



Entrepreneurial Leadership Skills and Competencies: A Systematic Literature Review

Fida Ahmed¹

University of Turbat, Turbat, Balochistan, Pakistan, & PhD Candidate at University of the West of Scotland, School of Business and Enterprise, Glasgow, UK

Christian Harrison²

University of Bolton, Greater Manchester Business School, Bolton, UK

Abstract. Entrepreneurial leadership (EL) is a relatively new paradigm of enquiry. The research on entrepreneurial leadership skills and competencies and their development is dispersed. This study, following an evidence-based approach, aims to address this issue by applying a systematic literature review. The findings of the SLR show that entrepreneurial leadership skills and competencies are critically important for the success of organisations regardless of their nature, size and contexts. Results of the review identify that proactiveness, innovativeness, risk taking propensity, articulating vision, motivation, communication, influence, teamwork, creativity, and risk-taking are important skills of entrepreneurial leaders. Whilst personal, functional, technological, and interpersonal competencies were identified as essential competencies for entrepreneurial leaders; entrepreneurship education and courses, as well as experiential, socially interactive and project-based learning approaches are regarded as processes of EL competencies' development. Drawing on extant literature, this research identified various research gaps and proposes future research streams on entrepreneurial leadership skills and competencies.

Keywords: entrepreneurship; leadership; entrepreneurial leadership; skills; competencies.

1. Introduction

Entrepreneurial leadership (EL) which converged from entrepreneurship and leadership has gained increased attention in recent times. Although leadership and entrepreneurship were traditionally recognised as separate fields of study, recent scholarship has drawn parallels between both fields on conceptual and historical perspectives (Ahmed and Harrison, 2021; Bagheri et al., 2013b; Cogliser and Brigham, 2004; Harrison et al., 2016a). Some researchers like Vecchio (2003)

-
1. Lecturer, University of Turbat, M8 Road, Turbat, Balochistan, Pakistan. Doctoral Candidate, University of the West of Scotland, School of Business and Enterprise, Hamilton International Technology Park, Stephenson Place, Blantyre, Glasgow G720LH. Fida.Ahmed@uws.ac.uk
 2. Professor, University of Bolton, Greater Manchester Business School, Great Moor Street, Bolton BL11SW. c.harrison2@bolton.ac.uk

recognised entrepreneurship as a type of leadership in a different context. The growing debate on the commonalities and differences on entrepreneurship and leadership led to the emergence of a new paradigm of enquiry known as ‘entrepreneurial leadership’ (Bagheri and Pihie, 2010; Harrison et al., 2018).

To date, various scholars have defined entrepreneurial leadership from different perspectives. For instance, Gupta et al. (2004, p. 242) conceptualise entrepreneurial leadership as “leadership that creates visionary scenarios that are used to assemble and mobilise a ‘supporting cast’ of participants who become committed by the vision to the discovery and exploitation of strategic value creation”. For Hejazi et al. (2012), entrepreneurial leadership is about recognising and exploiting opportunities. Whereas Surie and Ashley (2008) view entrepreneurial leadership as a leadership style ideal for solving organisational problems in uncertain environments.

Despite increased scholarship, there is a lack of consensus among researchers on a single definition of the notion; hence the concept remains elusive and lacks definitional clarity (Fernald et al., 2005; Harrison et al., 2018; Leitch and Volery, 2017). In effect, theoretical development of entrepreneurial leadership as a prominent theory is hindered and lacks measurement tools to assess characteristics and behaviours of entrepreneurial leaders (Renko et al., 2015).

Despite the lack of a clear definition, entrepreneurial leadership has been studied in a number of settings (Cogliser and Brigham, 2004; Darling and Beebe, 2007; Gupta et al., 2004; Harrison et al., 2018; Harrison et al., 2016b). However, as an emerging field of research, the current literature of EL is dispersed and fragmented (Clark et al., 2019). Specifically, the research on the impact of entrepreneurial leadership skills and competencies across organisations and their development, lacks a conclusive picture within the existing literature. Nevertheless, extant literature highlights that entrepreneurial leadership skills and competencies play a prominent role in identifying and exploiting business opportunities and coping with business challenges in uncertain environments (Ahmed and Harrison, 2021; Bagheri et al., 2013a; Harrison et al., 2018; Surie and Ashley, 2008).

Keeping in view the crucial impact of entrepreneurial leadership skills and competencies, this research attempts to review the existing literature on entrepreneurial leadership skills and competencies and their development by employing a systematic literature review (SLR).

This paper is structured as follows. The background of entrepreneurial leadership and a map of the body of research on the subject are provided in the first section. The methodology and three-stage SLR process are explained in the following section. The next section discusses the findings and results of SLR. The paper’s limitations, theoretical and practical implications, and a direction for future research are all presented in the last part.

2. Background

Growing academic debate on entrepreneurial leadership led to the emergence of multiple perspectives. Roomi and Harrison (2011) proposed four perspectives of entrepreneurial leadership which include: convergence of entrepreneurship and leadership, the psychological approach, the context approach, and the holistic approach.

Drawing on the convergence of leadership and entrepreneurship perspective, numerous scholars focused on the characteristics of entrepreneurship and leadership and have drawn on the similarities and differences in both fields (Cogliser and Brigham, 2004; Fernald et al., 2005; Harrison et al., 2018; Harrison et al., 2016b). As a result, various psychological characteristics, attributes, and personality traits of entrepreneurial leaders have been identified (Darling and Beebe, 2007; Gupta et al., 2004). Notably, Cogliser and Brigham (2004) identified vision, influence, creativity, and planning as overlapping characteristics of leaders and entrepreneurs. While Fernald et al. (2005) found the characteristics of vision, problem solving, decision-making, and risk taking common in leaders and entrepreneurs. However, the convergence of leadership and entrepreneurship approach is criticised for being descriptive and lack of an agreed list of characteristics among researchers. It also disregards how leaders and entrepreneurs can learn and develop these characteristics (Roomi and Harrison, 2011). A strand of literature explored entrepreneurial leadership from a contextual perspective such as gender (Galloway et al., 2015; Henry et al., 2015; Patterson et al., 2012); family business (Kansikas et al., 2012); research groups in universities (Hansson and Mønsted, 2008); the public sector (Currie et al., 2008); indigenous businesses (Mapunda, 2007); retail pharmacy (Harrison et al., 2018; Harrison et al., 2016a); human, social and institutional capital (Haynes et al., 2015; Leitch et al., 2013); aircraft industry (D'Intino et al., 2008); strategic management (Kuratko and Hornsby, 1999; Thompson, 1999; Kuratko, 2007); shared or distributed leadership (Cohen, 2004; Sklaveniti, 2017); and SMEs (Leitch et al., 2009; Simba and Thai, 2019).

Additionally, some researchers have also investigated entrepreneurial leadership in cross-cultural and national perspectives (Van Assche, 2005; Choi, 2009; Wang et al., 2012; Bagheri, 2017; Bagheri and Harrison, 2020; Megheirkouni et al., 2020); while others have attributed entrepreneurial leadership to effective SMEs and venture's performance (Agus and Hassan, 2010; Rahim et al., 2015; Paudel, 2019). Furthermore, some scholars have examined entrepreneurial leadership education and development (Okudan and Rzasas, 2006; Hentschke and Caldwell, 2005; Bagheri and Pihie, 2010; Kempster and Cope, 2010; Roomi and Harrison, 2011; Bagheri and Pihie, 2013; Churchill et al., 2013). Despite garnering a great deal of scholarly attention, the context approach does not address the issues about the conditions that foster

entrepreneurial leadership and does not inform whether they are best for a new venture or exist in established organisations (Clark et al., 2019).

The holistic approach to entrepreneurial leadership proposed by Roomi and Harrison (2011) underpins context and leadership style. This approach examines various leadership styles such as transformational and transactional leadership styles in terms of their potential entrepreneurial orientation. Nonetheless, how leadership style i.e., transformational leadership and higher entrepreneurial orientation produce higher business performance lack empirical justification. Arguably, it provides a weaker conceptual foundation to entrepreneurial leadership (Roomi and Harrison, 2011).

Taking context into consideration, Vecchio (2003) views entrepreneurship as a type of leadership that emerges in a specific setting. Kuratko (2007) offers an almost opposing viewpoint, appearing to argue that leadership is a form of entrepreneurship or, at the very least, that modern leaders must be entrepreneurial in order to be successful. Against the backdrop of this, Surie and Ashley (2008) define entrepreneurial leadership as “leadership capable of sustaining innovation and adaptation in high velocity and uncertain environments” (p. 235). This conceptualisation underpins transformational, team oriented, and value based perspectives and somehow combines the psychological and contextual approaches, thereby shifting the debate of entrepreneurial leadership towards a process perspective – that recognises the skills, behaviours, cultural values, organisational, personal, and transitional factors of entrepreneurial leaders to respond to environmental contingencies (Bagheri et al., 2013a; Coglisier and Brigham, 2004; Freeman and Siegfried, 2015; Harrison et al., 2016a; Harrison et al., 2018; Koryak et al., 2015; Swiercz and Lydon, 2002; Wang et al., 2012). This view significantly emphasises learning and developing various personal and functional competencies of entrepreneurial leaders (Bagheri et al., 2013a; Swiercz and Lydon, 2002). The process perspective of entrepreneurial leadership moves from a psychological to a dynamic view of the notion. Antonakis and Autio (2007) proposed a ‘process model’ and argued that context is a moderator of entrepreneurial leadership behaviour. For Leitch et al. (2009), entrepreneurial leadership is a social process that entails multiple activities, events and exchanges over time. Akin to this, Leitch et al. (2013) looked at entrepreneurial leadership through the lens of human and social capital and came to the conclusion that the skills, knowledge, and abilities of entrepreneurial leaders play a vital role in human and social capital development.

Arguably, the above perspectives may help to explore entrepreneurial leadership from various angles, but further research is required to consolidate the theoretical landscapes and explore the facets of entrepreneurial leadership from individualistic, team, inter-organisational, and dynamic interrelationship perspectives to obtain a more holistic understanding of entrepreneurial leadership (Leitch and Volery, 2017).

Given the aforementioned limitations, this study recognises EL as a social process that occurs in dynamic social contexts underpinned by knowledge, skills, and abilities of social actors. This as a result necessitates the investigation of EL skills and competencies and their development. In so doing, this study conducts a systematic literature review to draw a conclusive picture of extant literature pertaining to EL skills and competencies, and its impact across organisations and development. Evidence of the review provides a knowledge base for developing a competency perspective of entrepreneurial leadership thus broadening the theoretical base of the concept and enhancing our understanding towards a holistic view of the notion. By synthesising extant literature, this study also ascertains key research gaps in relation to EL skills, competencies and development, and proposes future research directions.

3. Methodology

According to Tranfield et al. (2003), the aim of a literature review is to ‘map and assess the existing intellectual territory and to specify a research question to develop the existing body of knowledge further’. The extant literature in business management predominantly adopts a narrative approach in conducting the literature review which is heavily criticised by researchers for being less critical (Harrison et al., 2016b); in effect, various researchers have called for a scientific and evidence-based approach for conducting literature review in the field of business and management (Harrison et al., 2016a, Harrison et al., 2018). A systematic literature review is recognised as a replicable, transparent and scientific process which provides a transparent, inclusive, and explanatory evidence of literature in a particular field (Tranfield et al., 2003). Ideally, a systematic literature review is most suitable to assess and map the dimensions of emerging fields of enquiry i.e., entrepreneurial leadership having a fragmented and dispersed literature (Harrison et al., 2018; Clark et al., 2019). This study conducts the SLR by adopting a three-stage process proposed by Tranfield et al. (2003).

3.1. Stage I: Planning the Review

The process of planning the review was carried out by developing a review protocol from the experts of entrepreneurial leadership. The panel assessed the need for the review, finalised review questions and review protocol. Drawing on various aspects of entrepreneurial leadership skills and competencies and their learning and development, an SLR review protocol was developed. Thereafter, a scoping study was carried out based on the below review questions followed by an inclusion and exclusion criteria.

- What is the impact of entrepreneurial leadership skills and competencies on organisations?
- What are the skills and competencies of entrepreneurial leaders?
- How can entrepreneurial leaders learn and develop these skills and competencies?

The evaluation of relevant literature was based on the inclusion and exclusion criteria mentioned in Table 1.

Table 1. SLR review protocol

<i>Details</i>	<i>Description</i>
Purpose of study	This SLR aims to identify entrepreneurial leadership skills and competencies, explore their impacts on various contexts, and identify how these skills and competencies can be developed.
Review Questions	<ul style="list-style-type: none"> • What is the impact of entrepreneurial leadership skills and competencies on organisations? • What are the skills and competencies of entrepreneurial leaders? • How can entrepreneurial leaders learn and develop these skills and competencies?
Inclusion Criteria	<ul style="list-style-type: none"> • Papers must be in English. • The focus of the paper must be entrepreneurial leadership skills and competencies or their development. • The paper directly addresses one or more of the review questions. • Papers published between 1985 and 2022
Exclusion Criteria	<ul style="list-style-type: none"> • Papers not in peer reviewed publications (i.e. conference proceedings or book chapters) • Papers focused on other styles of leadership • Papers not in English language
Databases	<ul style="list-style-type: none"> • Emerald • Ingenta connect • Sage Journals • Science direct • Springer link • Taylor and Francis • Web of Science • Wiley Online

The research on entrepreneurial leadership spans over 30 years (Clark et al., 2019); the first paper on EL was published by Lippitt (1987). Therefore, this study chose 1985 to 2022 as its timeframe for article search.

3.2. Stage II: Conducting the Review

The process of conducting the review was carried out by identifying keywords derived from the review questions. The following key words and search strings

were used to search the relevant studies across various online databases (See Table 2) that are recognised as the most reputable databases for management research (Harrison et al., 2018).

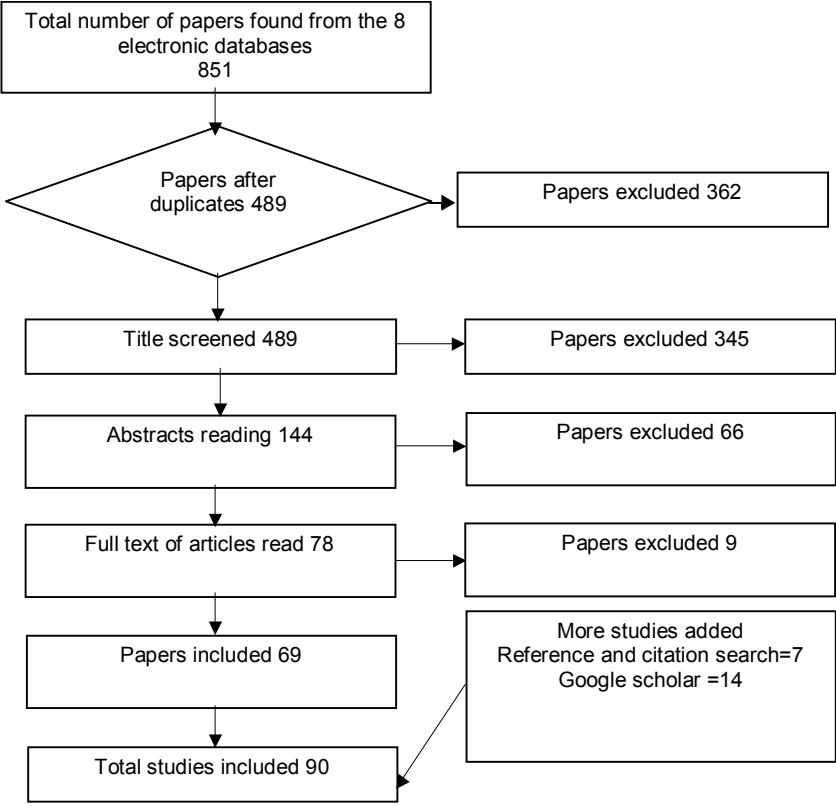
Table 2. Search strings and Keywords

Search Strings	
Search string 1	Entrep*
Search string 1a	Lead*
Search string 1b	Develop* OR Learning
Search string 1c	"Entrepreneurial leadership"
Search string 2	"Lead*"
Search string 2a	Entrep*
Search string 2b	Develop* OR Learning
Search string 2c	"Entrepreneurial leadership"
Search strings 3	"Entrepreneurial leadership"
Search strings 3a	Skills OR Competencies OR Capabilities OR attributes
Search strings 3b	Develop* OR Learning
Search string 4	Entrepreneurial leadership (for Google Scholar)

3.2.1. Screening and Selection Criteria

The initial search, meeting the inclusion and exclusion criteria, yielded 851 papers using keywords and specified search strings on the selected databases that are well recognised in business and management (as shown in Table 1). Duplicate screening was carried out from the initial search result using title, year, and authors screening, 362 duplicate records were excluded. After duplicate screening, title screening was conducted on the remaining results and 345 papers were excluded that were not specifically focused on entrepreneurial leadership skills and competencies. After the title screening, an abstract screening was performed and 66 studies were excluded as they were not directly addressing the review questions and did not meet the inclusion and exclusion criteria. Then the full text of articles was screened and 9 articles were excluded as they were not answering any of the review questions. Resultantly, 69 papers were selected for the review from the database search. In addition, 7 articles were identified from citation and bibliographies (inclusive). Lastly, article search was carried out on Google Scholar which yielded 14 articles relevant to review questions thus added in the literature pool. In sum, 90 articles were selected for the review and further analysis. The search was concluded on 8th of August 2022. The details of article screening and selection criteria are shown in Figure 1.

Figure 1. Screening and paper selection



3.3. Stage III: Reporting and Dissemination

The details of the SLR findings are discussed by using a descriptive, quantitative and qualitative analysis (Tranfield et al., 2003). Table 3 provides the details of the reviewed articles.

Table 3. Details of reviewed articles

No.	Author(s)	Type of Study	Area focused
1	Abbas (2014)	Conceptual	This paper theoretically discussed the challenges of entrepreneurial leaders within the context of Nigeria. The author argues that entrepreneurial leaders need to be academically prepared and gain entrepreneurial experience and managerial skills to cope with the challenges. However, the paper was entirely theoretical and the discussion didn't cover the areas of entrepreneurial leadership skills development.
2	Abbas and Tatfi (2010)	Conceptual	This article theoretically discussed the characteristics and skills of entrepreneurial leaders. The authors proposed that trust among employees, communication, self-improvement, technical skills, sense of responsibility, and decision-making skills are critical for entrepreneurial leaders. However, the paper was entirely theoretical and did not discuss how entrepreneurial leaders can develop these skills.

3	Agbim et al. (2013)	Empirical	This study explored the capabilities of entrepreneurial leadership essential for sustained entrepreneurial success of nascent and experienced entrepreneurial leaders. However, the paper did not discuss how entrepreneurial leaders can develop these capabilities.
4	Ahmed and Harrison (2021)	Conceptual	This article discussed the challenges and competencies of DIY entrepreneurial leaders in driving innovation at DIY labs. The study proposed an integrated entrepreneurial leadership competency model comprising of personal, functional, interpersonal, technological, ethical, and environmental competencies. However, the paper lacks empirical justification to show how these competencies can be developed.
5	Ahmed and Ramzan (2013)	Conceptual	This paper focused on entrepreneurial leadership competencies development adapting the model proposed by Bagheri et al. (2011).
6	Akbari et al. (2021)	Empirical	This article explored the role of entrepreneurial leadership on innovative work behaviour of employees through support for innovation and creative self-efficacy within the context of Iranian SMEs. The authors argue that entrepreneurial leaders can enhance employees' innovative behaviour through developing their skills and competencies by participating in entrepreneurship programs, training and coaching. However, the article didn't discuss the nature, structure, and the method of programs through which these competencies are developed.
7	Almahdi (2019)	Empirical	The purpose of this paper was to explore the role of university adaptation techniques in developing entrepreneurial leadership in context of Saudi Arabia. The author proposes that adaptation of entrepreneurship learning is critical for Saudi Government sustainable economic development goals. However, the study didn't discuss the structure of entrepreneurial learning, and the skills and competencies essential for human capital transformation.
8	Ansari et al. (2014)	Conceptual	This article focused on entrepreneurial leadership learning to cope with the risk, uncertainty and unpredictability of graduates.
9	Ariyani (2021)	Empirical	This study explored how school principals create an entrepreneurial learning environment in the school. The authors propose that an entrepreneurial learning environment can be developed through optimization, communication, motivation, monitoring, controlling, role model, and empowerment. School principals can drive innovation through vision building, staff development, and restructuring.
10	Aziz and Abiddin (2022)	Review	This paper explored leadership styles of students in context of Malaysia. The paper proposed entrepreneurial leadership as an effective leadership style for students to cope with the challenges of 21 st century. The paper also stressed on entrepreneurial leadership development among students through training. However, the paper lack arguments on other entrepreneurial leadership learning and development strategies and the assertions are theoretical and lack empirical basis.
11	Bagheri (2017)	Empirical	This paper explored the impact of entrepreneurial leadership on innovative work behaviour of high-tech entrepreneurial leaders. The findings show a significant positive relationship between entrepreneurial leadership and employee's innovative work behaviour. The author argues that high tech leaders should gain entrepreneurial training and courses to enhance their opportunity seeking and exploitation capabilities.
12	Bagheri and Harrison (2020)	Empirical	This article explored the concept of entrepreneurial leadership by developing a multi-dimensional measurement scale in the context of Iran and Scotland. The study followed a comprehensive approach and identified the skills and competencies, roles and behaviours of entrepreneurial leaders.
13	Bagheri and Pihie (2010)	Empirical	This article explored the role of family in entrepreneurial leadership competencies' development among university students within the context of Malaysia.

14	Bagheri and Pihie (2011a)	Conceptual	This article explored entrepreneurial leadership competency development by adapting the competency model of Gupta et al. (2004) underpinned by scenario enactment (pro-activeness, risk taking, and innovativeness) and cast enactment (building commitment and specifying limits), however, the paper was theoretical and lacks empirical evidence.
15	Bagheri and Pihie (2011b)	Empirical	This article explored entrepreneurial leadership competencies from the lens of university entrepreneurship programmes. The study proposed that entrepreneurial leaders can learn self-awareness, identity realisation, and self-efficacy capabilities through university's entrepreneurship programmes. However, this study was limited in context of two universities, hence the results cannot be generalised to other contexts.
16	Bagheri and Pihie (2012)	Empirical	This article investigated how entrepreneurial leaders can learn leadership capabilities by participating in student and program related roles in universities. However, this model is only limited in context of university, however, how this model can be applied on experienced entrepreneurial leaders, lacks discussions.
17	Bagheri et al. (2010)	Empirical	This article focused on entrepreneurial leadership learning from the lens of university students. This study proposed social interaction, observation, and reflection as a tool for entrepreneurial leadership competencies learning. However, the paper failed to outline specific mechanisms through which entrepreneurial leadership can be learnt.
18	Bagheri et al. (2013a)	Empirical	This article examined the role of entrepreneurship programmes in developing entrepreneurial leadership competencies. However, the study failed to identify how entrepreneurial leadership programmes can develop the competencies of entrepreneurial leadership.
19	Bagheri et al. (2013b)	Empirical	The purpose of this article was to explore the perception of entrepreneurial leaders toward their capabilities in leading new ventures in context of Malaysian university students. The authors propose that entrepreneurial leaders' self-efficacy is a multi-dimensional construct underpinned by various capabilities such as opportunity identification self-efficacy, relationship self-efficacy, management self-efficacy, tolerance self-efficacy, learning self-efficacy.
20	Bahgeri and Pihie (2009)	Empirical	This article focused on entrepreneurial leadership development from the lens of entrepreneurship programs particularly focusing on student's creativity, innovativeness and risk taking. However, the paper lacks discussion about particular skills and competencies required for entrepreneurial leaders.
21	Ballein (1998)	Empirical	This paper explored the attributes of healthcare entrepreneurial leaders. The author identified various attributes and skills of senior nurse executives including vision, integrity, strategic thinking, decisiveness, risk taking, innovativeness, persistence, teamwork, confidence, coping with change, communication, financial, team building, and leadership.
22	Bodolica et al. (2021)	Empirical	This paper explored the role of extracurricular and entrepreneurship club in developing the competencies of social entrepreneurial leaders in context of UAE. The authors argue that university leaders need to develop a sanction-free atmosphere in the university to uplift the social entrepreneurship and innovation skills of nascent entrepreneurial leaders. They further argue that entrepreneurial learning must focus on the employability, communication, innovation, planning, and networking skills of social entrepreneurs.
23	Brauckmann-Sajkiewicz and Pashiardis (2020)	Conceptual	<p>The purpose of this paper was to explore how can entrepreneurial leaders enhance the creativity and accountability in schools. In order to cope with the challenges of the external environment and capture business opportunities, entrepreneurial leaders in schools need to develop managerial, task handling, personnel selection and development and marketing skills.</p> <p>The authors propose that leadership training modules, internship, and developing cross-sectional networks facilitate effective school management.</p>

24	Campos (2021)	Empirical	This article examined entrepreneurial leader's characteristics and employee performance in context of MSME. The findings suggest that entrepreneurial leadership skills have positive impact on employee's productivity. The paper identified technical, conceptual, interpersonal, social intelligence, and emotional intelligence skills of MSME's owner as critical for enhancing the employee performance.
25	Carey et al. (2021)	Empirical	The purpose of this study was to explore how multidisciplinary courses based on consumerism and sustainability can enhance the competencies of entrepreneurial leaders in solving the social, economic, and environmental challenges. The authors proposed that sustainability education facilitate systems-thinking, anticipatory, normative, strategic, and interpersonal competencies development among students.
26	Carpenter (2012)	Empirical	This article explored the attributes of entrepreneurial leaders within the context of librarians. The author argue that entrepreneurial leaders have certain abilities such as creating partnership, inspiring and sharing vision, interpreting human behaviour, risk taking and seeking opportunities which are critically important for librarians to create new organisational structure, generate income, develop information and technology solutions, build new partners and improve services.
27	Chen (2007)	Empirical	This paper explored how the interaction of entrepreneurial leaders and their team member creativity influence innovative capability of the firm. The findings suggest the risk-taking, innovativeness, and proactiveness capabilities of entrepreneurial leaders enhance the team creativity and firm's innovative capability.
28	Churchill et al. (2013)	Empirical	This article explored the role of entrepreneurship programmes in developing entrepreneurial leadership skills of Polytechnic students. The authors proposed experiential learning, social interaction and opportunity recognition as a means of entrepreneurial leadership development.
29	Clark et al. (2019)	Review	This paper conducted a systematic literature review and a thematic analysis on entrepreneurial leadership and identified various themes such as the intersection of leadership and entrepreneurship, the gendered approach, the psychological approach, entrepreneurial leadership development, entrepreneurial leadership skills, entrepreneurial teams, the context approach, and entrepreneurial leadership and performance.
30	Dardiri et al. (2018)	Empirical	This article explored the role of entrepreneurial leadership strategies in achieving academic excellence at technical and vocational educational institution in context of Indonesia. The findings suggest that school principal's capabilities such as articulating vision and mission, motivating and inspiring staff member are essential of achieving academic excellence in the school. The authors argue that school excellence framework should aim to develop hard and soft skills of students. However, the study didn't discuss the skills and competencies of entrepreneurial leaders in context of technical and vocational institutions.
31	Darling and Beebe (2007)	Conceptual	This article explored the skills of entrepreneurial leaders and proposed communication skills as critically important for entrepreneurial leaders. However, the study was only confined to the communication skills and didn't discuss how entrepreneurial leadership skills can be learnt and developed.
32	D'Intino et al. (2008)	Empirical	The purpose of this article was to highlight the characteristics and capabilities of entrepreneurial leaders associated with aircraft industry. The authors argue that aircraft entrepreneurial leaders have the ability to envision and develop the future through effective strategic anticipation and understanding. However, the study was limited to a single aircraft industry i.e., Boeing thus the assertions may not be generalised.
33	Edmond et al. (2017)	Empirical	This paper explored the dimensions of entrepreneurial leadership learning among undergraduate students via a gender perspective. The article explored the impact of pedagogy on students' entrepreneurial leadership skills learning.

34	Fernald et al. (2005)	Conceptual	This paper draws on similarities and differences of entrepreneurship and leadership and identified vision, leadership style, and strategies as core characteristics of entrepreneurial leaders. The authors call for more theoretical and empirical work in relation to entrepreneurial leadership behaviours, ethics, and training and development.
35	Freeman and Siegfried (2015)	Conceptual	This study theoretically discussed the challenges of entrepreneurial leaders and the capabilities required for entrepreneurial leaders to cope with the challenges of their venture during the growth stage. The study proposed strategic thinking, coaching and self-evaluation as necessary capabilities to overcome their challenges. However, the study was theoretical and lacks empirical underpinning.
36	Greenberg et al. (2013)	Conceptual	This article proposed three principles that make basis of entrepreneurial leadership decision making. These include: cognitive ambidexterity, commitment to social, environmental and economic value creation, and self-awareness. However, the assertions are entirely theoretical and lack empirical justification.
37	Guo (2009)	Conceptual	This article explored the core competencies of healthcare entrepreneurial leaders and proposed that healthcare system and environment competencies, organisational competencies, interpersonal competencies are essential for healthcare entrepreneurial leaders. However, the competency model was based on previous literature and lacks empirical investigation.
38	Gupta et al. (2004)	Empirical	This article examined entrepreneurial leadership and identified two different tasks and capabilities of entrepreneurial leaders: scenario enactment (innovativeness and proactiveness) cast enactment (commitment building specifying limitations).
39	Halim and Razak (2014)	Empirical	This paper explored the communication strategies of female entrepreneurial leaders within the context of Malaysia. The article highlighted the key communication strategies of female entrepreneurial leaders which include: mother as a gendered resource, rapport talk, negotiation, iron maiden as a gendered resource, report talk, assertiveness, confrontational communication, pet as a gendered resource, joking and mitigating hedges. The authors argue that focusing on relationship, symbolic communication, body language and cognitive complexity are integral parts of effective communication. However, the study lacks discussion on the impact of communication strategies and how female entrepreneurial leaders can develop these communication skills.
40	Hansson and Monsted (2008)	Empirical	The purpose of this article was to explore entrepreneurial leadership research strategies in universities. The authors propose that entrepreneurial leaders in universities have certain capabilities that facilitate research advancement and knowledge creation. These skills include charisma, capability of linking external contacts, supporting and negotiating creativity, and developing an environment of self-confidence.
41	Harrison et al. (2016a)	Empirical	This study explored the challenges and attributes of entrepreneurial leaders within retail pharmacy sector of Nigeria and proposed a skills-based model of entrepreneurial leaders. However, the study didn't discuss the dimensions of entrepreneurial leadership skills development.
42	Harrison et al. (2016b)	Review	The purpose of this paper was to review and synthesise the extant literature on entrepreneurial leadership and its attributes by conducting a systematic literature review. The findings of the SLR shows that entrepreneurial leadership attributes are contextual. The paper highlighted several attributes of entrepreneurial leaders these include: vision, effective communication, risk taking, and creativity.
43	Harrison et al. (2018)	Empirical	This paper explored entrepreneurial leadership skills in developing economies' context particularly focusing on the retail pharmacy in Nigeria. The paper proposed a skill-based model of entrepreneurial leadership skills underpinned by technical/ business skills, interpersonal skills, conceptual skills, and entrepreneurial skills. However, the results of this study are entirely contextual and limited to retail pharmacy industry and their generalisation to other sectors, require further research.

44	Harrison et al. (2020)	Conceptual	This article theoretically discussed the concept of entrepreneurial leadership from the lens of entrepreneurship and leadership by drawing on attributes and skills of entrepreneurship, leadership and entrepreneurial leadership. However, the authors call for more empirical and theoretical investigation about the skills and attributes of entrepreneurial leaders.
45	He et al. (2017)		This article explored the overlapping characteristics of leadership and entrepreneurship. The findings suggest that vision, passion, integrity and self-confidence are key attributes of entrepreneurial leaders. However, this article was limited to the characteristics of entrepreneurial leaders and didn't explore how these characteristics can be learned or developed.
46	Horan (2007)	Conceptual	This article proposed an integrated leadership development program for developing entrepreneurial capabilities of entrepreneurial leaders. The author argued that an action based and integrated leadership development program play a vital role in developing the cross cultural skills and diverse team management. The action learning method can develop the risk taking, innovation skills, and solve complex challenges of organisations. However, the paper is entirely theoretical and lacks an evidence-based entrepreneurial leadership skills development model.
47	Hunter and Lean (2014)	Empirical	The article investigated the role of social capital on SME's competitiveness by using entrepreneurial leadership as an explanatory variable. The authors argue that entrepreneurial leaders in SMEs should develop specific personal and managerial skills to remain competitive in the changing business environment.
48	Jawi and Izhar (2016)	Conceptual	This article explores how entrepreneurial leadership capabilities enhance the transformation of libraries. Drawing on leader-member exchange theory, the article proposes that strategic, communicative, personal, motivational, and moderator factors are essential in driving innovations in libraries. However, this article was entirely theoretical and the assertions lack empirical justification.
49	Jones and Crompton (2009)	Empirical	This article explored entrepreneurial leadership from a shared leadership perspective and proposed the concept of enterprise logic based on structure, communication and delegation, people management, and vision, authenticity and enactment skills of managers, which are essential for effective organisational performance.
50	Karol (2015)	Conceptual	This article explored the challenges and skills needed for corporate entrepreneurial leaders. The findings revealed that to achieve aligned vision, establishing the trust and commitment, and the skills such as perspective taking, influence and agility are essential for team entrepreneurial leaders.
51	Kassai (2022)	Review	This paper reviewed entrepreneurial competencies and proposed a model of entrepreneurial leadership style for entrepreneurs. The paper adopted a case survey method in conducting the review and identified five competencies of entrepreneurial leaders – i.e., imagination (opportunity recognition and planning, execution, social, organisational, and personal. However, the paper mainly focuses entrepreneurial competencies rooted from the mainstream leadership and entrepreneurship literature and disregarded entrepreneurial leadership competencies.
52	Kempster and Cope (2010)	Conceptual	This article focused on entrepreneurial leadership learning as a social process. However, the paper didn't discuss the dimensions of entrepreneurial leadership skills and competencies that can be learnt through a social process.
53	Koryak et al. (2015)	Review	This article investigated entrepreneurial leadership, capabilities and their influence on the growth of SMEs.

54	Kuratko (2007)	Conceptual	This article discussed entrepreneurial leadership from a global context and discussed various dimensions of entrepreneurial leadership that affect the organisations of 21 st century. The authors proposed the need of entrepreneurial thinking in contemporary organisations to exploit business opportunities and achieve sustainable competitive advantage through adopting various entrepreneurial capabilities such as risk-taking, innovativeness and proactiveness.
55	Kuratko and Hornsby (1999)	Conceptual	The purpose this paper was to explored entrepreneurial leadership in context of corporations. The author explored various dimensions of entrepreneurial leadership to define corporate entrepreneurship strategies that include: developing vision, innovation, venture team, formation of entrepreneurial environment. However, the assertions are highly contextual and lack empirical justification.
56	Lajin and Zainol (2015)	Empirical	This paper examined the role of entrepreneurial leadership dimensions on academic achievement of students. The findings suggest that the dimensions of entrepreneurial leadership such as proactiveness, risk-taking, and competitive aggressiveness have a positive influence on academic grades of students.
57	Leffel et al. (2012)	Empirical	The purpose of this article was to explore how entrepreneurial leadership helps in effective team management in entrepreneurial venture, particularly focusing on conflict management. The authors propose that four skillset: assessment, intervention, resolution and maintenance are essential for the long-term success of the firm.
58	Leitch et al. (2009)	Empirical	This paper explored how entrepreneurial leadership can be developed in small and medium sized enterprises by proposing an action-based leadership development programme. The authors propose that action-based leadership learning programmes enable entrepreneurial leaders to acquire entrepreneurial knowledge, develop their skills and awareness to achieve organisational mission and vision.
59	Leitch et al. (2013)	Conceptual	This article explored entrepreneurial leadership skills from the lens of human, social, and institutional capital.
60	Lippitt (1987)	Conceptual	This article explored the characteristics and skills of entrepreneurial leaders such as risk taking, divergent thinking, sharp focus, personal responsibility, economic orientation, and learning from experience. Furthermore, the author argues that self-awareness, diagnostic skills, learning and getting advice and goal setting are important skills of entrepreneurial leaders. However, the study discussed these characteristics and skills from a conceptual perspective and the assertions lack empirical justification.
61	Lubis (2017)		This study explored the importance of entrepreneurial leadership and law for the formation of entrepreneurial university within the context of Indonesia. Drawing on management competency inventory theory, the author proposed various attributes of entrepreneurial leaders such as problem solving, communications, planning ability, decision making, ethical competency ability, project management negotiating, management information systems, information technology, and the use internet and the attributes of law graduates such as the understanding of corporation, contracts, taxes, securities, patents, real estate, and bankruptcy are critical for entrepreneurial learning.
62	Mars and Torres (2018)	Empirical	The purpose of this article was to examine the impact of entrepreneurial leadership course on student's proclivities towards leading change and their abilities. However, the study focused on the conceived abilities, knowledge and skills of entrepreneurial leader, the actual competencies of entrepreneurial leaders were beyond the scope of this study.
63	Mawoli (2016)	Conceptual	This study theoretically discussed the challenges and prospects of entrepreneurial leaders in context of Nigeria. The authors argue that entrepreneurial leadership challenges can be cope with entrepreneurial leadership programs. Entrepreneurial leadership programs play an integral role in developing the skills and attitudes of entrepreneurial leaders, driving innovation and enhance government revenue generation capacities. However, the assertions are entirely theoretical and lack empirical justification.

64	Mehmood et al. (2020)		This paper investigates the impact of entrepreneurial leadership on employee creativity through mediating role of psychological empowerment and psychological safety. The findings reveal that entrepreneurial leadership play a vital role in enhancing creativity thus facilitates opportunity identification and exploitation. The authors propose that communication and creative skills are important for entrepreneurial leaders to develop the confidence and competency level of employees.
65	Mezher and Hamed (2020)	Empirical	This paper explored the impact of entrepreneurial leadership factors on developing capabilities of company managers. The author argue that entrepreneurial leadership factors such as strategic, personal, communication and motivational factors are essential for the success of companies. These factors enable the company leaders to clearly identify future events, motivate their employees, and take effective decisions.
66	Ngigi et al. (2018)	Empirical	This study investigated entrepreneurial leadership competencies of mid-level CEOs in the context of Kenya and highlighted two categories of competencies, namely; relational competencies and task-oriented competencies. However, the study failed to discuss entrepreneurial leadership competencies development.
67	Okudan and Rzasa (2006)	Empirical	This article explored entrepreneurial leadership courses in developing entrepreneurial leadership behaviour and suggests that entrepreneurial leadership courses are essential in developing motivation, innovation, communication skills, teamwork and writing business plans capabilities of entrepreneurial leaders.
68	Olutade et al. (2015)	Empirical	The purpose of this paper was to investigate the role of entrepreneurial leadership skills and employee interaction on employee performance and business productivity. This article analysed the mediating role of motivation on leader member exchange (LMX) theory and job satisfaction in a team perspective. The findings show a positive relationship between leader-follower's motivation, LMX and job satisfaction. The authors argue that motivation and talent retention skills of entrepreneurial leaders are necessary for the organisational competitiveness.
69	Omeihe et al. (2023)	Empirical	This paper examined the role of entrepreneurial leadership, its attributes, and skills in context of Nigerian fashion SMEs. The paper identified various attributes such as hard work, long-term orientation, passion, length of service, creativity, innovation, vision; and skills such as technical, conceptual, interpersonal, entrepreneurial, and expectation management skills. However, the results are contextual to specific industry thus may not be generalised to other contexts.
70	Ordu (2020)	Empirical	The purpose of this paper was to explore the role of entrepreneurial leadership on identifying and exploring business opportunities in context of start-ups. The authors proposed that a democratic style of entrepreneurial leadership is essential in gaining employee engagement and increased commitment. Therefore, the leaders in start-up should participate in trainings, conferences, seminars, and work projects to enhance their entrepreneurial competencies. However, the paper lacks a wider discussion on entrepreneurial leadership competencies and their development.
71	Pihie and Bagheri (2013)	Empirical	This article investigated school leaders' entrepreneurial leadership practices on school innovativeness from a teacher's perspective. The findings suggest that professional leadership development programmes in schools are critical for school innovativeness. However, the study presented a single dimension of entrepreneurial leaders from a teachers' perspective.
72	Prieto (2010)	Conceptual	This study examined entrepreneurial leadership from the lens of proactive personality, organizational identification, and political skill. The authors argue that entrepreneurial leaders need to develop effective bargaining and team building skills to meet the challenges of changing times.

73	Putsom et al. (2019a)	Empirical	This article explored the effect of entrepreneurial leadership dimensions on value creation in automotive parts manufacturing in Thailand. The study proposed four competencies: personal competencies, managerial competencies, proactive competencies and technological competencies.
74	Putsom et al. (2019b)	Empirical	This study aimed to develop a measurement scale of entrepreneurial leadership competencies including personal competencies, managerial competencies, proactive competencies and technological competencies.
75	Quaye and Mensah (2019)	Empirical	This study examined the impact of entrepreneurial leadership attributes on the performance of SMEs owned by female entrepreneurial leaders in context of Ghana. The findings suggest that entrepreneurial leadership attributes such as innovation, proactiveness, and vision have significant influence on the firm's performance. The authors further argue that female entrepreneurial leaders need to develop self-motivation, knowledge, and skills by undertaking entrepreneurial training and education to enhance their creativity and exploit business opportunities.
76	Ranjan (2018)	Review	This paper provides a review of entrepreneurial leadership literature. The results of the review highlight various dimensions of entrepreneurial leadership such as strategic factors, communicative factors, personal factors, motivational factors and leadership behaviours. Human capital, social capital, entrepreneurial mindset, ambidexterity, and uncertainty absorbing, challenge framing, clearing path, commitment building and limit specification. The traits such as performance oriented, ambitious, informed, extra insight visionary foresight, confidence builder, diplomatic, effective bargaining, convincing, encourage, inspirational, enthusiastic, team builder, improvement-oriented, integrator, intellectual stimulation and positive attitude, were also identified from the review.
77	Renko et al. (2015)	Empirical	The purpose of this article was to develop the construct of entrepreneurial leadership. The study focused on how entrepreneurial leaders and their competencies can influence and direct group members in identifying and exploiting business opportunities.
78	Roomi et al. (2011)	Review	This article focused on entrepreneurial leadership development by reviewing past literature. The authors argue that entrepreneurial leadership capabilities can be developed through socially interactive, critically reflective and appropriate teaching materials.
79	Rusliati et al. (2020)	Empirical	This study focused on how entrepreneurial leadership helps in micro-enterprise development within the context of Indonesia. The authors argue that entrepreneurial leaders by developing their business management, opportunity seeking, confidence building, communication, social and technical skills can facilitate development of micro enterprises. However, the study fails to highlight how these skills and competencies can be developed within the context of micro enterprises.
80	Siddiqi (2007)	Empirical	The purpose of this paper was to explore the role of entrepreneurship programmes in developing entrepreneurial leadership traits. The findings posit that entrepreneurial leadership traits and skills can be developed through an experience-based learning approach. An experienced based approach enables entrepreneurial leaders to take informed business decisions. However, the article was only confined to experience based entrepreneurial learning, other modes of entrepreneurial learning didn't receive considerable attention.
81	Siilasmaa (2019)	Conceptual	This paper theoretically discussed how contemporary leadership theories such as entrepreneurial leadership enable the corporate leaders in planning and leading in unpredictable business environment. The author propose that entrepreneurial leaders should possess the capabilities of thinking and setting alternatives, building trust, encouraging accountability, leading by example and adopting creative ways work. However, the paper lack discussion on the development of these capabilities.

82	Smith et al. (2017)	Empirical	This article explored the role of educator in fostering entrepreneurial leadership learning focusing on actor network theory. The authors argue that entrepreneurial leadership learning is a dynamic process that takes place in peer networks.
83	Strubler and Redekop (2010)	Empirical	This article explores entrepreneurial leadership in context of human resource by identifying the entrepreneurial characteristics and capabilities of Dwight Carlson. The authors propose that the capacity of innovation, hard work, a sense of fun, and team spirit of entrepreneurial leaders determine the motivation and productivity of team members in wider organisational contexts.
84	Sundararajan et al. (2012)	Empirical	The article explored entrepreneurial leadership by linking it to spiritual leadership. The study concludes that for effective and creative entrepreneurial thinking, entrepreneurial leaders need to adopt a non-thinking and silent meditative approach in new ventures. This study suggests that a reflective thinking course should be designed to develop entrepreneurial leadership skills.
85	Swiercz and Lydon (2002)	Empirical	This article explored the competencies required for successful entrepreneurial leaders. The authors proposed that personal and functional competencies of entrepreneurial leaders are critical for their success. However, the article didn't discuss how entrepreneurial leaders can develop these competencies.
86	Tian and Smith (2014)	Conceptual	This study explored entrepreneurial leadership in context of social enterprises and identified challenges and skills of social entrepreneurial leaders. The study concluded that acceptance, differentiation and integration are key skills of social entrepreneurial leaders.
87	Van Assche (2005)	Empirical	This article examined entrepreneurial leaders from international contexts and the author argues that entrepreneurial leadership is an important factor in the creation of economic and monetary union. The author maintained that entrepreneurial leaders require the capabilities such as setting agendas, popularising issues, devising adaptive innovation policies, dealing and lining up support from stakeholders.
88	Wahab and Tyasari (2020)	Empirical	This article focused on the issues and challenges of university leaders in the context of Pakistan. The authors proposed that an entrepreneurial style of leadership is needed in HEIs in Pakistan to overcome the challenges of HEIs. The paper suggests that managerial competency and learning orientation are essential for HEIs entrepreneurial leaders' performance.
89	Wibowo and Saptono (2018)	Empirical	The purpose of this article was to investigate the impact of entrepreneurial leadership on creativity and innovation of elementary school teachers. The findings suggest that entrepreneurial leadership has a strong positive influence on teacher's creativity and innovation. The authors argue that elementary school's principals need to develop their entrepreneurial competencies by engaging in entrepreneurial courses, training, and workshops. However, the paper didn't highlight the specific competencies needed for school principals to drive innovation and creativity in the organisation.
90	Yang (2018)	Empirical	This study explored the role of entrepreneurship education in developing entrepreneurial leadership among Korean university students drawing on three basic factors of entrepreneurial leadership namely, risk-taking, proactiveness, and innovativeness. The author argues that entrepreneurship education underpinned on knowledge, skills, and mental cognition play a critical role in the development of university entrepreneurial leaders.

4. Descriptive Analysis

Descriptive analysis outlines the characteristics of studies on the basis of geographical distribution, types of paper, methodological approach, mode of data

collection, publication per year, most cited articles and journals with highest numbers of publications. These are detailed as follows.

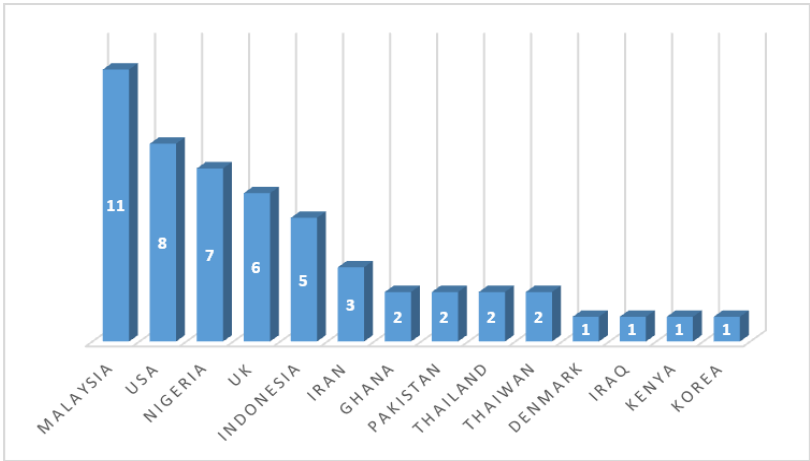
4.1. Geographical Distribution

The findings of the review reveal that a voluminous number of studies focusing on entrepreneurial leadership skills and competencies were conducted within the developing economy’s context which represents 65% or (59 articles) of total studies. The leading contributors are Malaysia 19% (11 studies), Nigeria 12% (7 studies), Indonesia 8% (5 studies), Iran 5% (3 studies), Ghana, Thailand, Taiwan, and Pakistan contributed 3% or (2 studies) each. Largest proportion of studies on entrepreneurial leadership skills and competencies from the developed economies are contributed by United States of America representing 8 studies, and United Kingdom 6 studies.

Evidence from the review suggests that studies pertaining to entrepreneurial leadership skills and competencies are largely rooted within the developing economies, even though the research on entrepreneurial leadership primarily presents a western perspective (Clark et al., 2019; Harrison et al., 2018).

The geographical distribution of the papers is presented in Figure 2.

Figure 2. Geographical Distribution of Studies



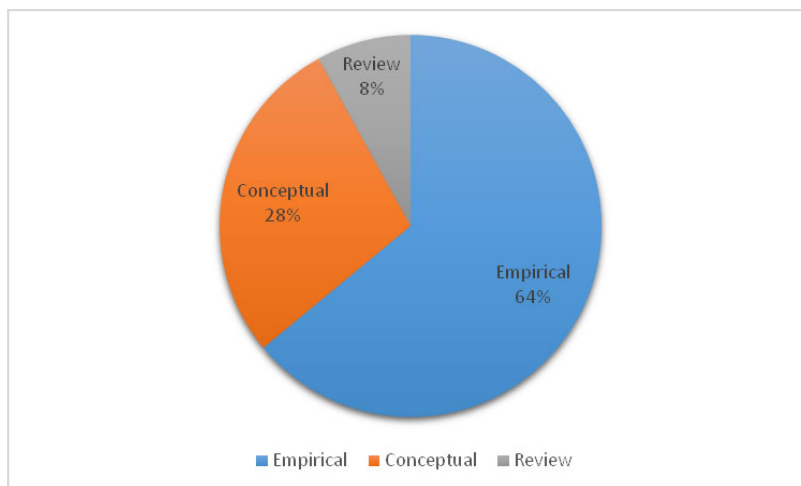
4.2. Types of Study

The types of study are classified as conceptual, review and empirical papers. The results of the review show that 64% (58 articles) were empirical in nature, 28% or (25 articles) were conceptual and the review papers accounted for 8% or (7 articles) of total studies (see Figure 3). The findings show that majority of the conceptual papers were conducted between 2010 and 2020, and the major themes of these papers were: conceptualisation of entrepreneurial leadership, attributes, skills, and characteristics of entrepreneurial leaders, and entrepreneurial leadership development in large, small and medium organisations. Despite the

valuable contribution of these papers in entrepreneurial leadership literature, by large, these papers failed to propose an agreed model of entrepreneurial leadership skills and competencies.

Although Harrison et al. (2018) proposed a skill-based model for EL, the model is limited in context of developing economies. Thus, an agreed model combining overlapping dimensions of EL from a developed and developing economies is recommended. More research is required to ascertain specific skills, characteristics and capabilities of entrepreneurial leaders (Bagheri et al., 2013a; Gupta et al., 2004).

Figure 3. Types of Study



4.3. Research Method

The empirical studies adopted a variety of methodological approaches which include quantitative, qualitative and mixed method. Evidence of the review shows existing studies on entrepreneurial leadership skills and competencies widely adopted a quantitative method representing 48% of the overall empirical studies. While 45% were qualitative and 5% adopted a mixed method of data collection. Figure 4 provides a graphical representation of the research methods adopted by the empirical papers.

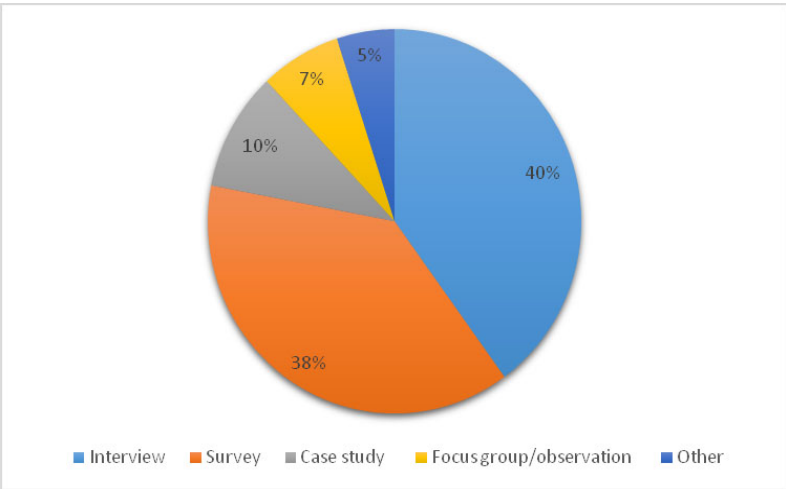
Figure 4. Research method



4.4. Mode of Data Collection

The mode of data collection of extant literature comprises survey, qualitative interviews, case study, focus group discussion and observation. The findings of the SLR show that 38% of empirical studies adopted survey as a method of data collection. Qualitative studies used various methods of data collection including interviews 40%, case study 10%, and focused groups/ observation 7%. The remaining 5% studies used different methods of data collection by mixing interviews, surveys, and other data collection techniques. The methods of data collection of the empirical studies are shown in figure 5.

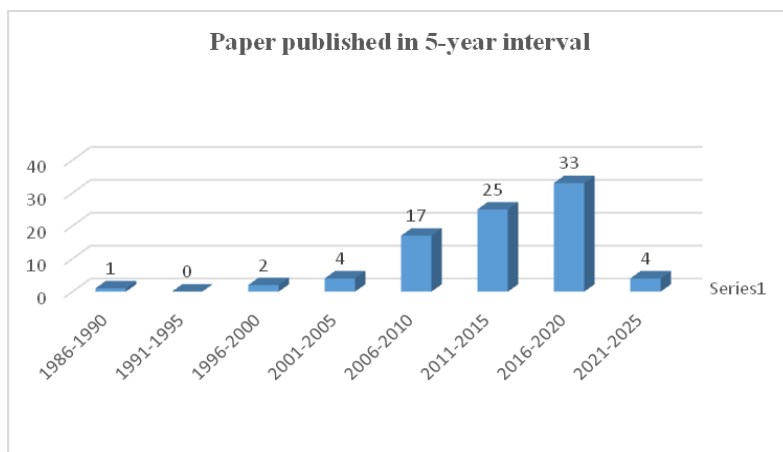
Figure 5. Mode of data collection



4.5. Number of Papers in Five-year Interval

The reviewed articles are dated from 1987 to 2021. Figure 6 shows a five-year interval distribution of the papers. As evident from the graph, the research on entrepreneurial leadership skills, competencies and entrepreneurial leadership development was scarce in the early years – i.e., 1987 to 2005 and an increasing trend of studies can be observed from 2006 onwards. During this phase, entrepreneurial leadership received substantial conceptual, empirical and review papers that laid its conceptual foundation. Proportionately, highest numbers of the papers on entrepreneurial leadership were published between 2011 and 2020 that represents 67% of overall studies. During this phase, 21 quantitative, 20 qualitative, 16 conceptual, and 5 review studies were conducted. The evidence suggests that most of these studies focused on EL skills and competencies in context of developing economies from a conceptual and empirical standpoint. Therefore, it can be argued that the facets of entrepreneurial leadership competencies particularly in context of developed nations, are further researchable.

Figure 6. Publication of papers on 5-year interval

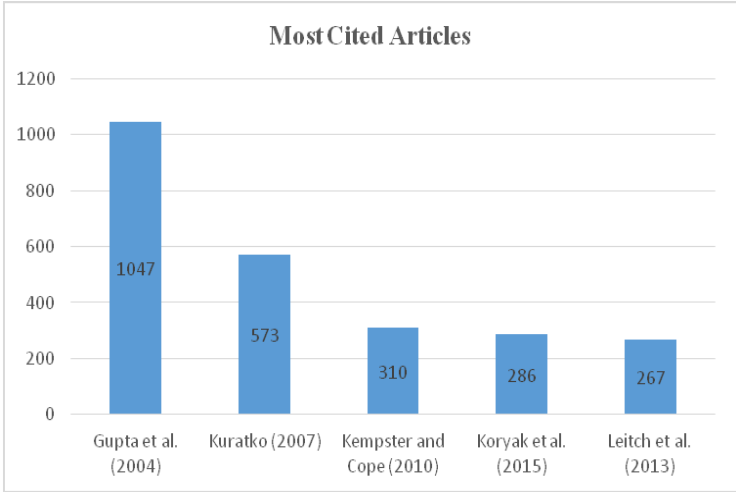


4.6. Most Cited Articles

The top five most cited articles within the field of entrepreneurial leadership are presented in figure 7. Among the existing studies, the most cited article was Gupta et al. (2004) which received 1047 citations. Gupta's work gained great prominence in extant literature, since it is the first paper that developed a construct for entrepreneurial leadership (Harrison et al., 2016b) and the definition proposed by Gupta et al. (2004) underpinned by scenario and cast enactment is predominantly adopted by scholars in the field. Other most cited articles such as Kuratko (2007) with 573 citations provides a theoretical discussion on entrepreneurial leadership from a global context and stress on the need for creativity and innovation in 21st century's organisations to uncover business potentials. Kempster and Cope (2010) with 310 citations explored entrepreneurial

leadership as a social learning process. Koryak et al. (2015) with 286 citations, reviewed the extant literature and examined the impact of entrepreneurial leadership capabilities on SMEs. The fifth most cited paper was Leitch et al. (2013) who explored entrepreneurial leadership skills from the lens of human, social and institutional capital. Despite the limitations, these papers have contributed prominently in the development of entrepreneurial leadership as an emerging construct.

Figure 7. Most Cited Articles



4.7. Journals with the Highest Number of Publications

The extant literature on entrepreneurial leadership skills and competencies is dispersed into a variety of journals. In this regard, Journal of Entrepreneurship Education, Journal of Small Business Entrepreneurship, and International Review of Entrepreneurship contributed 3 papers each, Journal of Leadership Studies, Journal of Small Business and Enterprise Development, Leader to Leader, Leadership and Organisation Development, and Procedia Social and Behavioural Sciences contributed 2 articles each. Table 4 shows the journal with highest publications.

Table 4. Journals with highest number of publications

Title of Journals	Number of Articles Published
Journal of Entrepreneurship Education	3 Articles
Journal of Small Business & Entrepreneurship	3 Articles
International Review of Entrepreneurship	3 Articles
Journal of Leadership Studies	2 Articles
Journal of Small Business and Enterprise Development	2 Articles
Leader to Leader	2 Articles

Leadership & Organization Development Journal	2 Articles
Procedia - Social and Behavioural Sciences	2 Articles

5. Results

5.1. RQ1: What is the impact of entrepreneurial leadership skills and competencies on organisations?

The research on entrepreneurial leadership is still growing and lacks definitional and theoretical clarity (Gupta et al., 2004; Harrison et al., 2018; Leitch et al., 2013). Despite the theoretical challenges, the concept has gained immense scholarship in different contexts in recent times. Particularly, the research on entrepreneurial leadership skills, competencies and their development has gained much prominence recently. The findings of this review identified 54 papers that answered fully or partially the review question one. The findings of these papers are presented under the following broad themes.

5.1.1. Entrepreneurial leadership competencies in dealing with business challenges

A growing body of literature highlights entrepreneurial leadership as a distinct type of leadership. Furthermore, the skills and capabilities of entrepreneurial leaders are essential to cope with emerging business challenges, create and sustain new ventures, identify and exploit business opportunities (Agbim et al., 2013; Coglisier and Brigham, 2004; Freeman and Siegfried, 2015; Harrison et al., 2016a; Koryak et al., 2015; Tian and Smith, 2014; Wahab and Tyasari, 2020).

Despite the fact that scholars have placed a lot of emphasis on the effects of entrepreneurial leadership skills and competencies on organisations, the literature that is currently available does not succinctly describe various skills and competencies of entrepreneurial leaders and how they are developed.

5.1.2. Entrepreneurial leadership competencies and entrepreneurial leadership development

The role of entrepreneurial leadership skills and competencies in developing entrepreneurial leadership has received considerable attention within the extant literature. Several authors have highlighted the influential role of entrepreneurial leadership capabilities such as business management, opportunity seeking, confidence building, and communication, social and technical skills in entrepreneurial leadership learning and development (Bagheri et al., 2013a; Bagheri and Pihie, 2010; Bagheri and Pihie, 2009; Gupta et al., 2004); sensing and exploiting business opportunities in micro, small, and large organisations (Leitch et al., 2009; Leitch et al., 2013) and micro enterprise development (Rusliati et al., 2020). The personal, functional and mental cognition competencies of entrepreneurial leader are pointed as vital for university

entrepreneurial leadership development and performing critical roles in entrepreneurial ventures (Bagheri et al., 2013a; Gupta et al., 2004; Swiercz and Lydon, 2002). Although these scholars stressed on entrepreneurial leadership skills and competencies as essential for entrepreneurial leadership development in various organisational settings, these studies largely provide a descriptive and generic analysis of entrepreneurial leadership skills and lack empirical validation. Arguably, the dimensions of specific entrepreneurial leadership competencies and their development in a dynamic organisational context require further exploration.

5.1.3. Innovation and creativity

A growing body of entrepreneurial leadership literature focused on how entrepreneurial leadership skills and competencies can enhance innovation and workplace creativity (Akbari et al., 2021; Bagheri, 2017; Bagheri and Akbari, 2018; Brauckmann-Sajkiewicz and Pashiardis, 2020; Chen, 2007; Kuratko, 2007; Pihie et al., 2014). For Pihie et al. (2014), entrepreneurial leadership capabilities of principals enhance school innovativeness. Entrepreneurial leadership skills and competencies such as managerial, task handling, personnel selection and development, and marketing skills are essential for enhancing accountability and creativity in schools (Brauckmann-Sajkiewicz and Pashiardis, 2020); developing employees' innovative work behaviour (Akbari et al., 2021) and nurses' innovation behaviour (Bagheri, 2017). However, these studies largely explored the impacts of EL on innovation and creativity by adopting a quantitative approach and gave little prominence into the dimensions of entrepreneurial leadership, creativity, and managing innovation in various organisational contexts from a qualitative approach.

5.1.4. Performance

The results of the review reveal that entrepreneurial leadership competencies such as communication and delegation, people management, vision, authenticity and enactment skills are essential for effective organisational performance (D'Intino et al., 2008; Jones and Crompton, 2009; Koryak et al., 2015; Ngigi et al., 2018; Olutade et al., 2015; Quaye and Mensah, 2019; Tian and Smith, 2014). Risk-taking, opportunity recognition and exploitation, and communicating vision are determining factors for improving the performance of retail pharmacy (Harrison et al., 2018; Harrison et al., 2016a) and enhancing effective leadership development, personal and business outcomes (Leitch et al., 2009; Leitch et al., 2013; Olutade et al., 2015).

Although the skills and competencies of entrepreneurial leaders are claimed to be effective for an enhanced organisational performance, there is more confusion in relation to specific entrepreneurial leadership competencies that have enduring effects on individuals and organisations. There are still many unanswered concerns regarding how EL abilities affect the behaviour and

performance of entrepreneurial leaders (Bagheri et al., 2013a) at an individual and team level.

5.1.5. Achieving mission and vision

According to Gupta et al. (2004), entrepreneurial leaders must have necessary abilities and competencies to conceive, mobilise, and persuade a group of people to realise the organisational goal. The skills and competencies acquired from an action-based leadership learning program enables entrepreneurial leaders to gain entrepreneurial knowledge, develop their skills and awareness to achieve organisational mission and vision (Leitch et al., 2009).

5.1.6. Effective decision making and value creation

The extant literature highlights that entrepreneurial leaders by learning specific entrepreneurial skills and capabilities, are better able to sense business opportunities and take informed business decisions as compared to traditional leaders (Bagheri et al., 2013a; Siddiqui, 2007). Consequently, these skills and competencies enable entrepreneurial leaders to obtained sustainable success and create value for their businesses. Entrepreneurial leaders' personal, managerial, proactive, and technological competencies are vital for value creation (Putsom et al., 2019a). Similarly, these skills are equally important for students to identify opportunities and enhance social, environmental, and economic value creation (Carey et al., 2021). Despite the prominent contribution to the literature, the above studies are not free from limitations. Most of the studies examined entrepreneurial leadership from a leader's perspective and lacks followers' perception (Harrison et al., 2018). Some of the studies explored the skills and competencies on conceptual standpoints (Ahmed and Harrison, 2021; Bagheri et al., 2013a; Guo, 2009); therefore, their assertions need empirical validity. Whilst, some studies did not specifically focus on the skills and competencies of entrepreneurial leaders rather called for the development of entrepreneurial leadership skills and competencies for an effective business outcome. The majority of research combined attributes, characteristics, and skills of entrepreneurial leadership; as a result, the precise abilities, traits, and characteristics of entrepreneurial leaders are still undefined and lack a clear picture. Moreover, the dimensions of entrepreneurial leadership skills and their development at team level, received scarce scholarly attention. The details of studies that focused on the impact of entrepreneurial leadership skills and competencies are presented in Table 5.

Table 5. Studies that focused on the impact of entrepreneurial leadership skills and competencies

<i>Type of impact</i>	<i>Author(s)</i>
Employees innovative work behaviour	Akbari et al. (2021)
Academic and non-academic achievement	Ariyani (2021), Dardiri et al. (2018), Lajin and Zainol (2015)
Effective entrepreneurial climate and strategies for innovation development and innovative solution to healthcare organisation	Bagheri (2017), Guo (2009)
Leading company in growth stage	Freeman and Siegfried (2015)
Scenario and cast enactment	Gupta et al. (2004)
Firm performance and growth	Koryak et al. (2015)
Employee performance and business productivity	Olutade et al. (2015)
Communication priorities on positive operational results	Leffel et al. (2012)
Effective decision making	Siddiqui (2007)
School effectiveness	Brauckmann-Sajkiewicz and Pashiardis (2020)
Growth orientation in high tech firms	Swiercz and Lydon (2002)
Development of university entrepreneurial leaders	Yang (2018)
Identify and exploit business opportunities	Wahab and Tyasari (2020)
Improving creativity and innovation	Chen (2007), Surie and Ashley (2008), Pihie and Bagheri (2013)
Enhancing business performance	D'Intino et al. (2008), Quaye and Mensah (2019)
Organisational effectiveness	Jones & Crompton (2009), Mezher and Hamed (2020)
Minimising start-up failure	Sundararajan et al. (2012); Freeman and Siegfried (2015)
Coping with business and organisational challenges	Abbas (2014), Ansari et al. (2014), Brauckmann-Sajkiewicz and Pashiardis (2020), Carey et al. (2021), Freeman and Siegfried (2015), Wahab and Tyasari (2020), Prieto (2010)
Driving innovation in libraries	Jawi and Izhar (2016)
Organisational structure development, income generation, information and technology solution development	Carpenter (2012)
Sustained entrepreneurial success of nascent entrepreneurs	Agbim et al. (2013)
Driving innovation at DIY labs	Ahmed and Harrison (2021)
Research advancement and knowledge creation	Hansson and Monsted (2008)
Achieving organisational mission and vision	Leitch et al. (2009)
Employee performance and business productivity	Olutade et al. (2015)
Business value creation	Putsom et al. (2019b)
Identifying and exploiting business opportunities	Renko et al. (2015), Mehmood et al. (2020), Ordu (2020)
Micro enterprise development	Rusliati et al. (2020)
Employee motivation and productivity	Strubler and Redekop (2010), Campos (2021)
Innovation and revenue generation in public organisation	Mawoli (2016)
Predicting and planning future events	Siilasmaa (2019)
Firm innovative capability	Chen (2007)

5.2. RQ2: what are the skills and competencies of entrepreneurial leaders?

Entrepreneurial leadership skills and competencies have been explored in 59 papers in the review which represents 65% of the overall studies. These competencies have been explored on different samples including students, SMEs' owners, CEOs, healthcare entrepreneurial leaders, managers, pharmacist, fashion entrepreneurs, and school principals (Agbim et al., 2013; Bagheri, 2017; Bagheri

and Akbari, 2018; Bagheri and Pihie, 2013; Bagheri and Pihie, 2011a; Cogliser and Brigham, 2004; Freeman and Siegfried, 2015 Harrison et al., 2016a; Koryak et al., 2015; Tian and Smith, 2014; Wahab and Tyasari, 2020). In this regard, the first study that explored the skills and competencies of entrepreneurial leader was Lippitt (1987) who proposed self-awareness, diagnostic skills, learning and getting advice and goal setting skills. Okudan and Rzasa (2006) stressed that communication, team work, and business plan writing skills are important to lead successfully. Abbas and Tatfi (2010) maintained that developing trust among employees, communication, self-improvement, technical skills, sense of responsibility, and decision-making skills are critical for entrepreneurial leaders. Darling and Beebe (2007) argue that communication skills are critically important for entrepreneurial leaders. Jones and Crompton (2009) described entrepreneurial leadership as a shared leadership perspective and proposed the concept of enterprise logic. They argue that structure, communication and delegation, people management, and vision, authenticity and enactment skills are essential capabilities for effective organisational performance. Moreover, business management, opportunities seeking, confidence building, communication, social and technical skills are recognised as crucial for the development of micro enterprises (Rusliati et al., 2020). Abbas (2014) argues that entrepreneurial leaders need to be academically prepared and gain entrepreneurial and managerial skills to cope with the challenges of turbulent times. Agbim et al. (2013) emphasised that technological skills; management skills and personal entrepreneurial skills of entrepreneurial leaders. While Harrison et al. (2018) proposed a skill-based model of entrepreneurial leadership in context of retail pharmacy and identified technical/ business skills, interpersonal skills, conceptual skills, and entrepreneurial skills as essential for retail pharmacy entrepreneurial leaders.

Some scholars emphasise on the personal and functional competencies of entrepreneurial leaders for developing and sustaining new ventures (Bagheri and Pihie, 2013; Bagheri and Pihie, 2011; Gupta et al., 2004; Swiercz and Lydon, 2002); driving innovation in DIY labs (Ahmed and Harrison, 2021). For other scholars risk taking, innovativeness, and proactiveness are critical for students' entrepreneurial success and effective task accomplishment (Ansari et al., 2014; Bagheri and Pihie, 2011; Gupta et al., 2004; Yang, 2018). Nonetheless, the existing studies on entrepreneurial leadership skills and competencies are not free from limitations. As highlighted by Harrison et al. (2018), majority of the studies explored the skills and competencies of EL following a leaders' perspective. How followers perceive the skills and capabilities of entrepreneurial leaders, and how these competencies can be learned and developed among followers has gained little empirical and theoretical prominence. Existing studies widely stressed the skills and competencies essential for entrepreneurial leaders and lack discussion about how the skills and competencies are learnt and developed. Most of these studies focused on students as entrepreneurial leaders and the discussion about

experienced entrepreneurial leaders has received little attention. Entrepreneurial leadership competencies from a group perspective remained understudied yet. The existing literature lacks a comprehensive and empirically validated model of specific entrepreneurial leadership skills and competencies that covers a broader context. In this regard, Harrison et al. (2018) although proposed a skills-based model for entrepreneurial leaders in developing economies' context, their assertions are highly contextual to retail pharmacy sector and cannot be generalised to other sectors. Studies explored the skills and competencies of entrepreneurial leaders are shown in Table 6.

The details of these skills and competencies are provided in Table 6.

Table 6. Studies focused on the skills and competencies of entrepreneurial leaders

<i>Type of skills and competencies</i>	<i>Author(s)</i>
Entrepreneurial and managerial	Abbas (2014)
Building trust, communication, self-improvement, sense of responsibility, technical and decision making skills	Abbas and Tatfi (2010)
Strategic, communicative, personal, motivational, and moderator skills	Jawi and Izhar (2016)
Personal, functional, interpersonal, technological, ethical, and environmental competencies	Ahmed and Harrison (2021)
Scenario enactment and cast enactment	Bagheri and Pihie (2011a)
Self-awareness, identity realisation, and self-efficacy capabilities	Bagheri and Pihie (2011b)
Managerial, task handling, personnel selection and development and marketing skills	Brauckmann-Sajkiewicz and Pashiardis (2020)
Systems-thinking, anticipatory, normative, strategic, and interpersonal competencies	Carey et al. (2021)
Creating partnership, inspiring and sharing vision, interpreting human behaviour, risk taking and seeking opportunities	Carpenter (2012)
Envisioning future, strategic anticipation skills	D'Intino et al. (2008)
Communication skills	Darling and Beebe (2007)
Charisma, capability of linking external contacts, supporting and negotiating creativity, and self-confidence.	Hansson and Mønsted (2008)
Imagination (opportunity recognition and planning, execution, social, organisational, personal)	Kassai (2022)
Strategic thinking, coaching and self-evaluation	Freeman and Siegfried (2015)
Healthcare system and environment competencies, organisational competencies, interpersonal competencies	Guo (2009)
Scenario enactment and cast enactment	Gupta et al. (2004)
Communication strategies	Halim and Razak (2014)
Risk-taking and opportunity recognition and exploitation.	Harrison et al. (2016a)
Vision, effective communication, risk taking, and creativity	Harrison et al. (2016a)
Technical/ business skills, interpersonal skills, conceptual skills, and entrepreneurial skills.	Harrison et al. (2018)
Personal and managerial skills	Hunter and Lean (2014)
Structure, communication and delegation, people management, and vision, authenticity and enactment skills of managers	Jones & Crompton (2009)
Aligned vision, establishing trust and commitment, perspective taking, influence and agility	Karol (2015)
assessment, intervention, resolution and maintenance	Leffel et al. (2012)
Risk taking, divergent thinking, sharp focus, personal responsibility, economic orientation, and learning from experience, self-awareness, diagnostic skills, learning and getting advice and goal setting	Lippitt (1987)

Relational competencies and task-oriented	Ngigi et al. (2018)
Motivation, innovation, communication skills, teamwork and writing business plans	Okudan and Rzasa (2006)
Motivation and talent retention	Olutade et al. (2015)
Personal competencies, managerial competencies, proactive competencies and technological competencies.	Putsom et al. (2019a), Putsom et al. (2019b)
Business management, opportunity seeking, confidence building, communication, social and technical skills	Rusliati et al. (2020)
Innovation, hard work, sense of fun, and team spirit	Strubler and Redekop (2010)
Personal and functional	Swiercz and Lydon (2002)
Acceptance, differentiation, integration skills	Tian and Smith (2014)
Setting agendas, popularising issues, devising adaptive innovation policies, dealing and support	Van Assche (2005)
Managerial competency and learning orientation	Wahab and Tyasari (2020)
Risk-taking, proactiveness, and innovativeness	Yang (2018)
Communication and creative	Mehmood et al (2020)
Vision, passion, integrity and self-confidence	He et al. (2017)
Employability, communication, innovation, planning, and networking skills	Bodolica et al. (2021)
Cognitive ambidexterity, commitment to social, environmental and economic value creation, and self-awareness	Greenberg et al. (2013)
Optimization, communication, motivation, monitoring, controlling, role model, and empowerment.	Ariyani (2021)
Technical, conceptual, interpersonal, social, and emotional intelligence	Campos (2021)
Effective bargaining and team building skills	Prieto (2010)
Strategic factors, communicative factors, personal factors, motivational factors and leadership behaviours. Performance oriented, ambitious, informed, extra insight visionary foresight, confidence builder, diplomatic, effective bargaining, convincing, encourage, inspirational, enthusiastic, team builder, improvement-oriented, integrator, intellectual stimulation and positive attitude	Ranjan (2018)
Problem solving, communications, planning ability, decision making, ethical competency ability, project management, negotiation. management information systems, information technology and the Internet	Lubis (2017)
Articulating vision and mission, motivating and inspiring staff member	Dardiri et al. (2018)
Opportunity identification self-efficacy, relationship self-efficacy, management self-efficacy, tolerance self-efficacy, learning self-efficacy	Bagheri et al. (2013b)
Innovation	Mawoli (2016)
Innovation, proactiveness, and vision	Quaye and Mensah (2019)
Strategic, personal, communication and motivational factors	Mezher and Hamed (2020)
Risk taking, innovation, and solving complex challenges	Horan (2007)
Proactiveness, risk-taking, and competitive aggressiveness	Lajin and Zainol (2015)
Thinking and setting alternatives, building trust, encouraging accountability, leading by example and adopting creative ways of work.	Siilasmaa (2019)
Risk-taking, innovativeness, proactiveness	Chen (2007)
Personal and interpersonal leadership competencies, communication skills and creative skills	Bagheri and Pihie (2012)
Verbal and non-verbal communication skills; cultivate good personality traits; and motivational skills	Agbim et al. (2013)
Growth capabilities and dynamic capabilities	Koryak et al. (2015)
Business and self-skills	Leitch et al. (2009)
Effectiveness skills and interpersonal communication skills in men	Edmond et al. (2017)

A further investigation into these skills and competencies illuminate that majority of the scholars reiterate communication skills as the most essential skill for entrepreneurial leaders which has been highlighted in 17 studies (Abbas and Tatfi, 2010; Agbim et al., 2013; Ariyani, 2021; Bagheri and Pihie, 2012; Bodolica et al., 2021; Darling and Beebe, 2007; Edmond et al., 2017; Halim and Razak, 2014; Harrison et al., 2016b; Jawi and Izhar, 2016; Jones and Crompton, 2009; Lubis, 2017; Mehmood et al., 2020; Mezher and Hamed, 2020; Okudan and Rzasa, 2006; Ranjan, 2018; Rusliati et al., 2020). The details of most cited skills and competencies are listed in Table 7.

Table 7. Most recurring skills and competencies

<i>Type of skills</i>	<i>Authors</i>
Networking and Team Building skills	Bodolica et al. (2021), Ranjan (2018), Prieto (2010), Okudan and Rzasa (2006), Edmond et al. (2017)
Interpersonal Competence	Carey et al. (2021), Bagheri and Pihie (2012), Ahmed and Harrison (2021), Guo (2009), Harrison et al. (2018), Chen (2007), Omeihe et al. (2023)
Entrepreneurial skills	Abbas (2014), Harrison et al. (2018), Omeihe et al. (2023)
Managerial skills	Abbas (2014), Brauckmann-Sajkiewicz and Pashiardis (2020), Hunter and Lean (2014), Jones & Crompton (2009), Putsom et al. (2019a), Putsom et al. (2019b), Rusliati et al. (2020), Wahab and Tyasari (2020), Bagheri et al. (2013a)
Strategic orientation skills	Jawi and Izhar (2016), Carey et al. (2021), D'Intino et al. (2008), Freeman and Siegfried (2015), Mezher and Hamed (2020)
Personal competence	Jawi and Izhar (2016), Ahmed and Harrison (2021), Hunter and Lean (2014), Putsom et al. (2019a), Putsom et al. (2019b), Bagheri and Pihie (2012), Leitch et al. (2009); Kassai (2022)
Functional competence	Swiercz and Lydon (2002), Ahmed and Harrison (2021), Brauckmann-Sajkiewicz and Pashiardis (2020)
Motivational skills	Jawi and Izhar (2016), Okudan and Rzasa (2006), Ariyani (2021), Ranjan (2018), Mezher and Hamed (2020), Agbim et al. (2013), Olutade et al. (2015), Dardiri et al. (2018)
Technological competence	Ahmed and Harrison (2021), Putsom et al. (2019a), Putsom et al. (2019b), Lubis (2017)
Technical competence	Omeihe et al. (2023), Harrison et al. (2018), Rusliati et al. (2020), Campos (2021), Abbas and Tatfi (2010)
Conceptual competence	Harrison et al. (2018), Campos (2021), Omeihe et al. (2023)
Communication skills	Abbas and Tatfi (2010), Jawi and Izhar (2016), Darling and Beebe (2007), Halim and Razak (2014), Harrison et al. (2016b), Jones & Crompton (2009), Okudan and Rzasa (2006), Rusliati et al. (2020), Mehmood et al. (2020), Bodolica et al. (2021), Ariyani (2021), Ranjan (2018), Lubis (2017), Mezher and Hamed (2020), Bagheri and Pihie (2012), Agbim et al. (2013), Edmond et al. (2017)
Opportunity recognition and exploitation skills	Bagheri and Pihie (2011a), Carpenter (2012), Gupta et al. (2004), Harrison et al. (2016a)
Risk taking skills	Carpenter (2012), Harrison et al. (2016a), Harrison et al. (2016b), Lippitt (1987), Yang (2018), Horan (2007), Lajin and Zainol (2015), Chen (2007)
Innovation and Creativity Skills	Harrison et al. (2016b), Okudan and Rzasa (2006), Strubler and Redekop (2010), Yang (2018), Bodolica et al. (2021), Mawoli (2016), Quaye and Mensah (2019), Horan (2007), Chen (2007), Bagheri and Pihie (2012), Omeihe et al. (2023)
Proactiveness Skills	Putsom et al. (2019a), Putsom et al. (2019b), Yang (2018), Quaye and Mensah (2019), Lajin and Zainol (2015), Chen (2007)

Articulating Vision	Bagheri and Pihie (2011a), Carpenter (2012), D'Intino et al. (2008), Gupta et al. (2004), Harrison et al. (2016b), Karol (2015), He et al. (2017), Ranjan (2018), Quaye and Mensah (2019), Omeihe et al. (2023)
---------------------	---

5.3. RQ3: How do entrepreneurial leaders learn and develop the skills and competencies?

Despite gaining an increased scholarship, the aspects of entrepreneurial leadership learning and development received little prominence (Harrison et al., 2016b; Roomi and Harrison, 2011). The findings of the review highlight that 31 studies which represent 35% of overall studies addressed the review question 3. Majority of the studies underscore entrepreneurship related programmes and curricula in developing entrepreneurial leadership skills and competencies (Agbim et al., 2013; Ahmed and Ramzan, 2013; Bagheri, 2017; Bagheri and Akbari, 2018; Bagheri and Pihie, 2013; Bagheri and Pihie, 2011b; Coglisier and Brigham, 2004; Freeman and Siegfried, 2015; Harrison et al., 2016a; Koryak et al., 2015; Okudan and Rzasa, 2006; Tian and Smith, 2014; Wahab and Tyasari, 2020). Conversely, some researchers believe that entrepreneurial learning is a social and contextual phenomenon underpinned by a naturalistic learning process which occurs through social interaction, observation, critical reflection, coaching, and training. Therefore, it is pertinent to induce entrepreneurial leaders towards a more practical learning approach in which they can participate in learning by doing, observing the real-life scenarios and performing various roles and task in entrepreneurial platforms (Bagheri and Pihie, 2013; Bagheri and Pihie, 2010; Bagheri and Pihie, 2011a; Churchill et al., 2013; Freeman and Siegfried, 2015; Kempster and Cope, 2010; Leitch et al., 2013).

Although the theoretical and empirical prominence of these studies cannot be denied, these studies are limited on various grounds. For instance, most of the researchers underscore traditional learning and teaching methods for developing the skills and competencies of entrepreneurial leaders. The content and methods of traditional entrepreneurship pedagogy are still under developed (Bagheri and Pihie, 2013) and may not fulfil requirements of diverse and complex entrepreneurial learning processes (Kempster and Cope, 2010). As argued by Okudan and Rzasa (2006), traditional entrepreneurship courses may be effective in developing basic entrepreneurial leadership, however, the specific skills and competencies of entrepreneurial leadership can only be learnt by adopting a comprehensive and combined learning approach. Moreover, the validity and impact of entrepreneurship programmes in a cross-cultural setting is further researchable. The design, contents and pedagogical method of entrepreneurship courses and programmes need empirical validation (Okudan and Rzasa, 2006). Studies that focused on the development of entrepreneurial leadership skills and competencies are show in Table 8.

Table 8. Entrepreneurial leadership skills and competencies development

<i>Type of development instrument</i>	<i>Author(s)</i>
Entrepreneurship programs, training and coaching	Akbari et al. (2021), Bagheri (2017), Aziz and Abiddin (2022)
Entrepreneurship programs	Bagheri and Pihie (2009), Bagheri et al. (2013a), Bagheri and Pihie (2011b), Akbari et al. (2021)
Social interaction, observation, and reflection	Bagheri et al. (2010), Roomi et al. (2011)
Student related and program related roles in university club	Bagheri and Pihie (2012)
Leadership training modules, internship, and developing cross-section networks	Brauckmann-Sajkiewicz and Pashiardis (2020)
Sustainability entrepreneurship programs	Carey et al. (2021)
Experiential learning, social interaction and opportunity recognition learning	Churchill et al. (2013)
Social learning process	Kempster and Cope (2010)
Action-based leadership development program	Leitch et al. (2009)
Entrepreneurial leadership courses	Okudan and Rzasa (2006), Mars and Torres (2018)
Professional leadership development programs	Pihie and Bagheri (2013)
Experience-based learning approach	Siddiqi (2007)
Peer learning process	Smith et al. (2017)
Reflective thinking	Sundararajan et al. (2012)
Entrepreneurial courses, training, and workshops	Wibowo and Saptono (2018)
Extracurricular and entrepreneurship club	Bodolica et al. (2021)
Entrepreneurial learning	Almahdi (2019)
Integrated leadership development program	Horan (2007)
Trainings, conferences, seminars, and work project	Ordu (2020)
Professional development programmes	Pihie et al. (2014)
Experiential teaching methods	Kempster and Cope (2010)
Action-based leadership learning and development	Leitch et al. (2009)
Social capital-based leadership development process	Leitch, McMullan and Harrison (2013)
Entrepreneurial leadership education programs	Bagheri and Harrison (2020)
Technical and traditional pedagogical tools, game-based simulation	Edmond et al. (2017)

6. Limitations

Although a systematic literature review is widely recognised as a legitimate process toward conducting review and providing insightful understanding of subjects in business and management research (Harrison et al., 2016b; Tranfield et al., 2003); it has certain limitations. Based on inclusion and exclusion criteria, review questions, and search duration, the inclusion of all records is not guaranteed. The search process was carried out only on published and peer reviewed research articles; thus, conference papers, book chapters, and unpublished work that may potentially carry insightful theoretical depth, were not included in the review process. Yet, this study ensured optimal studies inclusion

by conducting backwards, forward, citation and bibliography searches to identify further articles that addressed the review questions.

7. Conclusions and Recommendations for Future Research

The findings of the review highlight that entrepreneurial leadership skills and competencies play a vital role in identifying and exploiting business opportunities and coping with the daunting challenges of turbulent times. These skills and competencies enable entrepreneurial leaders to take calculated risks and enhance workplace creativity and innovation to sustain their long-term competitiveness. The findings of the SLR suggest that EL skills and competencies such as proactiveness, innovativeness, risk-taking propensity, articulating vision, motivation, communication, influence, teamwork, creativity, and risk-taking are important skills of entrepreneurial leaders and play a central role in the success of organisations. Whilst personal, interpersonal, functional, technological, human, and conceptual competencies are recognised as essential competencies of entrepreneurial leaders, the extant literature proposes that entrepreneurial leadership skills and competencies can be learnt and developed through various ways. In particular, entrepreneurship courses, project-based learning, co-taught multidisciplinary courses, entrepreneurship clubs and cocurricular activities have been recommended as means of entrepreneurial leadership development. While some researchers believe that effective entrepreneurial leadership learning cannot be achieved through traditional learning strategies, they argue that entrepreneurial leadership is a social and contextual process underpinned by a naturalistic learning process. Therefore, learning by doing as well as experiential, reflective and socially interactive learning strategies should be adopted to develop the skills and competencies of entrepreneurial leaders in different organisational settings.

The SLR's findings can guide a number of new research directions in the field of entrepreneurial leadership. There is a paucity of studies in relation to specific EL skills and competencies needed for the success of large and small organisations. Entrepreneurial leadership skills and competencies from a leader-follower perspective can be a potential research stream (Harrison et al., 2018). Entrepreneurial leadership skills and competencies in a group context also lack theoretical and empirical discussion. In particular, EL research lacks an integrated model of skills and competencies from a leader-followers and group perspective. Furthermore, how entrepreneurial leadership skills and competencies can be developed at an individual and team level across organisations lacks sufficient empirical underpinning. The extant literature widely focused on developing the skills and competencies of student's entrepreneurial leaders through entrepreneurship education. Further research is required on how these competencies can be learnt and developed by established

entrepreneurial leaders. Moreover, the dimensions of entrepreneurial leadership courses, their content and designs, and their impact on the entrepreneurial leaders' learning process, also needs further investigation.

The paper offers significant insights into policy and practice. First, it draws a clear picture of entrepreneurial leadership skills and competencies that can be used by various organisations i.e., higher educational institutions (HEIs), incubation centres, SMEs and established organisations, to identify and develop the skills to develop an entrepreneurial mindset in such organisations. Second, researchers, practitioners and educationists may use the evidence as a base line in developing the contents, curriculums and trainings for students and other professionals to enhance their entrepreneurial learning. Third, the paper offers valuable insights to educationists in developing contemporary pedagogical methods in HEIs by combining various entrepreneurial learning strategies i.e., classroom learning and social and experiential modes of learning. Finally, entrepreneurial leaders across organisations, by actively participating in entrepreneurship education, can identify and improve their entrepreneurial leadership competencies (Kempster and Cope, 2010).

References:

- Abbas, M. K. (2014), "The Challenges of Entrepreneurial Leadership in Nigeria", *Journal of Leadership and Management Studies*, 1(1): p 52-59.
- Abbas, S., and Taffi, M. (2010), "Entrepreneurial Leadership: Certainly a Tool Not a Means to Organizational Success", *Leadership*, 1(2): p 119.
- Agbim, K. C., Owutuamor, Z. B., and Oriarewo, G. O. (2013), "Entrepreneurship Development and Tacit Knowledge: Exploring the Link between Entrepreneurial Learning and Individual Know-how", *Journal of Business Studies Quarterly*, 5(2): p 113-129.
- Agus, A., and Hassan, Z. (2010), "The Structural Influence of Entrepreneurial Leadership, Communication Skills, Determination and Motivation on Sales and Customer Satisfaction", *International Journal of Business and Development Studies*, 2(1): p 109-130.
- Ahmed, A., and Ramzan, M. (2013), "A Learning and Improvement Model in Entrepreneurial Leadership", *Journal of Business and Management*, 11(6): p 50-60.
- Ahmed, F., and Harrison, C. (2021), "Challenges and Competencies of Entrepreneurial Leaders in Driving Innovation at DIY Laboratories", *Technology Analysis & Strategic Management*, 33(10): p 1-15.
- Akbari, M., Bagheri, A., Imani, S., and Asadnezhad, M. (2021), "Does Entrepreneurial Leadership Encourage Innovation Work Behaviour? The Mediating Role of Creativity Self-efficacy and Support for Innovation", *European Journal of Innovation Management*, 24(1): p 1-22.
- Almahdi, K. (2019), "Promotion and Participation of Saudi Universities towards the Development of Entrepreneurial Leadership—An Empirical Study in Saudi Arabian Context", *Journal of Entrepreneurship Education*, 22(6): p 1-14.
- Ansari, S., Bell, J., Iyer, B., and Schlesinger, P. (2014), "Educating Entrepreneurial Leaders", *Journal of Entrepreneurship Education*, 17(2): p 31-51.
- Antonakis, J., and Autio E. (2007), "Entrepreneurship and Leadership", In: J. R. Baum, M. Frese and R. A. Baron (Eds.), *The Psychology of Entrepreneurship*, p. 189-207. New York: Psychology Press.
- Ariyani, D. (2021), "Principal's Innovation and Entrepreneurial Leadership to Establish a Positive Learning Environment", *European Journal of Educational Research*, 10(1): p 63-74.
- Aziz, S., and Abiddin, N. (2022), "Leadership Style and Entrepreneurial Leadership among University Students: A Literature Review", *International Journal of Learning and Development*, 12(3): p 1522-1522.
- Bagheri, A. (2017), "The Impact of Entrepreneurial Leadership on Innovation Work Behaviour and Opportunity Recognition in High-Technology SMEs", *Journal of High Technology Management Research*, 28(2): p 159-166.
- Bagheri, A., and Akbari, M. (2018), "The Impact of Entrepreneurial Leadership on Nurses' Innovation Behaviour", *Journal of Nursing Scholarship*, 50(1): p 28-35.
- Bagheri, A., and Harrison, C. (2020), "Entrepreneurial Leadership Measurement: A Multi-Dimensional Construct", *Journal of Small Business and Enterprise Development*, 27(4): p 659-679.
- Bagheri, A., and Pihie, Z. A. L. (2009), "An Exploratory Study of Entrepreneurial Leadership Development of University Students", *European Journal of Social Science*, 11(1): p 177-190.
- Bagheri, A., and Pihie, Z. A. L. (2010), "Entrepreneurial Leadership Learning: In Search of Missing Links", *Procedia Social and Behavioural Sciences*, 7(C): p 470-479.
- Bagheri, A., and Pihie, Z. A. L. (2011a), "On Becoming an Entrepreneurial Leader: A Focus on the Impacts of University Entrepreneurship Programs", *American Journal of Applied Sciences*, 8(9): p 884-892.
- Bagheri, A., and Pihie, Z. A. L. (2011b), "Entrepreneurial Leadership: Towards a Model for Learning and Development", *Human Resource Development International*, 14(4): p 447-463.
- Bagheri, A., and Pihie, Z. A. L. (2012), "Entrepreneurial Leadership Competencies Development among Malaysian University Students: The Pervasive Role of Experience and Social Interaction", *Pertanika Journal of Social Science and Humanities*, 20(2): p 539-562.
- Bagheri, A., and Pihie, Z. A. L. (2013), "Role of University Entrepreneurship Programs in Developing Students' Entrepreneurial Leadership Competencies: Perspectives from Malaysian Undergraduate Students", *Journal of Education for Business*, 88(1): p 51-61.

- Bagheri, A., Pihie, Z. A. L., and Akmaliah, Z. (2010), "Role of Family in Entrepreneurial Leadership Development of University Students", *World Applied Sciences Journal*, 11(4): p 434-442.
- Bagheri, A., Pihie, Z. A. L., and Krauss, S. E. (2013a), "Entrepreneurial Leadership Competencies among Malaysian University Student Entrepreneurial Leaders", *Asia Pacific Journal of Education*, 33(4): p 493-508.
- Bagheri, A., Pihie, Z. A. L., and Krauss, S. E. (2013b), "Entrepreneurial Leadership Self-efficacy: A Focus on Malaysian Student Entrepreneurial Leaders", *Archives Des Sciences*, 66(1): p 690-708.
- Ballein, K. M. (1998), "Entrepreneurial Leadership Characteristics of SNEs Emerge as Their Role Develops", *Nursing Administration Quarterly*, 22(2): p 60-69.
- Bodolica, V., Spraggon, M., and Badi, H. (2021), "Extracurricular Activities and Social Entrepreneurial Leadership of Graduating Youth in Universities from the Middle East", *International Journal of Management Education*, 19(2): p 100-489.
- Brauckmann-Sajkiewicz, S., and Pashiardis, P. (2020), "Entrepreneurial Leadership in Schools: Linking Creativity with Accountability", *International Journal of Leadership in Education*, 25(5): p 1-15.
- Campos, J. D. S. (2021), "Analysis of Entrepreneurial Leadership Skills and Sustainable Employee Productivity of MSMEs", *Journal of Social Entrepreneurship Theory and Practice*, 1(1): p 12-27.
- Carey, C., Beitelspacher, S., Tosti-Kharas, J., and Swanson, E. (2021), "A Resource-Efficient Modular Course Design for Co-Teaching Integrated Sustainability in Higher Education: Developing the Next Generation of Entrepreneurial Leaders", *Entrepreneurship Education and Pedagogy*, 4(2): p 169-193.
- Carpenter, H. (2012), "Cheerleader, Opportunity Seeker, and Master Strategist: ARL Directors as Entrepreneurial Leaders", *College & Research Libraries*, 73(1): p 11-32.
- Chen, H. (2007), "Entrepreneurial Leadership and New Ventures: Creativity in Entrepreneurial Teams", *Creativity and Innovation Management*, 16(3): p 239-249.
- Choi, K. (2009), "Entrepreneurial Leadership in the Meiji Cotton Spinners' Early Conceptualisation of Global Competition", *Business History*, 51(6): p 927-958.
- Churchill, Q., Agbodohu, W., and Arhenful, P. (2013), "An Exploratory Study of Entrepreneurial Leadership Development of Polytechnic Students", *Journal of Education and Practice*, 4(24): p 9-18.
- Clark, C. M., Harrison, C., and Gibb, S. (2019), "Developing a Conceptual Framework of Entrepreneurial Leadership: A Systematic Literature Review and Thematic Analysis", *International Review of Entrepreneurship*, 17(3): p 347-384.
- Cogliser, C. C., and Brigham, K. H. (2004), "The Intersection of Leadership and Entrepreneurship: Mutual Lessons to be Learned", *The Leadership Quarterly*, 15(6): p 771-799.
- Cohen, A. R. (2004), "Building a Company of Leaders", *Leader to Leader*, 2004(34): p 16-20.
- Currie, G., Humphreys, M., Ucbasaran, D., and McManus, S. (2008), "Entrepreneurial Leadership in the English Public Sector: Paradox or Possibility?", *Public Administration*, 86(4): p 987-1008.
- D'Intino, R. S., Boyles, T., Neck, C. P., and Hall, J. R. (2008), "Visionary Entrepreneurial Leadership in the Aircraft Industry", *Journal of Management History*, 14(1): p 39-54.
- Dardiri, A., Alfianto, I., Kuncoro, T., Suswanto, H., and Elmunsyah, H. (2018), "Entrepreneurial Leadership for Excellent Technical and Vocational Education Institutions", *World Transactions on Engineering and Technology Education*, 16(4): p 441-447.
- Darling, R., and Beebe, A. (2007), "Enhancing Entrepreneurial Leadership: A Focus on Key Communication Priorities", *Journal of Small Business & Entrepreneurship*, 20(2): p151-167.
- Edmond, P., Brannon, L., Stewart, A., and Williams, J. (2017), "Gender Differences in Entrepreneurial Leadership Skills Training", *Global Journal of Entrepreneurship*, 1(2): p 32-52.
- Fernald, W., Solomon, T., and Tarabishy, A. (2005), "A New Paradigm: Entrepreneurial Leadership", *Southern Business Review*, 30(2): p 1-10.
- Freeman, D., and Siegfried, L. (2015), "Entrepreneurial Leadership In The Context Of Company StartUp And Growth", *Journal of Leadership Studies*, 8(4): p 35-39.

- Galloway, L., Kapasi, I., and Sang, K. (2015), "Entrepreneurship, Leadership, and the Value of Feminist Approaches to Understanding them", *Journal of Small Business Management*, 53(3): p 683-692.
- Greenberg, D., McKoneSweet, K., and Wilson, J. (2013), "Entrepreneurial Leaders: Creating Opportunity in an Unknowable World", *Leader to Leader*, 2013(67): p 56-62.
- Guo, L. (2009), "Core Competencies of the Entrepreneurial Leader in Health Care Organizations", *Health Care Manager*, 28(1): p 19-29.
- Gupta, V., MacMillan, C., and Surie, G. (2004), "Entrepreneurial Leadership: Developing and Measuring a Cross-Cultural Construct", *Journal of Business Venturing*, 19(2): p241-260.
- Halim, A., and Razak, A. (2014), "Communication Strategies of Women Leaders in Entrepreneurship", *Procedia Social and Behavioural Sciences*, 118(2014): p 21-28.
- Hansson, F., and Mønsted, M. (2008), "Research Leadership as Entrepreneurial Organizing for Research", *Higher Education*, 55(6): p 651-670.
- Harrison, C., Burnard, K., and Paul, S. (2018), "Entrepreneurial Leadership in a Developing Economy: A Skill-based Analysis", *Journal of Small Business and Enterprise Development*, 25(3): p 521-548.
- Harrison, C., Omeihe, I., Simba, A., and Omeihe, K. (2020), "Leading the Way: The Entrepreneur or the Leader?", *Journal of Small Business & Entrepreneurship*, p 1-17. First published online 23 November 2020.
- Harrison, C., Paul, S., and Burnard, K. (2016a), "Entrepreneurial Leadership in Retail Pharmacy: Developing Economy Perspective", *Journal of Workplace Learning*, 28(3): p 150-167.
- Harrison, C., Paul, S., and Burnard, K. (2016b), "Entrepreneurial Leadership: A Systematic Literature Review", *International Review of Entrepreneurship*, 14(2): p 235-264.
- Haynes, T., Hitt, A., and Campbell, T. (2015), "The Dark Side of Leadership: Towards a Midrange Theory of Hubris and Greed in Entrepreneurial Contexts", *Journal of Management Studies*, 52(4): p 479-505.
- He, L., Standen, P., and Coetzer, A. (2017), "The Perceived Personal Characteristics of Entrepreneurial Leaders", *Small Enterprise Research*, 24(2): p 97-119.
- Hejazi, M., Malei, M. and Naeiji, J., (2012), "Designing a Scale for Measuring Entrepreneurial Leadership in SMEs", *International Proceedings of Economics Development and Research*, 28(2): p 71-77.
- Henry, C., Foss, L., Fayolle, A., Walker, E., and Duffy, S. (2015), "Entrepreneurial Leadership and Gender: Exploring Theory and Practice in Global Contexts", *Journal of Small Business Management*, 53(3): p 581-586.
- Hentschke, G. C., and Caldwell, B. J. (2005), "Entrepreneurial Leadership", In: B. Davies (Ed.), *The Essentials of School Leadership*, pp. 145-159. Thousand Oaks, CA: Sage Publications.
- Horan, J. (2007), "Business Driven Action Learning: A Powerful Tool for Building World-class Entrepreneurial Business Leaders", *Organization Development Journal*, 25(3): p 75-80.
- Hunter, L., and Lean, J. (2014), "Investigating the Role of Entrepreneurial Leadership and Social Capital in SME Competitiveness in the Food and Drink Industry", *International Journal of Entrepreneurship and Innovation*, 15(3): p 179-190.
- Jawi, M., and Izhar, T. (2016), "Entrepreneurial Leadership Capabilities and Innovativeness in Academic Libraries: A Research Model", *International Journal of Academic Research in Business and Social Sciences*, 6(1): p 28-39.
- Jones, O., and Crompton, H. (2009), "Enterprise Logic and Small Firms: a Model of Authentic Entrepreneurial Leadership", *Journal of Strategy and Management*, 2(4): p 329-351.
- Kansikas, J., Laakkonen, A., Sarpio, V., and Kontinen, T. (2012), "Entrepreneurial Leadership and Familiness as Resources for Strategic Entrepreneurship", *International Journal of Entrepreneurial Behavior & Research*, 18(2): p 141-158.
- Karol, A. (2015), "Leadership in the Context of Corporate Entrepreneurship", *Journal of Leadership Studies*, 8(4): p 30-34.
- Kassai, Á. (2022), "The Four Leadership Styles of Entrepreneurs: A Competency-based Model for Entrepreneurial Leadership", *Budapest Management Review*, 53(5): p 16–31.
- Kempster, S., and Cope, J. (2010), "Learning to Lead in the Entrepreneurial Context", *International Journal of Entrepreneurial Behavior & Research*, 16(1): p 5-34.

- Koryak, O., Mole, K. F., Lockett, A., Hayton, C., Ucbasaran, D., and Hodgkinson, P. (2015), "Entrepreneurial Leadership, Capabilities and Firm Growth", *International Small Business Journal*, 33(1): p 89-105.
- Kuratko, D. F. (2007), "Entrepreneurial Leadership in the 21st Century: Guest editor's Perspective", *Journal of Leadership & Organizational Studies*, 13(4): p 1-11.
- Kuratko, D. F., and Hornsby, S. (1999), "Corporate Entrepreneurial Leadership for the 21st Century", *Journal of Leadership Studies*, 5(2): p 27-39.
- Lajin, M., and Zainol, A. (2015), "The Effect of Entrepreneurial Leadership, Self-Efficacy and Organizational Performance: A Conceptual Paper", *International Academic Research Journal of Social Science*, 1(1): p 16-24.
- Leffel, A., Hallam, C., and Darling, J. (2012), "Enhancement of Entrepreneurial Leadership: A Case Focusing on a Model of Successful Conflict Management Skills", *Administrative Issues Journal: Connecting Education, Practice, and Research*, 2(2): p 13-25.
- Leitch, C. M., McMullan, C., and Harrison, R. T. (2009), "Leadership Development in SMEs: An Action Learning Approach", *Action Learning: Research and Practice*, 6(3): p 243-263.
- Leitch, C. M., McMullan, C., and Harrison, R. T. (2013), "The Development of Entrepreneurial Leadership: The Role of Human, Social and Institutional Capital", *British Journal of Management*, 24(3): p 347-366.
- Leitch, C. M., and Volery, T. (2017), "Entrepreneurial Leadership: Insights and Directions", *International Small Business Journal*, 35(2): p 147-156.
- Lippitt, L. (1987), "Entrepreneurial Leadership: A Performing Art", *Journal of Creative Behaviour*, 21(3): p 264-270.
- Lubis, L. (2017), "Assessing Entrepreneurial Leadership and the Law: Why are these Important for Graduate Students in Indonesia?", *International Journal of Arts & Sciences*, 10(2): p 41-76.
- Mapunda, G. (2007), "Entrepreneurial Leadership and Indigenous Enterprise Development", *Journal of Asia Entrepreneurship and Sustainability*, 3(3): p 1-28.
- Mars, M., and Torres, M. (2018), "Developing Collegiate Student Proclivities to Entrepreneurial Leadership", *Journal of Leadership Education*, 17(4): p 110-129.
- Mawoli, M. (2016), "Transforming the Nigerian Economy through Entrepreneurial Leadership: Challenges and Prospects", *Journal of Entrepreneurship Research*, (7): p 1-20.
- Megheirkouni, M., Thirlwall, A., and Megheirkouni, A. (2020), "Entrepreneurial Leadership in Middle East Sport Businesses: The Impact of Gender Differences in Cultural Values", *Gender in Management: An International Journal*, 35(2): p 167-188.
- Mehmood, S., Jian, Z., and Gilal, G. (2020), "Entrepreneurial Leadership and Employee Innovative Behaviour: Intervening Role of Creative Self-efficacy", *Human Systems Management*, 39(3): p 367-379.
- Mezher, H., and Hamed, A. (2020), "Diagnosing Entrepreneurial Leadership Factors among A Sample of Managers of Companies of the Ministry of Water Resources", *International Journal of Research in Social Sciences and Humanities*, 10(3): p 209-221.
- Ngigi, S., McCormick, D., and Kamau, P. (2018), "Entrepreneurial Leadership Competencies in the 21st Century: An Empirical Assessment", *DBA Africa Management Review*, 8(2): p 1-17.
- Okudan, E., and Rzasa, E. (2006), "A Project-based Approach to Entrepreneurial Leadership Education", *Technovation*, 26(2): p 195-210.
- Olutade, M., Liefoghe, A., and Olakunle, A. (2015), "Influence of Entrepreneurial Leadership Skills on Employees' Motivation and Job Satisfaction: A Leader Member Exchange (LMX) Approach", *International Journal of Academic Research in Business and Social Sciences*, 5(9): p 46-69.
- Omeihe, I., Harrison, C., Simba, A., and Omeihe, K. (2023), "The Role of the Entrepreneurial Leader: A Study of Nigerian SMEs", *International Journal of Entrepreneurship and Small Business*, 49(2): p 187-215.
- Ordu, A. (2020), "Entrepreneurial Leadership in Start-Up Businesses", *Bulgarian Comparative Education Society*, (18): p 197-203.
- Patterson, N., Mavin, S., and Turner, J. (2012), "Unsettling the Gender Binary: Experiences of Gender in Entrepreneurial Leadership and Implications for HRD", *European Journal of Training and Development*, 36(7): p 687-711.

- Paudel, S. (2019), "Entrepreneurial Leadership and Business Performance: Effect of Organizational Innovation and Environmental Dynamism", *South Asian Journal of Business Studies*, 8(3): p 348-369.
- Pihie, Z. A. L., and Bagheri, A. (2013), "The Impact of Principals' Entrepreneurial Leadership Behaviour on School Organizational Innovativeness", *Life Science Journal*, 10(2): p 1033-1041.
- Pihie, Z. A. L., Asuimiran, S., and Bagheri, A. (2014), "Entrepreneurial Leadership Practices and School Innovativeness", *South African Journal of Education*, 34(1): p 1-11.
- Prieto, C. (2010), "Proactive Personality and Entrepreneurial Leadership: Exploring the Moderating Role of Organizational Identification and Political Skill", *Academy of Entrepreneurship Journal*, 16(2): p 107-120.
- Putsom, W., Suwannarat, P., and Songsrirote, N. (2019a), "The Effect of Entrepreneurial Leadership, Value Creation and Automotive Parts Manufacturing Businesses Performance in Thailand", *Human Resource and Organization Development Journal*, 11(2): p 1-33.
- Putsom, W., Suwannarat, P., and Songsrirote, N. (2019b), "Scale Development for Measuring Entrepreneurial Leadership Competencies", *Human Behaviour, Development and Society*, 20(3): p 29-40.
- Quaye, M., and Mensah, I. (2019), "Entrepreneurial Leadership and Performance of Female-owned Small and Medium-sized Enterprises in Ghana", *International Journal of Entrepreneurship and Small Business*, 38(12): p 19-44.
- Rahim, L., Zainal Abidin, Z., Mohtar, S., and Ramli, A. (2015), "The Effect of Entrepreneurial Leadership towards Organizational Performance", *International Academic Research Journal of Business and Technology*, 1(2), p 193-200.
- Ranjan, S. (2018), "Entrepreneurial Leadership: A Review of Measures, Antecedents, Outcomes and Moderators", *Asian Social Science*, 14(12): p 104-114.
- Renko, M., Tarabishy, A., Carsrud, L., and Brännback, M. (2015), "Understanding and Measuring Entrepreneurial Leadership Style", *Journal of Small Business Management*, 53(1): p 54-74.
- Roomi, A., and Harrison, P. (2011), "Entrepreneurial Leadership: What is it and How should it be Taught?", *International Review of Entrepreneurship*, 9(3): p 183-226.
- Rusliati, M., Wibowo, A., and Narmaditya, S. (2020), "Does Entrepreneurial Leadership Matter for Micro-Enterprise Development? Lesson from West Java in Indonesia", *Journal of Asian Finance, Economics, and Business*, 7(8): p 445-450.
- Siddiqui, S. (2007), "An Empirical Study of Traits Determining Entrepreneurial Leadership-An Educational Perspective", *Skyline Business Review*, 4(1): p 37-44.
- Siilasmaa, R. (2019), "Entrepreneurial leadership: A New Approach to Strategy When You Can't Plan for Predictability", *Leader to Leader*, 2019(92): p 32-36.
- Simba, A., and Thai, T. (2019), "Advancing Entrepreneurial Leadership as a Practice in MSME Management and Development", *Journal of Small Business Management*, 57(2) p 397-416.
- Sklaveniti, C. (2017), "Processes of Entrepreneurial Leadership: Co-acting Creativity and Direction in the Emergence of New SME Ventures", *International Small Business Journal*, 35(2): p 197-213.
- Smith, S., Kempster, S., and Barnes, S. (2017), "Up the ANTe: Understanding Entrepreneurial Leadership Learning through Actor-network Theory", *Industry and Higher Education*, 31(2): p 132-139.
- Strubler, C., and Redekop, W. (2010), "Entrepreneurial Human Resource Leadership: A Conversation with Dwight Carlson", *Human Resource Management*, 49(4): p 793-804.
- Sundararajan, M., Sundararajan, B., and Henderson, S. (2012), "Role of Meditative Foundation Entrepreneurial Leadership and New venture Success", *Journal of Spirituality, Leadership and Management*, 6(1): p 59-70.
- Surie, G., and Ashley, A. (2008), "Integrating Pragmatism and Ethics in Entrepreneurial Leadership for Sustainable Value Creation," *Journal of Business Ethics*, 81(1): p 235-246.
- Swiercz, M., and Lydon, R. (2002), "Entrepreneurial Leadership in Hightech Firms: A Field Study", *Leadership & Organization Development Journal*, 23(7): p 380-389.
- Thompson, J. L. (1999), "A Strategic Perspective of Entrepreneurship", *International Journal of Entrepreneurial Behaviour & Research*, 5(6): p 279-296.

- Tian, Y., and Smith, K. (2014), "Entrepreneurial Leadership of Social Enterprises: Challenges and Skills for Embracing Paradoxes", *Journal of Leadership Studies*, 8(3): p 42-45.
- Tranfield, D., Denyer, D., and Smart, P. (2003), "Towards a Methodology for Developing Evidenceinformed Management Knowledge by Means of Systematic Review", *British Journal of Management*, 14(3): p 207-222.
- Van Assche, T. (2005), "The Impact of Entrepreneurial Leadership on EU High Politics: A Case Study of Jacques Delors and the Creation of EMU", *Leadership*, 1(3): p 279-298.
- Vecchio, P. (2003), "Entrepreneurship and Leadership: Common Trends and Common Threads", *Human Resource Management Review*, 13(2): p 303-327.
- Wahab, A., and Tyasari, I. (2020), "Entrepreneurial Leadership for University Leaders: A Futuristic Approach for Pakistani HEIs", *Asia Pacific Management Review*, 25(1): p 54-63.
- Wang, C. L., Tee, D. D., and Ahmed, P. K. (2012), "Entrepreneurial Leadership and Context in Chinese Firms: A Tale of Two Chinese Private Enterprises", *Asia Pacific Business Review*, 18(4): p 505-530.
- Wibowo, A., and Saptono, A. (2018), "Does Entrepreneurial Leadership Impact on Creativity and Innovation of Elementary Teachers?", *Journal of Entrepreneurship Education*, 21(2): p 1-9.
- Yang, H. (2018), "The Effect of Entrepreneurship Education on Entrepreneurial Leadership of University Students", *Asia-Pacific Journal of Business Venturing and Entrepreneurship*, 13(3): p 59-69.