepreneurship education at a university in the Western Cape



Source: the authors

Figure 1 illustrates the growing trends of increased support and acceptance, as well as the increasing interdisciplinarity in entrepreneurship education. Entrepreneurship education is increasingly becoming a part of the entire higher education curriculum.

## Conclusion

This study was conducted to investigate emerging trends in entrepreneurship education at a university in South Africa. It is essential to inform policymakers and educational institutions nationwide about the new and emerging frontiers for entrepreneurship education in South Africa. The study found an increased perspective on the interdisciplinarity of education, whereby the relevance of entrepreneurial education is being recognised as necessary across all educational faculties and disciplines. This indicates a shift from the narrow focus of entrepreneurial education in the Faculty of Management Sciences to all faculties, including the arts, engineering, and others. In essence, the study found that everyone needs entrepreneurship education across all disciplines. The study recommends the adoption of entrepreneurship across all systems. This study makes a unique contribution to the field of entrepreneurship practice, whereby the entrepreneurship course is considered a distinct field and its interlinkage with various disciplines is overlooked. The results strengthen the view of an interdisciplinary paradigm for entrepreneurship education. Few studies have conducted a detailed and focused examination of the multidisciplinary entrepreneurship paradigm, as advanced in the present study. This study employed a case study approach, which may limit the generalizability of the results to the specific case analysed. The study lays a foundation for more cross-sectional research and provides directions for future studies. Other universities may find this study helpful, given that universities in South Africa generally operate within the same legal, policy, and socio-economic context, which makes the conditions at the analysed university similar to those of other universities.

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