

Entrepreneurship Education: Fostering an Intrapreneurial Orientation

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Abstract

Entrepreneurship education (EE) programs often focus on new venture creation and developing entrepreneurial skills. However, as employees' entrepreneurial competencies become increasingly important, questions arise about whether intrapreneurial orientation is also an intended outcome of these programs. This qualitative study explores whether entrepreneurship education is designed to foster intrapreneurial behaviour, referred to as an employee's intrapreneurial orientation, within existing organisations. By conducting a systematic review of empirical studies in Google Scholar linking EE and intrapreneurial orientation, analysed using a thematic content analysis, we find that research in this area remains limited. Key themes suggest that networking, apprenticeships, management development programs and project-based learning are important for EE programs which want to foster an IO. These findings contribute to enhancing entrepreneurship education programs and advancing an employee's intrapreneurial orientation as a valuable business outcome.

1. Introduction

1.1. Background

Entrepreneurship Education (EE) is universally recognised as pivotal in building the skills, aptitude and competencies necessary for an entrepreneurial career. EE is, however, still regarded as a relatively new field in its own right as it was previously only considered at the subject level (Bueckmann Diegoli et al, 2018). Other authors, such as Mico and Cungu (2023:2), view EE as a field that now

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incorporates “dimensions related to social, psychological and pedagogical aspects, making it a process through which learners acquire a broad set of competencies by bringing individual, social, and economic benefits”.

However, EE programs have traditionally prioritised new venture creation, reflecting the predominant focus on entrepreneurship, innovation, new ventures, and sustainability, often overlooking intrapreneurship (Glackin & Phelan, 2020; Huang et al., 2021). A differing perspective of EE is one of a dual nature, where EE contains the learning outcome of i) enhancing employability, active citizenship and entrepreneurial skills for life or ii) enhancing entrepreneurial and business activity (Mico & Cungu, 2023). While entrepreneurship and the establishment of Small and Medium-sized Enterprises (SMEs) are recognised for driving economic growth, job creation, and poverty alleviation, in particular in emerging and transitional markets (Atems & Shand, 2018; Neumann, 2021; Nieuwenhuizen & Tselepis, 2023), literature exploring the intersection of EE and intrapreneurship is limited. In particular, limited research exists linking EE with employees’ intrapreneurial orientation (IO). Numerous studies affirm that embracing entrepreneurial orientation (EO) significantly enhances business performance, particularly by empowering small and medium enterprises (SMEs) with autonomy and proactive innovation (Matchaba-Hove & Goliath, 2016). EO, its constituent components, and implications have garnered considerable interest in the current body of knowledge, with numerous studies proposing various constructs, drivers, and motivations (Covin & Wales, 2012). However, while organisational-level EO has been extensively studied, EO at the individual level has often been neglected (Antoncic & Hisrich, 2003; Foba & De Villiers, 2007).

Entrepreneurship transcends traditional boundaries and includes employees within organisations. It is vital to recognise employees' pivotal role in identifying opportunities, driving innovation, and aligning products and services with market needs, thereby bolstering SME success (Jain & Ali, 2012). This entrepreneurial mindset, termed intrapreneurial orientation (IO), encompasses a predisposition toward innovation, risk-taking, and proactive behaviour among individuals within established firms. Hence, the efficacy of IO hinges largely on individual employees' initiative and engagement (Lyon et al., 2000; Stewart, 2009). The impact of EE on intrapreneurial behaviour and the alignment of current EE initiatives with fostering IO remain inadequately explored. Huang et al. (2021) advocate for a more holistic approach to intrapreneurship research, acknowledging its dynamic role in business and management.

EE has become widespread across educational institutions worldwide, particularly in business schools at both undergraduate and postgraduate levels (Tselepis et al., 2021). However, while these programs inherently emphasise entrepreneurship's role in small business creation, their effectiveness in developing skills and competencies relevant to fostering an IO in employees in existing workplaces remains uncertain. This article aims to address this gap by investigating the linkages between EE

programs and IO. Through a systematic review of existing empirical studies, this research seeks to illuminate how EE can foster intrapreneurial mindsets and skills.

1.2. Problem Statement

While traditionally the outcome of entrepreneurship education centred around equipping learners with the skills and knowledge to start new ventures, imparting an entrepreneurial mindset necessary to act like an entrepreneur in an existing business has received less attention in literature. It is, therefore, imperative to establish whether EE programmes impart an intrapreneurial orientation in learners. To this end, this study aims to investigate studies which link entrepreneurship education and IO.

1.3. Research objectives

The primary objective of this qualitative study is to investigate the link between Entrepreneurship Education Programs and fostering an Intrapreneurial Orientation. To this end, a systematic literature review is conducted to ascertain the existence of studies linking these two concepts.

2. Literature Review

Entrepreneurship education plays a pivotal role in fostering enterprising and innovative individuals. Intrapreneurial orientation is closely linked to the notion of enterprising individuals, as it provides a step towards entrepreneurship by allowing employees to develop new innovative ideas within the safety of an existing workplace. To adequately address the objective of the study, the below literature review first unpacks the concept of intrapreneurial orientation, followed by an exploration of entrepreneurship education.

2.1. Intrapreneurial Orientation

Intrapreneurship originates from two main research streams: Entrepreneurial Orientation (EO) and Corporate Entrepreneurship (CE). It involves cultivating an organisational environment that encourages intrapreneurial activities, harnessing employees' innovative potential through cultures that emphasise innovation, risk-taking, and proactive behaviour (Antoncic & Hisrich, 2003; Kuratko, 2017; Schachtebeck, 2021). This is particularly important in the modern business world as the role of the employee has changed. Decision-making is increasingly decentralised, with employees having more discretion, responsibility and are now regarded as one of the primary sources of innovation (Neesen, Caniels & de Jong, 2019). Initially rooted in EO, IO enhances organisational decision-making and entrepreneurial actions (Lumpkin & Dess, 1996). EO, primarily a concept at the organisational level, enhances competitive positioning and stimulates entrepreneurial behaviour,

thereby contributing to improved organisational success and performance (Khandwalla, 1977; Covin & Slevin, 1991; Lumpkin & Dess, 1996; Zahra, Rauch et al., 2009). Miller (1983) originally outlined EO with three key dimensions: proactiveness, innovativeness, and risk-taking. Proactiveness involves seizing opportunities for competitive advantage; innovativeness entails exploring novel ideas and concepts; and, risk-taking encompasses tolerance for uncertainty. Additional dimensions such as autonomy and competitive aggressiveness have been proposed (Lumpkin & Dess, 1996; 2005), underscoring EO's adaptability across different organisational contexts (Covin & Slevin, 1989; Jain & Ali, 2012).

While EO traditionally is aimed at the organisational-level, authors such as Stewart (2009) suggests its principles can apply at the individual level, giving rise to Intrapreneurial Orientation (IO). IO is pivotal for fostering organisational growth and revitalization but requires organisational changes in longstanding practices (Sinha & Srivastava, 2016). IO runs deeper and wider than EO, needing to change behaviours at the employee level. Foba and De Villiers (2007) highlighted five characteristics common among intrapreneurs: strategic thinking, innovativeness, autonomy, risk-taking, and team-building. Jain, Ali & Kamble (2015) underscored six attitudes conducive to organisational performance: achievement orientation, risk-taking propensity, internal locus of control, innovativeness, proactiveness, and market orientation.

2.2. Entrepreneurship Education

Entrepreneurship Education (EE) plays a pivotal role in nurturing entrepreneurial abilities, encompassing cognitive awareness, skills, and fundamental concepts. These competencies empower individuals to navigate the multifaceted entrepreneurial process (Alberti *et al.*; 2004; Yusoff, Ahmad & Halim, 2016). Apostu et al (2022), however, posit that the involvement of business is critical for EE as this not only changes the role of the teacher, but also makes EE more practical. While new venture creation remains a common outcome of EE, there is a growing recognition that instilling an entrepreneurial mindset is equally crucial. Mico and Cungu (2023) posit that a clear link exists between EE and the ultimate choice of an entrepreneurial career path. In other words, EE improves the probability of an individual choosing to become an entrepreneur. Authors such as Schachtebeck and Tselepis (2024) emphasise the acquisition of entrepreneurial competencies alongside practical skills. EE programs must strike a balance between theory and practice, preparing students not only to create ventures but also to think innovatively and embrace uncertainty. EE serves as a catalyst for personal and professional growth. By integrating theory, action, and real-world experiences, educators empower the next generation of entrepreneurs to shape the future of business.

Three primary approaches to EE exist, emphasising the importance of both theoretical knowledge and practical experiences. These approaches are referred to as Learning About Entrepreneurship (LAE),

Learning for Entrepreneurship (LFE) and Learning Through Entrepreneurship (LTE) (Gibb, 2005; Schachtebeck & Tselepis, 2024). The LAE approach is regarded as the simplest form of EE as it mainly focuses on teaching foundational entrepreneurship theories and concepts. This is often done as teachers active on EE programs are often not trained to impact entrepreneurial skills effectively and merely concentrate on the underlying theory (Mico & Cungu, 2023). In large-class settings, instructors deliver lectures, reinforce textbook material, and assess student learning through tests (Crispin, 2013). Herein however lies the main downside of this approach as it is unable to provide real-world experience dimensions, as the focus is on the provision of theory. LFE goes further than LAE by taking an action-oriented approach (Gibb, 2005). It focuses on preparing students to start a business by provision of practical, technical and teacher-guided instruction (Hardie, Highfield & Lee, 2020). However, research has also shown that LFE is more effective in crafting an entrepreneurial identity within the learner, thereby creating a long-lasting impact (Hardie, Highfield & Lee, 2020). Action-oriented learning is, however, one of the most impactful EE instructional methods as it provides a deeper learning experience for the learner (Amaral et al, 2023). Lastly, LTE transcends the confines of classroom-based instruction and has been shown to be effective at both the primary and secondary school level, as well as at the tertiary level (Hardie, Highfield & Lee, 2020). It encourages students to venture beyond textbooks and immerse themselves in practical aspects of entrepreneurship, thereby adopting a learning-by-doing approach (Tan & Ng, 2006; Hardie, Highfield & Lee, 2020; Tselepis *et al.*, 2021). This can encompass activities of a practical nature such as internships, apprenticeships, launching of businesses, and participating in Capstone projects provide valuable experiential learning experiences. This can also include business simulations, which combine both theory and practice (Fox et al, 2018). LTE fosters risk-taking, adaptability, and the ability to navigate the unknown - an entrepreneurial mindset (Hoppe, 2016).

3. Research Methodology

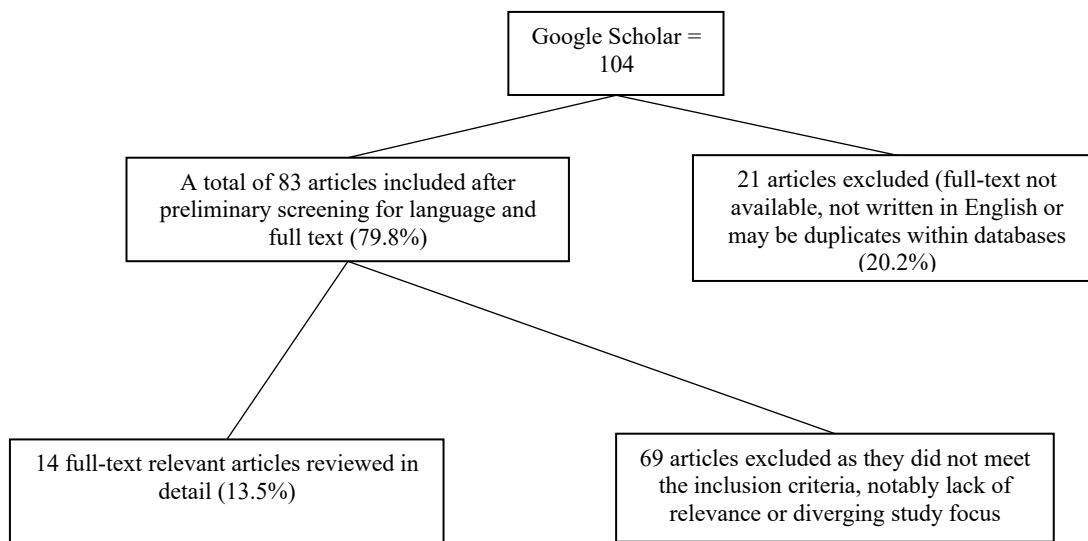
This study employed a descriptive research design utilising a systematic review to qualitatively assess the relationship between entrepreneurship education (EE) and intrapreneurial orientation. Systematic reviews are typically employed to comprehensively identify, synthesise, and evaluate all available qualitative or quantitative evidence, to provide an empirically derived response to a specific research inquiry (Mallett et al., 2012). Unlike traditional literature or narrative reviews, systematic reviews adhere to predefined steps to locate relevant studies in a particular field, ensuring an unbiased search, rigorous selection process and replicability, resulting in improved scientific rigour, objectivity, and thoroughness in the search process (Sánchez-González et al., 2010; Cassell & Lee, 2011). Specific inclusion and exclusion criteria were established to guide the systematic review process. Included studies were required to be empirical, investigate the intersection of entrepreneurship education and

intrapreneurial orientation, be available as full-text articles, and report results in English. Studies were excluded if they were non-empirical, limited to abstracts, or did not focus on how entrepreneurship education impacts intrapreneurial orientation. Full-text articles were preferred to ensure the inclusion of nuanced details often missed in dissemination studies. Once studies meeting the inclusion criteria were identified, thematic content analysis was employed for data analysis. The study's objective guided this analysis to determine if EE programs linked to intrapreneurial orientation.

The primary research question driving this systematic review was formulated as: "How do entrepreneurship education programs foster intrapreneurial orientation?" To effectively address this question, keywords were compiled, including "entrepreneurship education" and "intrapreneurial orientation." The objective was to identify empirical journal articles examining the connection between EE programs and developing an intrapreneurial orientation.

The systematic review made use of a Boolean search method, utilizing the above-mentioned keywords. The primary search string was as formulated as follows: ("entrepreneurship education") AND ("intrapreneurial orientation"). Instead of searching specific databases, Google Scholar was utilised as the underlying source for this study. Google Scholar provides the broadest coverage of academic literature across disciplines, including peer-reviewed papers, theses, books, conference papers, and patents (Bakkalbasi et al., 2006; Harzing & Alakangas, 2016). It is, therefore, an ideal source for a systematic literature review. The selected keywords were in the article titles, texts, abstracts, or keywords. The initial database search yielded 104 studies in the first phase. Following an initial screening to exclude studies lacking full-text availability, not written in English, or identified as duplicates across databases, 21 articles were removed. Subsequently, the remaining 83 articles underwent screening against the predefined inclusion and exclusion criteria. Ultimately, 14 studies, constituting 13.5% of the initial total, were deemed suitable for review. The systematic review's overall search process is illustrated in Figure 1.

Figure 1 Process of study selection



4. Results and Findings

The systematic review yielded a total of fourteen full-text journal articles which were reviewed in detail. The main findings of the fourteen journal articles linking EE and IO were summarised in Microsoft Excel using key words. The identified studies were analysed using thematic analysis, with four major themes derived from these articles and subsequent summarised key words. These themes included i) apprenticeship training for innovation, ii) collaboration and networking, iii) management education and iv) project-based learning. While the four themes were derived from the fourteen identified studies, it should be noted that overall, a dearth of research still exists that links EE and IO. The impact of EE on the IO of employees, therefore, remains underexplored. Authors such as Amaral, Nieuwenhuizen and Schachtebeck (2023) explored similar links, but these were focused on students in higher education institutions. A dearth of research was also noted in this particular study.

The first theme, **Apprenticeship Training for Innovation**, emphasises the use of apprenticeship training within existing businesses to enhance innovation. This also links directly back to the notion of fostering an IO for employees as apprenticeship training would expose students to real-life, practical, entrepreneurial training. Studies such as those by Frank *et al.* (2016) stress the link between apprenticeship programs and higher business innovation levels. Key factors identified within this theme include selection processes, vocational education, career planning, social integration, incentive systems, and corporate social responsibility (Frank *et al.*, 2016). A study by Dallas, Greenhalgh-Spencer and Frias (2021) also stresses combining curricular and real-world experiences to make EE programs more impactful. The second theme, **collaboration and networking**, highlights that collaboration within an organisation, and networking outside of the organisation, is crucial for

developing entrepreneurial skills and fostering an entrepreneurial mindset among staff (Henry & Lahikainen, 2024). In particular, these authors highlight the importance of collaboration for the development of entrepreneurial skills, as well as the importance of an entrepreneurial mindset for employees. Hand-in-hand with this is the openness to new experiences from employees, who need to be willing to venture into the unknown and take risks (Singh & Mehdi, 2022). The third theme, **management education**, stresses the importance of having management development programs within existing organisations which focus on developing an IO. Authors such as Gonzalez-Tejero and Molina (2022), as well as Smith *et al.* (2019), champion the inclusion of EE curricula into leadership and management development programs, thereby indirectly encouraging the development of an IO among business managers. To this end, Marques *et al.* (2018) highlight the inclusion of education for entrepreneurship in management education programmes, in particular with focus on self-efficacy, risk-taking and innovation. Other important competencies related to EE and intrapreneurial behaviours include professional/creative skills, communicative/championing abilities, opportunity recognition, as well as social and brokering competencies (Kreuzer & Weber, 2017; Marques et al, 2018; Blanka, 2019; Breyer-Mayländer & Zerres, 2022). The last theme, **project-based learning**, speaks directly to the LTE philosophy of EE. One article in particular highlighted the importance of ‘arts intrapreneurship’ (Ruiz *et al.*, 2023). This particular approach integrates project-based learning within an arts curriculum, thereby transcending the traditional approach of integrating entrepreneurship in business curricula. In addition, this theme encourages various project-based learning approaches (e.g., events, startups, local needs, program redesign, marketing campaigns, social enterprises, app development, and research projects). These learning approaches also underpin LTE as they transcend mere provision of theory in EE.

5. Managerial Implications

Entrepreneurship education programmes are primarily offered by higher education institutions, both public and private. While these programmes are also offered at the basic school level, which was not the focus of this study, the link to EE programmes at post-school level is important. This is to ensure that learners at basic schooling level are familiar with fundamental entrepreneurial knowledge, which can be honed at post-school level. Universities and policy-makers can further leverage these findings to realign entrepreneurship education programs, placing greater emphasis on fostering an entrepreneurial mindset and promoting workplace-based entrepreneurial activities. These skills, primarily through adopting an entrepreneurial mindset, are crucial for both business success and societal advancement, representing essential capabilities for the future. The study also highlighted a shift away from LAE and toward LFE and LTE. EE programs should therefore limit theory-based teaching and focus on practically applying these skills in a real-world setting. Lastly, the study's conclusions advocate for integrating intrapreneurial orientation outcomes more extensively into EE

programs. This strategic adjustment could yield substantial benefits for businesses aiming to enhance innovation and competitiveness in an increasingly competitive and global market environment.

6. Conclusions, Limitations and Future Research

The purpose of this study was to ascertain links between entrepreneurship education and the creation of an intrapreneurial orientation. Findings indicated that literature linking these two concepts is still scarce. Four themes emerged, in the form of apprenticeship, management development programs, project-based learning, as well as collaboration and networking. The major themes confirm findings of EE studies which highlight the impactful nature of LTE and LFE approaches to EE. It is noteworthy that LAE approaches, which are mainly theoretical in nature, did not prominently feature in the systematic review findings. This may confirm that in order to promote an IO among employees, LTE and LFE approaches should be the primary vehicle through which this is achieved in the workplace. The study therefore contributes to the existing body of knowledge by linking the EE and IO concepts more explicitly, while at the same time providing suggestions for higher education institutions to promote IO as an outcome.

This study also faced some limitations. While Google Scholar is regarded as the most comprehensive database / repository of research articles, it is not exhaustive. Future studies could, therefore, include searches in other databases such as Web of Science (WoS), JSTOR or more focused databases such as EbscoHost. These databases further provide the option to refine search criteria and terms more precisely, thereby aiding discovery of relevant studies, whereas Google Scholar searches the full-text. Second, due to the formulation of specific inclusion and exclusion criteria, some studies may have been inadvertently excluded from the systematic review. Future research could consider adjusting these criteria to offer a more thorough examination of the EE and IO concepts. This, this qualitative study utilised a systematic review method, which inherently lacks empirical data. Future studies would benefit from empirically investigating the effects of entrepreneurship education programs on intrapreneurial orientation outcomes, using both quantitative and qualitative approaches. This approach would significantly contribute to the limited body of literature that integrates these two concepts.

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