Educational Administration: Theory and Practice
2024,30(4), 98-111
ISSN:2148-2403
https://kuey.net/

Research Article

Entrepreneurship Education: An Insight Into The State Of Art

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Citation: VB Krishna et al. (2024), Entrepreneurship Education: An Insight Into The State Of Art, *Educational Administration: Theory and Practice*, *30*(4), 98-111, Doi: 10.53555/kuey.v30i4.1409

ARTICLE INFO

ABSTRACT

Entrepreneurship Education is a subject of interest for academicians, administrators and policymakers (Kuratko, 2005). There has been increased attention towards entrepreneurship education, leading to a range of research on entrepreneurship education impact studies. (Gartner & Vesper, 1994; Henry, Hill, & Leitch, 2005; Weaver, Dickson, & Solomon, 2006; Dickson, Solomon, & Weaver, 2008). Through the study the researchers analysed 64 articles on Entrepreneurship Education published between 2008 and 2019, continuing the study of Pittaway and Cope (2007). Different search steps following The PRISMA 2020 statement Page MJ et al. (2020) are adopted to undertake the literature survey. The study analysed various research papers classified under different dimensions, such as Factor Approach, Entrepreneurial Behaviour, Gender studies, Learning Entrepreneurship, Policy and Regional Study and Social Entrepreneurship, which is related to Entrepreneurship. All these different fields of study are analysed to understand the state of art in the domain of entrepreneurship education.

Keywords: Entrepreneurship Education, State of Art, PRISMA, Literature review, Entrepreneurship, Education

1. Introduction

Over the years, the idea of entrepreneurship has evolved, and the scope is also becoming diversified. The impetus for entrepreneurship as an outcome relies on the definition of entrepreneurship that would not only point to the creation of new business ventures but also need to emphasize the various contexts (Gibb,2002). Some definitions emphasize opportunity recognition and exploitation (Shane & Venkatraman, 2000). Such definitions are broad because they include nascent entrepreneurship, family business, social entrepreneurship, and corporate entrepreneurship. So, Entrepreneurship may differ from new venture creation but with creativity and change (Kirby, 2004). However, there is a general understanding that entrepreneurship significantly impacts economic growth (Carree et al., 2002).

In this background, Entrepreneurship Education is a subject of interest for academicians, administrators and policymakers (Kuratko, 2005). Reason being its impact on employment and economic growth (Audretsch, Grilo, & Thurik, 2011). There has been increased attention towards entrepreneurship education, leading to a range of research on entrepreneurship education impact studies. (Gartner & Vesper, 1994; Henry, Hill, & Leitch, 2005; Weaver, Dickson, & Solomon, 2006; Dickson, Solomon, & Weaver, 2008). Entrepreneurship education is a formalized teaching that educates anyone interested in business creation (Bechard & Toulouse, 1998). Entrepreneurship education can trigger entrepreneurial initiatives by enhancing the entrepreneurial mindset among the students (Petridou et al., 2009; Lubis, 2014). There is also a debate about the role of universities and business schools in their contribution to entrepreneurship education (Kirby, 2004).

Various studies also show that entrepreneurship education has a positive spillover on intentions and attitudes (Kolvereid & Moen, 1997; Tkachev & Kolvereid, 1999) It is significant because awareness and perception precede the entrepreneurial intention which eventually becomes the foundation for starting a business venture. Similar studies show that entrepreneurship can also be promoted through Education and Training (Petridou & Glaveli, 2008).

Contrary to the above arguments, early researchers in the domain had argued that entrepreneurs are born, not bred, and it is beyond the capabilities of business schools or universities to teach individuals to become more enterprising (Johannison, 1991). Further, the entrepreneurship programs run by business schools equate entrepreneurship with new venture creation and educate "about" entrepreneurship rather than educating for entrepreneurship (Kirby, 2004). Katz (1990) identified a weak relationship between Entrepreneurial intention and behaviour. Further, entrepreneurship education's usefulness has also been questioned (Aronsson, 2004).

2. Research Method

We analyzed 64 articles on Entrepreneurship Education published between 2008 and 2019, continuing the study of Pittaway and Cope (2007). Best practices from the methodological (Tranfield, Denyer, & Smart, 2003), synthesis (Cooper, 1989), and entrepreneurship literature (Pittaway & Cope, 2007; Wang & Chugh, 2014) were adopted.

We have gathered the data from the EBSCOhost database, which is home to thousands of academic works. Previous research has shown that the simultaneous use of other relevant databases does not increase the number of relevant documents captured due to the duplications that occur among the databases (Harzing & Alakangas, 2016). Thus, we used only the EBSCOhost database in this study's literature survey.

Different search steps following The PRISMA 2020 statement Page MJ et al. (2020) are adopted to undertake the literature survey.

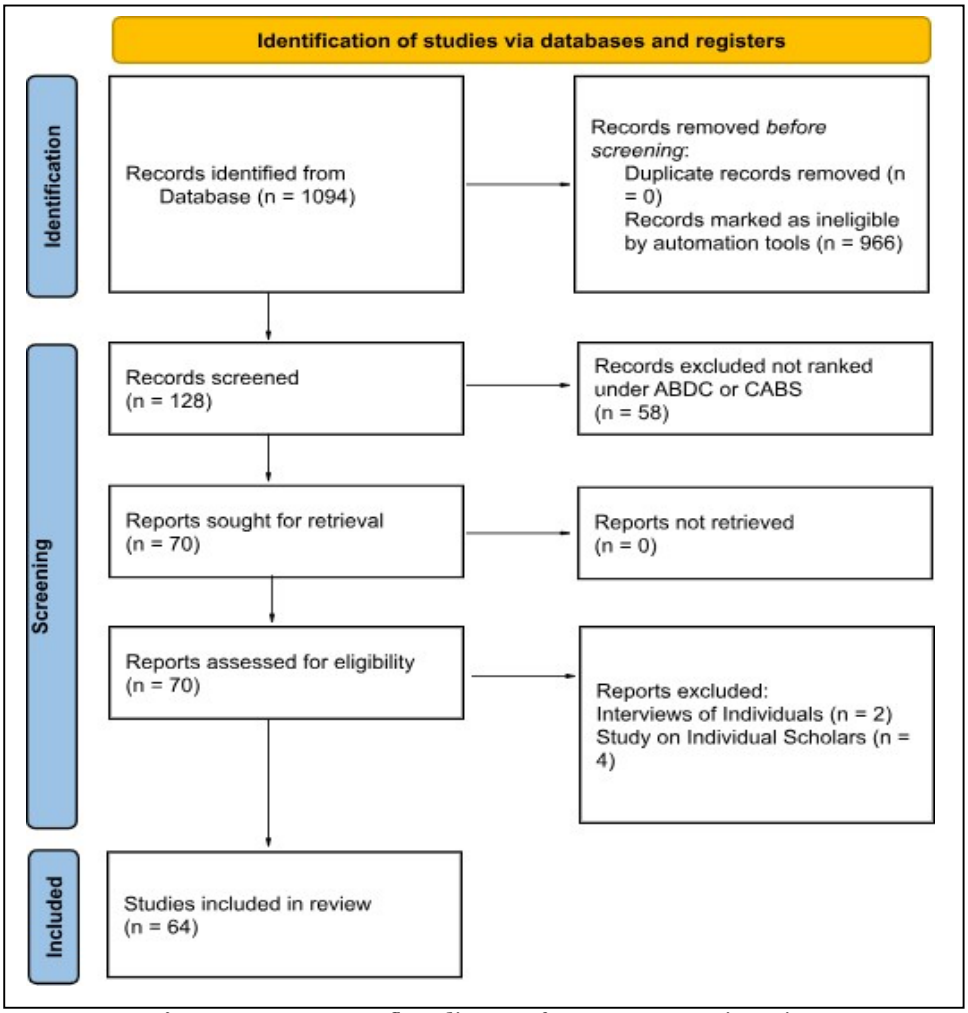

Fig 1: PRISMA 2020 flow diagram for new systematic review

First, the documents were retrieved using the term "Entrepreneurship Education", appearing as a topic (i.e., as keywords in document titles, keywords, and abstracts). In total, 1094 records included academic journal articles, magazines, trade publications, industry profiles and book reviews.
Second the "type of document" was specified as the scholarly (peer-reviewed) - academic journal articles, and the period between 2008 and 2019 is defined. After this process, in total, 128 records were obtained.
Furthermore, the documents selected are from the discipline categories most commonly used to classify journals that cover EE research, including subcategories of "business," "management," "economics," "education educational research," "psychology educational," or "education scientific disciplines." from the journals listed as medium- and high-ranking entrepreneurship journals under ABDC (Australian Business Dean Council) and CABS (Chartered Association of Business Schools). After this process, we selected twelve high-impact journals and seventy peer review articles. Further, to exclude bias towards the individuals in the scholarly domain, the interviews of individuals and study on individual scholars' contribution has been excluded.
Finally, we considered 64 journal articles from twelve academic journals for the exploratory survey.

3. Analysis

The study analysed various research papers classified under different dimensions, such as Factor Approach, Entrepreneurial Behaviour, Gender studies, Learning Entrepreneurship, Policy and Regional Study and Social Entrepreneurship, which is related to Entrepreneurship. All these different fields of study are analysed with the help of three different dimensions, namely (i) Theme, (ii) Research Methodology (iii) Outcomes

3.1 Research Themes

This section of the article explores the main research themes addressed by researchers in Entrepreneurship. Zahra et al. (2007) examined the variations among academic advisory boards of entrepreneurship centres regarding their efforts and attention based on a selection of research papers. Soriano (2009) provided an overview of the existing literature on the entrepreneurial learning process. Brown & Hanlon (2016) conducted a comprehensive study to validate the Behavioral Observation Scales (BOS) using performance measures and a national survey of entrepreneurs. Another researcher, Gordon et al. (2012), investigated the contextual relationship between students' self-efficacy beliefs and entrepreneurial intentions within entrepreneurship courses' content and teaching methods. Shirokova et al. (2017) focused on a fascinating theme, exploring whether entrepreneurs predominantly exhibit a nonlinear thinking style or possess a more balanced combination of nonlinear and linear thinking styles. Pittaway et al. (2015) introduced the "Entrepreneurship Education Model" (EEM), which is based on Liñán and Chen's adaptation of Ajzen's theory of planned behaviour. The authors utilized this model as an evaluation tool, employing a mixed methods approach to assess entrepreneurship education in a large German university. This model can be valuable for aspiring entrepreneurs. Fretschner & Weber (2013) and Lyons (2017) proposed a similar analysis, examining the proactive attitude towards entrepreneurship education using a quasi-experimental design. They compared an MSc entrepreneurship program with a control group from an MSc supply-chain management program, aiming to evaluate the effectiveness of entrepreneurship education based on the theory of planned behaviour (TPB).

Edelman (2008) suggested operationalizing the concept of entrepreneurial intention and its antecedents to address relevant issues. The impact of entrepreneurship education, training, and support in fostering positive perceptions of competence for start-up firms were recognized, as well as validating the measurement of entrepreneurial attitudes as a predictor of self-employment intentions. Neck & Greene (2011) focused on the attitudes expressed by individuals considering their career options after completing their formal education at university. Gender-related studies in entrepreneurship were also addressed, with one paper examining the progression of venture ideas from the conceptual stage to commercialization, explicitly focusing on elite STEM talent. Additionally, Toutain et al. (2017) investigated the effects of gender and supplementary management education on academics' willingness to start their own companies. The focus of research in Entrepreneurship revolves around various themes and perspectives. Katz (2008) argues that entrepreneurial activity in business can be seen as fully developed, countering Kuratko's viewpoint. Brown and Hanlon (2016) explore how the combination of human and social resources enhances the learning experience in entrepreneurship, specifically examining the value of "know-what," "know-how," and "know-who." Oyugi (2015) empirically investigates the impact of formal education on entrepreneurship selection and success in advanced economies, shedding light on the rise of entrepreneurship education in universities worldwide and its effectiveness in cultivating entrepreneurial skills through a quasi-experimental approach.

Saeed et al. (2015) distinguish between managerial and entrepreneurial skills, focusing on describing the domain of entrepreneurship education. Kwong and Thompson (2016) analyze the theme of entrepreneurship education programs, while McNally et al. (2016) examine whether entrepreneurial leadership enhances professional skills among university students. Katz (2008) introduces the concept of Evidence-Based Management (EBM) in MBA programs in the United States, highlighting its importance. Seet et al. (2018) explore various epistemological

viewpoints on entrepreneurial learning at the individual and business levels. Sluis et al. (2008) discuss how governments prioritize technology, science, and engineering graduates to foster entrepreneurial skills. Sluis et al. (2017) present three cases of academic entrepreneurship training in Sweden, showcasing different approaches to addressing challenges in this context.

Vanevenhoven and Liguori (2013) compare data from the Panel Study of Entrepreneurial Dynamics (PSED) dataset with information from entrepreneurship textbooks to understand how nascent entrepreneurs embark on their business ventures. Volery (2013) examines the Innovation and Entrepreneurship (I&E) course, which aims to equip engineers with entrepreneurial skills to pursue unconventional career paths. Rideout and Gray (2013) emphasize the significance of including entrepreneurship education programs in higher education to raise awareness and promote business start-ups. MUSTARD (2009) highlights the role of design thinking and entrepreneurship education in encouraging individuals to perceive the world from fresh perspectives, generate hypotheses, and engage in cognitive actions to navigate ambiguous circumstances. Morris (2013) conducted a study focusing on action-based entrepreneurship training programs and applied action regulation theory to examine their effectiveness. The training programs strongly emphasized action, as participants learned action concepts and actively engaged in the start-up process of a company. Duval (2013) discusses the increasing use of technology for business innovation and the importance of coordinating efforts between inventors, business practitioners, and legal professionals. This coordination is crucial for transferring innovations from academia to industry through licensing or entrepreneurial engagement. Bagheri and Pihie (2011) highlight the positive impact of student-led clubs on entrepreneurial learning.

Charlier (2011) highlights the role of government policies in supporting Higher Education Institutions (HEIs) in offering training programs for SMEs, specifically focusing on improving higher-level skills necessary for their growth. Karataş-Özkan (2011) explores the drivers behind causal and effectual reasoning among student-founders of new ventures. Lindh and Thorgren (2016) emphasize how local business operations and culture can influence the interpretation and implementation of local-level policies. KICKUL et al. (2012) argue that entrepreneurship education has played a crucial role in fostering social entrepreneurship, allowing students to leverage their capital and skills to address complex social problems.
ELMES et al. (2012) draw from geography and anthropology literature to provide a location-based perspective that enhances the understanding of social entrepreneurship and offers new pedagogical approaches. SMITH and WOODWORTH (2012) highlight the increasing importance of educating social entrepreneurs and inventors in business schools, emphasizing effective pedagogical techniques. WESLEY and WILLIAMS (2012) examine the skill sets taught in social entrepreneurship courses and evaluate the competencies deemed relevant by social entrepreneurship professionals. PHILLIPS, N. (2016) adopts a practice-based wisdom perspective to address social entrepreneurs' significant challenge in managing the conflict between social welfare and economic success. HOWORTH (2012) explores the dynamics and challenges of social entrepreneurship education, using social theories of learning to gain a deeper understanding of the learning process. Social entrepreneurs must navigate the delicate balance between social and business goals.

3.2 Methodology of Research

Zahra et al. (2007) conducted exploratory research by approaching 50 professional centre directors and requesting their boards to participate. Their objective was to gather information and insights on a specific topic. Soriano (2009) reviewed the literature by exploring articles from the top 9 international scientific journals. The purpose was to understand the existing research and knowledge in the field comprehensively. Bagheri & Pihie (2011) conducted an empirical study among 131 students pursuing an entrepreneurial education program. The researchers collected and analysed data to draw conclusions and insights about their research questions.

Fretschner & Weber (2013) conducted a multivariate analysis study to analyse their collected data. This statistical analysis allowed them to examine the relationships and patterns in the data. Brown & Hanlon (2016) compared behavioural observation scales in their study, while Gordon et al. (2012) tested predictions through a survey involving 114 students enrolled in different entrepreneurship courses. These studies evaluated and compared various measures and approaches in entrepreneurship research. Pittaway et al. (2015) utilised a mixed methods evaluation tool in an awareness education setting. This tool allowed them to gather quantitative and qualitative data to understand the phenomenon under study comprehensively.

Thursby et al. (2009) conducted a study using a quasi-experimental design. This design allowed them to examine the effects of entrepreneurship education and determine any differences in the pre-and post-test measures without a specific training intervention. Garbuio et al. (2018) adopted a mixed methodological approach, combining quantitative and qualitative data analysis. This approach enabled them to obtain a more comprehensive understanding of the research topic. Ebersberger & Pirhofer (2011) experimented using an entrepreneurial education program that spanned 24 hours of class over three days. The purpose was to assess the impact and effectiveness of the program within the specified time frame.

Lyons & Zhang (2017) conducted a study with 805 university students. They analysed the data using structural equation modelling to examine the relationships between different variables. Their findings indicated the influential role of perceived educational support on entrepreneurial self-efficacy, followed by concept development support, business development support, and institutional support. Furthermore, they found that entrepreneurial self-efficacy significantly affected entrepreneurial intention. Zhang (2009) utilised quantitative data from a survey of U.K. students in their research. This data provided them with valuable information and insights related to their research questions.

Zozimo et al. (2017) employed scale validation techniques and factor analytics techniques in their study. These techniques allowed them to assess the validity and reliability of the measurement scales used in their research. Toutain et al. (2017) analysed a detailed survey involving 308 academics from various scientific fields. The purpose was to gather information and perspectives from experts in the area to enrich their study.

Brown & Hanlon (2016) used a qualitative research design to conduct in-depth semi-structured interviews with participants. Additionally, participants were given access to learning websites to enhance their understanding. This design enabled them to gather detailed and comprehensive insights. Oyugi (2015) examined the existing literature on the relationship between educational attainment and entrepreneurship success and choice. They used meta-regression analysis (MRA) as a statistical tool to synthesise and discuss previous study results with similar features.

Fretschner & Weber (2013) conducted a multi-level review using a cross-country sample of 87,918 students from the Global University Entrepreneurial Spirit Students' Survey (GUESTS). The sample was collected through a non-random process, allowing universities to choose the classes and schools included in the survey. The authors analysed the data collected through social media, email, or in-class questionnaires. The study included responses from 93,265 individuals in 26 countries, and non-response and missing values were addressed in the analysis. Rauch & Hulsink (2015) analysed the empirical entrepreneurship literature to identify consistent findings regarding the impact of educational attainment on entrepreneurship success and choice. They used meta-regression analysis (MRA) as a statistical instrument to combine results from previous studies with similar characteristics.

Hölzner & Halberstadt (2019) conducted research involving 494 students enrolled in entrepreneurship programs and 238 students in a control group. Their study focused on upper-secondary vocational, technical, and commercial school students, a demographic that had received limited attention in previous research despite representing a significant portion of young adults in European education programs. The researchers incorporated personality characteristics into their analysis and used a quasi-experimental pre-, post-, and post-test framework to gather data multiple times. Krueger (1993) conducted an extensive analysis of the entrepreneurship education (E-ed) literature to classify and evaluate empirical research assessing the outcomes and impacts of university-based E-ed. The study involved searching influential entrepreneurship journals over ten years and employed a pretest-posttest and control group design. The authors also examined potential differences between respondents and non-respondents, and the data was collected from two universities in two countries to enhance external validity. Psychometric reliability metrics were also presented.

Saeed et al. (2015) utilised a Delphi methodology to present evidence of a core collection of 13 entrepreneurial competencies. They conducted a pilot study involving students in an international education program, using pre- and post-measures to assess competency growth. The study highlighted the role of entrepreneurship education in enhancing these competencies.

Kwong & Thompson (2016) analysed the literature to assess an educational program. They found that most entrepreneurship education research focused on curriculum design and execution, with a significant gap in the evaluation practice, as identified through a literature review. McNally et al. (2016) conducted a study exploring different learning mechanisms for enhancing entrepreneurial leadership skills. They focused on entrepreneurial learning and its significance, laying the groundwork for an integrated model of entrepreneurial leadership growth. Katz (2008) examined over 800 management course syllabi from 333 programs to identify references to evidence-based management (EBM) principles. They also investigated lecturer, program, and establishment characteristics as potential correlates of EBM references. Seet et al. (2018) conducted a longitudinal case study to investigate the entrepreneurial learning processes of five new ventures that formed venture teams. Over ten months, they collected data through participant evaluations, in-depth interviews, and observational research during venture team meetings.

Sluis et al. (2008) involved 666 first-year engineering students in their research, gathering qualitative data from their written feedback. They also conducted student achievement interviews to explore different learning outcomes. The study focused on students' positive responses to the spaghetti game and discussed collaboration

mechanisms and pedagogical breakthroughs. Sluis et al. (2017) presented three academic programs integrating academia and practice in entrepreneurship learning. The research was conducted in Swedish, considering practical factors and representing different approaches to promoting entrepreneurship learning.

Vanevenhoven & Liguori (2013) compared data from entrepreneurship textbooks in U.S. higher education institutions with the Panel Study of Entrepreneurial Dynamics (PSED) Data Set to analyse entrepreneurial activities. They examined the alignment between textbook coverage and actual entrepreneurial practices. Volery (2013) described the French Grandes Ecoles system and the Innovation and Entrepreneurship specialisation development at MINES ParisTech. The author discussed the current state of training in engineering schools, drew lessons from their experience, and suggested future directions.

Rideout & Gray (2013) analysed research articles published in various journals, focusing on the impacts of entrepreneurship education (E.E.) in higher education. They systematically reviewed empirical evidence and identified trends and teaching models in the field. Mustard (2009) discussed the relationship between cognitive acts, information representations, and the efficiency of designers in solving problems. The authors explored the integration of design thinking and cognition in entrepreneurial education, proposed a model for design-driven entrepreneurship education, and discussed its implementation.

Morris (2013) presented descriptive statistics and correlations of research variables related to entrepreneurship education. They used t-tests to compare variables between training and control groups and analysed differences in measures between the two universities. Duval (2013) described a high-tech entrepreneurship initiative that involved experiential learning and early exploration of commercialisation issues. The program included external evaluation, and the authors used quasi-experimental methods with pre-and post-tests and a control group to assess the impact on perceived capabilities.

Bagheri & Pihie (2011) conducted a study that drew ideas from existing literature on entrepreneurial learning. They conducted exploratory studies and surveyed students interested in clubs to test the concepts of entrepreneurial learning. The research aimed to test existing theories and allow new theories to emerge. In 2009, they conducted a second step in the study, gathering information about students' participation in entrepreneurship clubs through a questionnaire based on the principles of entrepreneurial learning. The study involved 77 students from 29 United Kingdom and United States institutions. The research employed qualitative studies and a student survey, comparing two student-led clubs: entrepreneurship clubs and Enactus clubs. Charlier (2011) interviewed five small and medium-sized owners/managers who participated in the Lancaster University LEAD program in 2004. Qualitative techniques were used to record their experiences. The participants were required to express, connect with, and support each other during the program as part of the learning process. The interviews took place at the beginning and middle of the program, and further discussions were conducted in 2009. The research aimed to examine the impact of LEAD on these individuals five years after completing the course, specifically focusing on its influence on their educational experiences and business behaviour.

Karataş-Özkan (2011) conducted a study using the Global University Entrepreneurial Spirit Students' Survey (GUESS) involving 2179 student entrepreneurs from 26 countries. Lindh's (2016) research involved sampling municipalities and schools in Sweden and collaborating with local businesses. Both urban and rural cities were included in the study. KICKUL et al. (2012) developed a theory identifying fundamental educational concepts in social entrepreneurship and entrepreneurship education. The approach emphasises the importance of inter-university tools, activities, and external collaborations for the framework's success. ELMES et al. (2012) addressed the concept of social entrepreneurship by analysing syllabi from graduate-level social entrepreneurship programs and examining the shortcomings of the two main frameworks: environment and society. They also presented a case study on a place-based approach to teaching social entrepreneurship, demonstrating how place-based thinking is integrated into undergraduate mentoring.

Smith & Woodworth (2012) incorporated Social Identity Theory and Self-categorization theory in their research. These theories explore the influence of social identity and group categorisation on entrepreneurial behaviour. Wesley & Williams (2012) examined the results of a survey of 150 social entrepreneurs and venture capitalists to identify 35 primary competencies in social entrepreneurship. They also analysed 77 social entrepreneurship course syllabi from universities worldwide to determine if educators are teaching these core competencies.

Phillips (2016) employed the Classical Practice-Based Wisdom and Contemporary Wisdom Theory theories. Classical Practice-Based Wisdom focuses on principled approaches to achieving social success, while Contemporary Wisdom Theory integrates wisdom psychology and neuroscience to gain insights into managing conflicting values. HOWORTH (2012) utilised social learning theories to analyse their validity and applicability in the context of entrepreneurial learning. They conducted an inductive analysis to explore the role of social learning in entrepreneurial education.

Zozimo et al. (2017) identified sixteen participants who completed a program designed explicitly for entrepreneurs offered by a top-rated U.K. university. Through in-depth interviews, they collected data using a life course strategy. The data was then organised into descriptive categories and explanatory themes, examining the relationship between role models and learning.

3.3 Outcomes of Various Studies

Soriano (2009) emphasizes the need for improvement in current entrepreneurial education, particularly in paying more attention to the social environment. These sugg Under standingal context and dynamics are crucial for practical entrepreneurship. Bagheri and Pihie (2011) suggest that social competence plays a direct role in the success of entrepreneurial networking. Developin Strong social skills and building ships are essential for entrepreneurs to network and collaborate with others effectively. Fret schner and Weber (2013) aim to uncover the reasons behind the success of universities like MIT and Stanford in fostering entrepreneurship and creating successful businesses. By studying these institutions, the researchers seek to identify the factors and strategies that contribute to their entrepreneurial achievements. Brown and Hanlon (2016) explore the relationship between entrepreneurs and firm performance. They provide an overview of the behavioural observation scales used to assess and measure various aspects of entrepreneurial behaviour, shedding light on how these behaviours impact the business's success. Gordon et al. (2012) highlight that previous studies have treated entrepreneurial education as a homogeneous entity without considering its different components. Their research emphasizes the need to differentiate and analyze specific elements of entrepreneurial education to gain a more comprehensive understanding of its effects.

Shirokova et al. (2017) challenge the stereotype that entrepreneurs possess a highly nonlinear thinking style. Their study aims to investigate whether entrepreneurs tend to exhibit a predominantly nonlinear thinking style or a more balanced combination of nonlinear and linear thinking styles. Pittaway et al. (2015) draw attention to the significant increase in entrepreneurship courses offered in higher education. However, they note the need for more rigorous, consistent, and sustainable evaluations of these programs, leaving questions unanswered about the appropriate design and structure of such courses. Thursby et al. (2009) argue that entrepreneurship education positively influences individuals' perceptions of entrepreneurship, including their attitudes and intentions towards starting their businesses. This suggests that education shapes individuals' entrepreneurial mindsets and aspirations.

Garbuio et al. (2018) examine the impact of different teaching methods, teacher-directed and self-directed learning approaches, on students' proactive attitudes. They also consider the moderating effects of group potency and emotions on the outcomes of proactivity learning. This research highlights the importance of instructional approaches in fostering proactive behaviours among aspiring entrepreneurs. Ebersberger and Pirhofer (2011) propose a theoretical framework based on the theory of planned behaviour. They introduce vital variables such as the initial level of intention and prior entrepreneurial exposure to better understand entrepreneurial decision-making processes and outcomes.

Lyons and Zhang (2017) demonstrate that university support, including perceived educational support, concept development support, basin development support, and citational support, significantly shape students' entrepreneurial self-efficacy. This self-efficacy, in turn, along with individual motivations, serves as a fundamental driver of entrepreneurial intentions. Zhang (2009) finds that individuals intending to enter entrepreneurship immediately place less emphasis on avoiding stress and responsibility, viewing themselves as natural leaders. They also exhibit higher confidence in their ability to succeed, although not necessarily due to superior knowledge. Zozimo et al. (2017) highlight the lack of need for validation techniques in publications focused on entrepreneurial attitudes and intentions. This suggests the need for more rigorous and methodologically sound validation approaches in studying these crucial areas. According to Toutain et al. (2017), female entrepreneurs are less inclined to start businesses in high-growth sectors. This difference can be attributed to variations in business intentionality, founders' human capital, and access to finance. The researchers surveyed academics and controlled for academic achievement, scientific field, and perceived obstacles. Their findings reveal that female academics demonstrate a significantly lower propensity for high willingness to engage in entrepreneurial endeavours.

Katz (2003) argued in a Journal of Business Venturing article that entrepreneurship, despite its maturity, needs to gain the same level of legitimacy as other business disciplines. However, Don Kuratko (2004, 2005) countered this claim in a keynote address to the United States Association for Small Business and Entrepreneurship (USASBE) and an article in Entrepreneurship: Theory & Practice, asserting that entrepreneurship is indeed a good area, though not fully matured, within the realm of business disciplines. Brown and Hanlon (2016) researched to examine how the combination of human and social resources enhances the entrepreneurial learning experience in a start-up accelerator. They specifically focused on the value of "know-what," "know-how," and "know-who" elements. Their study contributes to entrepreneurship theory and practices, particularly in the Asia Pacific region,

by highlighting the role of "know-who" in closing the training loop for "know-what" and "know-how," providing entrepreneurs with valuable tools to support their entrepreneurial self-efficacy.

Oyugi (2015) explores the relationship between entrepreneurship entry and educational attainment, linking it with economic theory. The article delves into how educational achievements influence individuals' decisions to pursue entrepreneurship. Fretschner and Weber (2013) apply human capital theory to investigate the correlation between the number of entrepreneurship education initiatives attended and entrepreneurship learning. The relationship follows a curvilinear pattern, where additional exposure to entrepreneurship education initiatives is beneficial until a certain threshold level is reached. Beyond this point, the impact of education on learning declines.
Rauch and Hulsink (2015) employ economic theory to analyze the relationship between entrepreneurship entry and educational attainment, shedding light on the interplay between education and entrepreneurial pursuits. Hölzner and Halberstadt (2022) draw on human capital theory to examine entrepreneurship education outcomes. The research suggests that individuals with more or higher-quality human resources are better equipped to identify and leverage entrepreneurial opportunities. Formal education plays a significant role in acquiring explicit information that can benefit entrepreneurs.

From a psychological career theory perspective, Krueger (1993) explores the decision-making process and educational preparation for an entrepreneurial career. The Career Theory, derived from Adam Smith's Human Capital Theory, highlights the role of education, or the lack thereof, as a contributing factor to individuals' pursuit or avoidance of entrepreneurial occupations. Ajzen's Theory of Planned Action (1991) posits that entrepreneurial intentions often follow entrepreneurial activities and can influence the academic experience. (Saeed et al., 2015) The researchers laid the theoretical and conceptual groundwork for a competency-based approach to entrepreneurship. Drawing from structuration theory (Giddens, 1984), they view entrepreneurship as a mechanism that unfolds through individual behaviour and environmental interactions.

(McNally et al., 2016) Entrepreneurial leadership is recognized as a distinct type of leadership behaviour, particularly relevant in volatile, demanding, and competitive environments. Scholars have taken two approaches to entrepreneurial leadership competencies: a "work-oriented approach" and a "socio-cultural and situated approach," emphasizing specific abilities required for leadership roles in entrepreneurial endeavours. (Jerome A. Katz, 2008) This study employed institutional theory to understand decision-making in entrepreneurship. According to institutional theory (DiMaggio & Powell, 1983), individuals may imitate the practices of highly respected others when uncertain about the best course of action.

(Seet et al., 2018) The definition of entrepreneurship in this study emphasizes the relentless pursuit of growth opportunities, wealth accumulation, and company expansion. Adopting a process-relational approach, entrepreneurship is viewed as a proactive endeavour involving learning, envisioning possibilities, managing day-to-day operations, and engaging with stakeholders. (Sluis et al., 2008) In France, engineering education predominantly follows a traditional lecture-based approach that may not effectively foster collaboration and communication skills. The researchers introduced the "spaghetti game," a participative and team-based learning method, as an alternative to enhance collaboration, problem-solving, and teamwork skills.

(Sluis et al., 2017) This article presents entrepreneurship as a procedural phenomenon characterized by the actions and behaviours of entrepreneurs. (Vanevenhoven & Liguori, 2013) The authors build on Kirchhoff's (1994) distinction between small/new businesses with varying levels of entrepreneurial activity. They argue that highly innovative and growth-oriented firms are often considered "glamorous," while those with more common goals are seen as "economic centres." This distinction becomes crucial during the growth stage of businesses, challenging the conventional classification of "small" versus "entrepreneurial." (Rideout & Gray, 2013) The study incorporates different entrepreneurship education (E.E.) effects into a broader teaching model. The authors focus on two dimensions: styles of effect and underlying pedagogy, aiming to explore the link between pedagogical approaches and student/graduate entrepreneurial outcomes.

(MUSTARD, 2009) Design-thinking academics must adapt their teaching methods to collaborative, project-based, and studio settings. The article suggests incorporating design cognition into a problem- and team-based pedagogy, aligning with the popular entrepreneurship education approach. The role of mentors, external support, and critical reflection in-studio learning is also emphasized. (Morris, 2013) The author develops a theoretical framework based on action regulation theory to examine how action-based entrepreneurship training facilitates business start-ups. The framework explores intermediaries that clarify the reasons and processes through which entrepreneurship training enables individuals to start businesses. (Duval, 2013) Integrative programs incorporating experiential entrepreneurship modules into existing degree programs can offer value to students. The authors argue that such programs can particularly benefit science, engineering, business, and law research students.

(Bagheri & Pihie, 2011) The study applies Kolb's experiential encompasses four dimensions: concrete experience, reflective observation, abstract conceptualization, and active experimentation. Individuals move across these dimensions during the learning process. (Charlier, 2011) Governments worldwide recognize the critical role of the SME sector in regional economies and have implemented programs to promote collaboration between Higher Education Institutions (HEIs) and SMEs. In the U.K., various initiatives aim to foster coordination and partnership between HEIs and SMEs to support regional economic development.

(Karataş-Özkan, 2011) University entrepreneurship-related offerings, including curricular programming, co-curricular activities, and financial support, play a differentiating role in adopting causal or effectual entrepreneurship approaches among experienced and inexperienced student entrepreneurs. (Lindh & Thorgren, 2016) Academics argue that regional growth and development policies should be tailored to the specific local context in which they are implemented. Additionally, localized learning and information spillover between established and potential entrepreneurs may lead to lock-in effects that hinder new knowledge development.

According to KICKUL et al. (2012), the entrepreneur significantly shapes a role in shaping potential social entrepreneurship endeavours. By introducing new lesson plans and methodological innovations, students are the necessary capital and skills to launch, develop, and scale their businesses, addressing complex and large-scale social problems. ELMES et al. (2012) emphasize the importance of providing students with a deeper understanding of the intricate relationships between social enterprises and local ecosystems. This understanding enables individuals within various community networks to grasp the immediate impact that a social enterprise can have on their local environment study conducted by SMITH & WOODWORTH (2012), Social Identity Theory and Self-categorization theory were utilized as theoretical frameworks to analyze the phenomenon under investigation. These theories explore how individuals' identities and group membership influence their behaviour and decision-making processes.

The work of WESLEY & WILLIAMS (2012) adopts the theory of social change to address issues such as urban decay, poverty alleviation, and the search for economically viable alternatives for individuals experiencing poverty. This theory provides a framework for understanding the dynamics of societal transformation and the pursuit of sustainable solutions.

PHILLIPS (2016) draws on two theories: Classical Practice-Based Wisdom and Contemporary Wisdom Theory. Classical Practice-Based Wisdom offers a principled approach to achieving social success in a complex world. On the other hand, Contemporary Wisdom Theory incorporates advancements in wisdom psychology and neuroscience to provide insights into managing conflicting values and making wise decisions. In HOWORTH's (2012) study, social learning theories were applied to assess their validity and applicability after conducting an inductive analysis. These theories contribute to understanding how individuals learn from their social environment and the impact of observational learning on entrepreneurial behaviour.

Zozimo et al. (2017) examined the theoretical foundations of their research, drawing on insights from social learning theory (Bandura, 1977). Additionally, they refer to Cope's (2005) seminal work, which provides valuable insights into the learning processes of entrepreneurs and the role of role models.

4. Conclusion

The research review paper aimed to examine previous studies in entrepreneurship, focusing on the themes, theories, and research methodologies utilised. The authors analysed various research papers that explored entrepreneurship and its learning process. The selected articles covered various topics, including entrepreneurship centres, social competence, nonlinear thinking, entrepreneurship education, gender studies, and more. These studies employed different methodologies, such as quasi-experimental designs, national surveys, and empirical research.

Based on their analysis, the authors concluded that entrepreneurship education is crucial in fostering positive perceptions of competence among individuals starting their businesses. Governments are emphasising the development of entrepreneurial skills among graduates in technology, science, and engineering. Including entrepreneurship education programs in higher education contributes to a greater awareness of business start-ups.

Furthermore, action-based entrepreneurship training programs that utilise action regulation theory, design thinking, and entrepreneurship education help individuals view the world from fresh perspectives and reduce psychological confusion when faced with ambiguous circumstances. Each research methodology mentioned in the paper holds significant value. This section highlights the illustration of variables, sample selection methods, sample characteristics, and research areas.

The studies primarily focused on analysing and exploring various aspects of entrepreneurship education. These aspects include its impact on entrepreneurial success, learning mechanisms to enhance entrepreneurial leadership skills, and the necessary competencies for entrepreneurship. To synthesise the findings of previous studies and draw meaningful conclusions, the researchers employed different research designs and statistical tools. They also assessed existing literature and educational programs to identify gaps and enhance understanding of entrepreneurship education.

Overall, the data suggest that entrepreneurship education is an important research area that requires further exploration and development. The theories section of the paper delves into various aspects of entrepreneurship education and research. It highlights several key points, such as weaknesses in current entrepreneurial education regarding the social environment, the direct influence of social competence on entrepreneurial networking success, and the need for rigorous program evaluations for entrepreneurship courses in higher education. The positive perception of entrepreneurship, university support, institutional support, gender disparities, human capital, and the relationship between educational attainment and entrepreneurship entry are also discussed.
The reviewed studies emphasise the significance of entrepreneurship education in fostering entrepreneurial competencies and success. However, further understanding is needed regarding the role of the social environment and the appropriate design of curricula and instructional methods for entrepreneurship courses. The studies also identify factors like social competence, institutional support, gender, and human capital that can influence entrepreneurship outcomes. Overall, the research reviewed in this paper provides valuable insights into entrepreneurship education and the various factors that impact entrepreneurial success. Continued research is necessary to deepen our understanding and enhance the effectiveness of entrepreneurship education programs. It is evident that Entrepreneurship Education certainly influences perceptions about entrepreneurship, but there seems not much research evidence pointing that it affects actual behaviour. There is a debate about whether the appropriate outcome of entrepreneurship education is related to creating an enterprise (Fayolle, 2006). Moreover, mandatory entrepreneurship courses may not demand students to start a business venture. However, they aim to increase awareness about entrepreneurship (von Graevenitz, Harhoff, & Weber, 2010) and provide the necessary skills for entrepreneurship (Oosterbeek, van Praag, & Ijsselstein, 2010). However, several academic courses and training programs aim to educate and prepare students in entrepreneurship to set up their businesses (Gibb, 2002). At the same time, creating new organizations is the core of entrepreneurship (Gartner, 1988).

Interestingly, only a few studies assessed the behavioural outcomes, such as the startups initiated (Souitaris et al., 2007) and the number of ventures started (Kolvereid, 1996). This may be because of the time frame involved in the study. The effect of intention on their behaviour would evolve (Kolvereid & Moen, 1997). This means that more extended time frames are required to thoroughly study the effect of entrepreneurship education on entrepreneurial behaviour. All the above discussion makes it interesting to understand state of the art in the scholarly domain of entrepreneurship education, which supports future research.

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