PEOPLE: International Journal of Social Sciences
ISSN 2454-5899

Marcella Riwo Abudho, 2026

Volume 12 Issue 2, pp. 01-21

Received: 27th February 2026

Revised: 5th March 2026

Accepted: 17th March 2026

Date of Publication: 24th July 2026

DOI- https://doi.org/10.20319/pijss.2026.122.0121

This paper can be cited as: Abudho, M.R. (2026). Developments in Entrepreneurial Competence Literature: Towards the Future of Work. PEOPLE: International Journal of Social Sciences, 12(2), 01-21

DEVELOPMENTS IN ENTREPRENEURIAL COMPETENCE LITERATURE: TOWARDS THE FUTURE OF WORK

Marcella Riwo Abudho
Doctoral Candidate, Institute of Management, University of Szczecin, Szczecin, Poland
mabudho@gmail.com

Abstract

The innovative human capital in global economic development cannot go unnoticed in such times of change with a focus on sustainability. Research has long shown that the intermateriality across social, economic, and political facets is a manifestation of the change created by entrepreneurship. Entrepreneurship is therefore not just a venture creation process but a driver of civilization. Entrepreneurial learning has been evolving since the proposal of the first entrepreneurship course, dubbed 'Management of New Enterprises,' at Harvard Business School in 1947. The diversity of educational aims, methods in teaching, and approaches in monitoring and evaluation has led to the heterogeneity in the definition of concepts around entrepreneurship, including entrepreneurship competence, entrepreneurial education, and entrepreneurship practice. Entrepreneurs have been described by a variety of terms, and various studies have concluded that there is no scientific definition that has been agreed upon for the concept. The ever-growing engagements in entrepreneurial competence in research and practice has led to a diversity of perspectives and models that all make a contribution to the field. While *referring to early entrepreneurial literature, studies have concluded that individual intentions and subsequent behaviors bring the emergence of new business organizations, and as this process evolves over time, entrepreneurial intentions are witnessed across business formations.*

Keywords:
Entrepreneurial Competencies, Future Work, Innovation, Industry 4.0 & 5.0, Economic Growth

1. Introduction

Over the past two centuries, every major wave of economic development has been ignited by bold innovation and structural transformation. Today, industry 4.0 is once again rewriting the rules of products, production systems, global supply chains, and entirely new business models for the future of work. In this accelerating era of disruption, it is entrepreneurial competence the unique ability to spot scientific and inventive breakthroughs and turn them into scalable ventures that will determine who creates the next generation of growth, jobs, and opportunity. The growth of the entrepreneurship discipline is multifaceted, representing numerous research dimensions, methods, perspectives, and traditions. Contributions have been made from administration, business, economics, psychology, sociology, history, geography, finance, marketing and cultural anthropology. "Entrepreneur" is a French word derived from "entreprendre," which means to undertake. The word describes an individual who translates innovation and opportunity recognition into viable, marketable ventures. This process involves adding value through the investment of time, capital, and specialized skills. Entrepreneurial competence cannot be discussed without the recognition of developments in entrepreneurial literature. Early and progressive developments in entrepreneurial studies over the years by numerous studies (Ebner, 2005; Thornton, 1999; Casson & Casson, 2012; Carlsson et al. 2013; Martynyshyn et al. 2022). The precursor work by Cantillon (1755) brings new knowledge, methodology, theory, and policy by describing the entrepreneur's role as purchasing inputs at a certain price and selling outputs at an uncertain price bringing the market into stability. Essential to this definition, Smith's theory of economic growth considers the capital owner, the organizer, and the manager of trade as an entrepreneur (Smith, 1776). Marx (1867) recognizes entrepreneurs within capitalist structures as people whose role is that of organizing the factors of production to obtain maximum surplus value. Say (1971) advances the Cantillonian approach and emphasizes how entrepreneurs are economic agents confined to planning, organizing, supervising, innovation, and supply of capital. The contributions of Max Weber and Werner Sombart expanded the institutional dimension of entrepreneurship making a more economic sociology approach, as they presented the subject of entrepreneurship as a factor of developmental factors. Weber (1920) argued that the new era entrepreneur exhibited a number of characters, i.e., an energetic attitude; being trusted by both customers and employees; innovative duty; and a religious duty driving professional concern. According to Schumpeter (1934), success and progress is derived from force and confrontation by entrepreneurial leaders who create a cyclic pattern of capitalist economic evolution and create more opportunities for venturing agents. In the mid of the twentieth century, The Need for Achievement (nACH) theory by McClelland (1961) lays ground for the entrepreneurial competence concept by positing how individuals are driven by a desire for internal accomplishment and excellence rather than social recognition. An entrepreneur's competencies recognize and implement complex ideas and their ways of implementation (Vettik-Leemet & Mets, 2024). Employee skills evolve over the years and the desirable competence changes as new ones appear. Barwińska-Małajowicz and Pyrek (2023) explain how industrial revolution transitions are posing new sets of competencies for the future and that in this situation, human - centric competences are becoming more vital than those of robotics, artificial intelligence, and information systems. On the other hand, neoclassical discourses approach entrepreneurship as a disruptive event, destabilizing norms to introduce change through creativity and the introduction of new ways. Despite the entrepreneurship concept not being a core idea in the economic theory, the growing interest is evident outside formal research. research. Baumol (1968) states that the absence of the entrepreneurial function in the conventional economic analysis and the lack of its appearance in the neoclassical economics is simply why it has lagged behind in economic analysis (Carlsson et al., 2013). However, human capital is an investment that has a higher rate of return and should be invested in to grow the quality of labour. Erikson (2001) explains this approach emphasizes the continuous adaptation and reallocation of resources as the core of entrepreneurial action in a changing world. Various studies emphasize that such research revolving around entrepreneurial competence is crucial for the development of academic courses (Chlebiej, 2022), in-practice training (Secundo et al. 2020), labour market policy making, collaborative decisions (Barwińska-Małajowicz and Pyrek, 2023), fostering new projects, and start-up growth (Ferreras-Garcia et al., 2021). Entrepreneurial concepts have therefore been described by a variety of terms and various studies have concluded there is no scientific definition (Rivera-Kempis et al., 2021). Despite the competing schools of thought around entrepreneurship, there are various terms that have revolved around the discussion of who and what entrepreneurship competence encompasses. The purpose of this study is to present development in entrepreneurial competence literature, towards the future of work. The objectives guiding this study include describing how the definition of entrepreneurial competence has evolved over time, the key differences between paradigms and the changes for future entrepreneurial competence approach?

2. Systematic Literature Review

The research employed a systematic literature review and undertook a scientific process based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses to answer the research questions that guided the study. The ability of inclusion and exclusion criteria in a systematic literature review aids in confining the study to its objectives as well as minimizing bias from transparency and its drive for reproducibility (Lame 2019). The use of desk research drew papers from SCOPUS due to its sources of highly cited papers and coverage indexing vast collections of journals and high impact factors. Specific keywords were used to draw papers from the database, including "entrepreneurial competence, entrepreneurial thought, entrepreneurial behavior, entrepreneurial development, new ventures, start-up skills." Parameters for refinement included open access reviewed articles, research articles, and book chapters within the subject areas of business, management and accounting, social sciences and economics, econometrics, metrics, metrics and finance. The period of interest included literature from the mid-twentieth century due to the relevance of the development of entrepreneurial thought as part of the study. Figure 2.1 presents this information based on a PRISMA model.

Figure 2.1: *PRISMA Model (Author, 2026)*

3. Discussion

3.1 The Concept of Entrepreneurial Competence

Studies have differentiated competence as skills or standards and competency as specific behavior exhibited by individuals (Strebler et al., 1997). Nascent studies introduce competency as individual abilities, behavior, attitude, and knowledge that enable entrepreneurs to perform well (Baum and Locke, 2004; Baum et al., 2001; Brophy and Kiely, 2002; Brownell, 2008; Woodruffe, 1993).

McClelland's work on need for achievement was initiated within organization behavior and built foundations for the succeeding literature for the study of human competence at work and (Miner, 2005) states how this approach folds the theory of motives for achievement, power, and affiliation into a comprehensive framework to establish what leads to levels of higher competence in positions. The employment of this approach as a procedure to understand performance from the dimension of knowledge, traits, motives, self-concept has been since followed in the consultancy industry, pioneered by Boyatzis. Early literature defines competence in numerous ways: an individual's capacity to meet job demands and achieve desired results within a specific business (Boyatzis, 1982); the set of characteristics of an individual that are observable, measurable, and predictive of superior performance within a given role or job (Gartner, 1985); and technical and non-technical operationalizers of a venture in a company (Huck & McEwen, 1991). Hoffmann (1999) defines competencies in three different ways, i.e., the standard of a person's performance, result, or output; observable output or performance; and knowledge, skills, and abilities that present the underlying attributes of a person. A popular definition by Weinert (1999) is that competencies represent a dynamic combination of cognitive and meta-cognitive skills, knowledge and understanding, interpersonal, intellectual and practical skills, and ethical values (Rivera-Kempis et al., 2021; Secundo et al. 2000). Psychologists have used the concept of competence as a measure of ability and how their performances reflect their traits and capacities. Bird (1995) and Boyatzis (1982) mention the malleability of competence, which reflects on the elements making up the concept and those that should be treated as moderators, for example, traits in stable disposition or self- efficacy motivation. Most reviewed literature on entrepreneurship has common mentions that can be categorized into personal traits or to the organization as an entity. Despite these views, literature is consistent to how Mitchelmore and Rowley (2010) define entrepreneurial competence, i.e., a specific group of competencies relevant to the exercise of successful entrepreneurship. Ibid state how the concept of competence has been used in scientific literature, with the terms "skills," "acumen," "expertise," and "competency" being used interchangeably. The European Parliament and the Council of 18 December 2006 outline knowledge, skills and attitudes as the elements of competence (Tittel & Terzidis, 2020). The lack of universally agreed upon standards for the concept in science may create a disconnect in its practicality between academia and industry. This nature has been termed as a ”fuzzy concept” by Boon and Van der Klink (2003).

Developments from the foundational literary works of competence show progression that reflects upon the definition as it moves from individualistic to the enterprise. Kusumawijaya & Astuti (2021) define competence as the ability required for action towards taking advantage of an opportunity, planning for resources, and undertaking the business risk. In line with this, the European Commission defines entrepreneurship competence as ‘the ability to exploit opportunities and ideas to create value for others based on creativity, critical thinking, problem solving, initiative, perseverance, and the ability to work with others to plan and manage projects that have cultural, social, or commercial value’ (Bacigalupo et al., 2016). Pennetta et al. (2024) explain how various authors have given definitions to the three common contexts around entrepreneurship, i.e., entrepreneurial skills and abilities, entrepreneurial capabilities, and entrepreneurial competence. Fayolle et al. (2006) defines entrepreneurial skill as the overall ability to do something well, with the key concepts being competence, proficiency, knowledge, and capability, while Hayton (2015) explains that entrepreneurial skill is the ability to identify consumers' needs to pursue technical or commercial opportunities. A more critical approach is explained by Mischel (1973), which highlights how competence as the ability to do something constitutes both skills and abilities. On the other hand, claims by Matthews et al. (1992) state that entrepreneurial skills and entrepreneurial abilities are different, whereby the practice of these skills produces proficiency on specific tasks, while these abilities are generic traits (Pennetta et al. 2024). The concept of entrepreneurial competence can therefore be defined as the standard of an entity’s observable output influenced by a set of exhibited knowledge, skills and abilities aimed at successful creation of a venture and growth of a business. There are three broad progressive categories for entrepreneurial competence definition. Reviewed sources reveal: the behavior-oriented construct, the business-oriented construct and the value-driven dynamic construct. Firstly, foundational literature explain entrepreneurial competence as a behavior-oriented construct. In this view, EC is seen as a construct focused on a narrow set of attributes that practically drive an individual toward performance and the achievement of results within a business. From the lenses of psychological studies on individual traits, authors contributing to this construct (Boyatzis, 1980; Gartner, 1989; Hoffman, 1999; Bird, 1995) define entrepreneurial competence as an individual’s capacity to meet job demands. These characteristics are observable and measurable, serving as predictors of superior performance in a specific role. It also encompasses the ability to recognize and envision taking advantage of opportunities to see a firm through to a successful end result. Furthermore, it is regarded as a benchmark for planning and a comprehensive ability related to entrepreneurial success, encompassing a person's knowledge, skills, and abilities as underlying attributes. Secondly, the business-oriented construct defines entrepreneurial competence as a multi-dimensional ability that forms an entrepreneurial profile necessary for the creation and growth of ventures (Man et al. 2002; Moriss et al. 2013; Martínez-Martínez & Ventura, 2020; Pennetta et al. 2024). The set of integrated capabilities consisting of knowledge, skills, and attitudes are applied for entrepreneurial actions like identifying, evaluating, and pursuing opportunities to create value for society. It represents higher-level characteristics, including personality traits and total job performance ability. This overarching construct is linked to various sub-competences required to design, create, and develop a business venture efficiently. Finally, the value-driven dynamic construct views entrepreneurial competence as targeted actions aimed at long-term prospects, impact, and sustainability.This perspective focuses on the specific knowledge and skills required to identify, assess, and mitigate risks all environmental risks for longevity in business. It involves the ability to plan resources, undertake risk, and transform ideas into socio-economic value for others. The three views show the progressive nature of the concept from nascent foundational basics to a framework of greater inclusivity. This has been greatly influenced by the developing nature of entrepreneurial activity, which has included individual entrepreneurs, start-ups, new ventures, businesses, and organizations. Enterprise studies have also continued to identify the role of the environment in entrepreneurship, and this has determined the direction of entrepreneurial competence research, which is witnessed in the progressive nature of this concept. Table 3.1.1 presents the three orientations categorizing the definition of competence with an example of the various scholars who have made significant contributions as well as other supportive literature on the same.

Table 3.1.1 *Definition of Entrepreneurial Competence*

View of Orientation	Author	Definition of Entrepreneurial Competence	Citation(s)
Behavior-oriented construct where EC is viewed as integrated narrow set of attributes focusing on opportunities	Boyatzis (1980)	A individual's capacity to meet job demands and achieve desired results within a specific business.	Spencer & Spencer (1993); Bird (1995); Man et al. (2002)

and practically driving towards an end outcome of performance.			
	Gartner (1985)	The set of characteristics of an individual that are observable, measurable, and predictive of superior performance within a given role or job.	Man et al. (2002); Chen et al. (1998); Mitchelmore & Rowley (2010)
	Chandler & Jansen (1992)	Ability to recognize and envision taking advantage of opportunities and the drive to see the firm through to the end result.	Erikson, 2001, Mitchelmore & Rowley (2010)
	Bird (1995)	The benchmark of planning and entrepreneurship and is a comprehensive ability related to entrepreneurial success.	Mitchelmore & Rowley (2010); Edwards-Schachter et al (2015)
	Hoffmann (1999)	The standard of a person's performance, result, or output; observable output or performance; and knowledge, skills, and abilities that present the underlying attributes of a person.	Ahmad et al. (2010); Lans et al. (2011); Pennetta et al. (2024);
Business-oriented construct where EC is viewed as a multi-dimensional ability resulting in an entrepreneurial profile for the creation and growth of ventures.	Man et al. (2002)	A set of integrated capabilities consisting of knowledge, skills, and attitudes for taking entrepreneurial actions (opportunity identification, evaluation, and pursuit) and creating value (for others and society).	Morris et al. (2013); Lans et al. (2018)
	Mitchelmore & Rowley (2010)	Higher-level characteristics encompass personality traits, skills, and knowledge and therefore can be seen as the total ability of the entrepreneur to perform a job successfully.	Penetta et al. (2024); Batchmann et al. (2024)
	Morris et al. (2013)	is an overarching construct linked to a variety of sub-competences or competence areas.	García-Cabrera et al., 2023,
	Martínez-Martínez & Ventura (2020)	Combination of knowledge, skills, aptitudes, and personality traits necessary for the successful design, creation, and development of a business venture, allowing the entrepreneur to identify and exploit new business opportunities in an efficient and effective manner.	Rakhimova et al (2025); Mai & Thai(2025)
Value-driven dynamic construct where EC is viewed as targeted actions for long-term prospects and impact like risk management and sustainability.	Hudáková et al. (2019)	the specific set of knowledge and skills that allow a manager to identify, assess, and mitigate risks (market, financial, and operational) to ensure the sustainability of the business.	Urbancová et al. (2022); Janošková, et al (2021)
	Kusumawijaya & Astuti (2021)	The ability required for action towards taking advantage of an opportunity, planning for resources, and undertaking the business risk	Nazief et al. (2025); Achmad et al. (2025)

Ferreras-Garcia et al. (2021)	A combination of knowledge, skills, abilities, and characteristics that allow an entrepreneur to explore opportunities, convert ideas into a profitable business, and maintain business development and growth.	Fagadar et al. (2021); Zhu et al. 2023
Bacigalupo et al. (2016)	EntreComp Framework, entrepreneurial competence is the ability to act upon opportunities and ideas and transform them into value for others (financial, cultural, or social).	Ņikitina et al., 2020, Barwińska-Małajowicz & Pyrek (2024)
Pennetta et al. (2024)	as multidimensional abilities to see and act on opportunities, whereby the set of skills are applied to a specific environment.	Noor et al. (2024); Segundo et al.(2025)

4. The Competing Paradigms of Entrepreneurial Competence Concept

Entrepreneurial learning has been evolving since the proposal of the first entrepreneurship course, dubbed ‘Management of New Enterprises,’ at Harvard Business School in 1947 (Katz, 2003). The diversity of educational aims (Rasmussen et al., 2011), methods in teaching (Secundo et al., 2020) and approaches in monitoring and evaluation (Purzer, 2016) has led to the heterogeneity in the definition of concepts around entrepreneurship, including entrepreneurial practice and competence. Boyatzis (1982) introduces competence from the American school as an underlying characteristic of a person affecting the effectiveness of their action towards superior job performance. The UK, through the Management Charter Initiative has since 1988 described competence as an action, behavior, or outcome that a person seeking to achieve in a specific occupation must be able to exhibit. The importance of entrepreneurial competence is described in the European Entrepreneurship Competence Framework, which directs how entrepreneurship education has to be guided by entrepreneurial approaches, practices, knowledge, and skills to determine the learning tools and methods to strengthen entrepreneurship competences. The concept of entrepreneurial competences has therefore been described as a collection of the competences enabling discovery and creation of opportunities coupled with the ability to utilize and thrive in those opportunities. Table 3.1.1 highlights how, despite the numerous definitions from various scholars, there seems to be a shift from the behavior -oriented oriented construct that focuses on the psychologically rooted individual traits to a value-driven dynamic construct stemming from venture operations.

4.1 The Individual Trait Paradigm

The behavioral approach of studies in entrepreneurship started a revolution focusing on the traits of an individual entrepreneur (Gartner et al., 1989). Pioneer studies include McClelland (1961) Palmer (1971) and Brockhaus (1982). These behavioral approach of the individual perspective school have long led to the discussion of the nature of an entrepreneur. McClelland (1961) describes five achievement situations or characteristics that are preferred by high achievers which he later recognizes differentiate business persons to set apart entrepreneurs (Miner, 2005). Firstly, high achievers prefer skill-based effort and not luck or chance. In this instance the entrepreneurs get personal credit from the outcome and take personal accountability for the results. Secondly, high – achievers embrace the achievement situations that demand ever-stretching of self by calculating the risk level. They settle on intermediate-level tasks that are difficult and risky and not those that are easy with no risk or are too difficult with a low level of success. Thirdly, high-achieving individuals actively seek feedback due to engagement in high complexity activities within a reasonable time. Fourthly, they allow novel solutions and innovations and get a higher sense of satisfaction when these solutions bring value. Finally, they need a distinguished perspective of future orientation and proceed to think autonomously and plan proactively. While referring to early entrepreneurial literature, studies have concluded that individual intentions and subsequent behaviors bring the emergence of new business organizations, and as this process evolves over time, entrepreneurial intentions are witnessed across business formations (Katz, 2003; Gartner & Vesper, 1994). Across literature, a profile of the individual aspects of entrepreneurs have been highlighted. These include change creator; innovator (Schumpeter, 1912); craftsman vs opportunistic (Smith, 1967); creativity; challenge-taker (Drucker, 1985); venture creation; independence; future uncertainty (Kratko, 1997); pioneer (Glasl & Lievegoed, 1993); wealth creator; visionary; self-realization; initiative; attitude, skill, and managerial attributes; start-up; opportunity recognition; idea generation (Esubalew & Raghurama, 2020); social networking; new-business formation and small business management; strategic autonomy; and leadership. Chlebiej (2021) conducted a study to establish the level of individual competencies in management students. This study adopted findings on entrepreneurial competencies by Robles and Zárraga-Rodríguez (2015) whose research design followed a delphi method on 10 competent and expert entrepreneurs. These competencies are: risk and social mobility, autonomy, information search and analysis, diligence, continuous improvement and result orientation, communication, self-confidence, developing and maintaining social networks, dynamism and change management, initiative, innovation, leadership, and negotiation skills. Robles and Zárraga-Rodríguez (2015) define entrepreneurial competencies as a collective scale that measures the level of these mentioned competencies. Findings by Chlebiej (2021) show that entrepreneurial competencies are significantly correlated with each other with dynamism and change management and initiative as well as entrepreneurial competences and initiative, self-confidence and risk and social mobility. A review of various literature shows that entrepreneurial qualities include dynamics of action, leadership skills, ability to see opportunities, ability to act in conditions of risk and uncertainty, creativity, independence, ability to adapt, internal motivation, extraversion, compliance, meticulousness, and openness to experience (Korpysa, 2020). Studies have well highlighted the importance of understanding entrepreneurial competencies (Hudáková et al. 2019) in the perspective of both individual and enterprise characteristics. The individual entrepreneurial perspective perceives the entrepreneur as the course of new business creation due to their personality traits, background experiences, psychological characteristics and attitudes (Gartner et al., 1989). Gartner (1985) asserts entrepreneurs are not unidimensional and present a highly heterogenous population that requires extensive consideration for the conceptualization of frameworks. A more diverse opinion has stemmed from entrepreneurial competence research which has shifted from personal traits to more organization -focused perspective, and this is due to the fact that successful organizations have to be more entrepreneurial.

4.2 The Venture Paradigm

The latter work of Schumpeter (1942) on “Capitalism, Socialism and Democracy” connotes that, entrepreneurs are not necessarily individual persons, but even a business, a country or even its agenda can act as so with various business cycles registering entrepreneurial abilities. Mitchelmore and Rowley (2010) highlight how early researches like that by Hofer and Charan (1984), Hunger and Wheelen (1996) and Churchill and Lewis (1983) acknowledge that as firm’s evolve through the lifecycle, development from entrepreneurially managed venture to a professionally managed business recognizes change from the competencies at individual level to the competencies at the firm level. The aforementioned source clarifies the scholarly distinction within entrepreneurship research between managerial and entrepreneurial competencies (Lerner & Almor, 2002; Chandler & Hanks, 1994). Ferreras-Garcia et al. (2021) indicate that despite the numerous descriptors of entrepreneurial competencies (knowledge, skills, attitudes, character traits), they can be measured before and after an intervention to identify that which is required for individual development within a specific context. The entrepreneurial competencies related to the birth, survival and growth of ventures can be associated to business performance and profitability. In the paper titled ‘Revisiting Shapero: A taxonomy of entrepreneurial typologies’, Erikson (2001) states how entrepreneurs are people with the cognitive and behavioral ability to deal with movements to and from the industrial organization of economic equilibrium. Ibid explains how the shift towards economic equilibrium is driven by the entrepreneurial abilities embedded in an individual’s behavior enabling them to exploit opportunities. In the contrary, Schultz (1975) postulates how entrepreneurs represent a competence of perceiving disequilibria well hidden in opportunities as they embark on an assessment of whether these opportunities are worth of profitable engagements to make decisions on further resource allocation. This approach terms entrepreneurial ability as a scarce resource that can be acquired in experience or by education. A number of studies (Sanchez,2011; Sitzmann et al., 2010) has found the teaching of entrepreneurship gives learners the foundation for entrepreneurship competencies and allows them emerge (Ferreras-Garcia et al., 2021). Vesper (1980) and Gartner et al. (1989) highlights how profiles of new business ventures should be categorized under four characteristics each with its own indicators i.e. individual, organizational, environmental, and process characteristics. Ibid explains that individual indicators provides the background characteristics and motivations while organizational indicators are the kind of strategies and structures used by the new business ventures. To add on, environmental defines the nature of the competition dynamics around while process are the activities undertaken and efforts exerted to bring the ventures into light. Gartner (1985) explains how the process perspective originates its foundations as presented by Danhoff (1949), that entrepreneurship is not a person but a function of activities. The six processes are summarized as how the entrepreneur locates a business opportunity; accumulates resources; markets products and services; produces products; builds and organization and finally responds to government and society. The works by Gartner et al. (1989) equally introduce a taxonomy of new business ventures; an 8 type cluster (NBV gestalt) where each new business venture falls under based on the exhibited mix of the four characteristics. Certain perspectives propose that entrepreneurial competencies are crucial for business initiation, whereas managerial skills become essential for subsequent business expansion. Mitchelmore and Rowley (2010) draws from various literature on competency and categorizes four major types of competencies namely: entrepreneurial, business and management, human relations, conceptual and relationship. Further, it divides entrepreneurial competencies to include market definition, offering development, idea generation, environmental scanning, recognizing and envisioning taking advantage and formulating strategies.

4.2.1 The Future

In the early 1990s, entrepreneurial research reflected on the economist's view and included literature on market process, risk and uncertainty, new firms, social mobility, growth and decline. Considerable improvements in production, distribution and energy had its share. The internet age has not only removed societal and economic borders but is also reducing the human intervention in routine task (Barwińska-Małajowicz & Pyrek, 2024). The early 2000s witnessed the modern social entrepreneurship research (Carlsson et al., 2013). This is entrepreneurial research reflecting on the intrapersonal processes of entrepreneurial individuals and teams emanating from behavioral science. Research builds upon social cognition by making reference to attribution, heuristics, and perception. Thornton (1999) introduces the sociological aspect of entrepreneurship with the recognition that many scholars have pointed out the need for a unifying scheme to integrate the diversity of quality, interdisciplinary nature and the development of entrepreneurial concept. In line with the definition by Gartner that entrepreneurship is the creation of new organizations, Thornton explains entrepreneurship is dependent on context and is a social and economic process. The current dimension of creativity and innovation is manifesting in the preceding work by Kirzner who asserts entrepreneurs are skilled with the knowledge of knowing where to find data that distinguishes their actions from the widespread ignorance present in the market. These alert entrepreneurs drive the market towards equilibrium as they identify arbitrage opportunities (Storr & John, 2015). From Kirzner's assertion, Langlois (2002) defines entrepreneurial activity as reorganization of economic capabilities by new discoveries or creative profitable new ways. Kirzner (1973) conquers with Schumpeter (1934) on the dynamic nature of markets evident on how historical patterns show entrepreneurial possibilities arise to give birth to business institutions through systemic innovation (Langlois, 2002). This type of innovation is simultaneous changes of various combinations along the stages of production. In the process, systemic innovation allows the emergence of newer capabilities, including those separately owned within the market system.

Meanwhile, various existing production system processes are rendered obsolete as the business firm experiences new control in transaction costs, efficiency, coordination, and capabilities (Schumpeter, 1912). It outlined the function of entrepreneurs and as that of carrying out new combinations (innovation). Schumpeter's explains how entrepreneurship introduces new combinations through resources, technology, and ideas and brings into existence new product, a new service, a new production method, a new market, new source of supply, or a new form of organization (Śledzik, 2013; Chlebiej, 2021). Schumpeter therefore explains how economic development as a historical series of fundamental structural shifts is driven by innovation, which his work categorized into four stages: invention, innovation, diffusion, and imitation. Schumpeter's theory dictates how entrepreneurs leverage scientific and inventive discoveries to generate ideas with entirely new avenues for investment, growth, and job creation. He further argues invention is a less impactful basic innovation, while innovations such as adoptions (diffusion) or replications (imitation) begin significantly yielding profits and entrepreneurs resolve to intensely leverage technologies overall to shake economies. Barwińska-Małajowicz and Pyrek (2023) provide provides an example of how the Industry 4.0 concept has brought change to products and production systems with respect to the design, operations, processes, operations and services, global supply chains and eventually the creation and integration of new business models for future work organization. This seems to be evident in how the progressive industrial developments have been witnessed over the century. The study by Barwińska-Małajowicz and Pyrek (2023) on 'Workers' Competencies in the Context of Industry 4.0. The Case of Poland ' and present a comprehensive model of future competences and provides three categories namely: cognitive, technical, and social competences. Further, this model outlines the employee competencies 4.0 as concluded from various literature. Cognitive competencies include cognitive flexibility, creativity, critical thinking and complex problem solving. Technical competences also referred to as digital competences, include the ability to acquire, process and use information in a critical manner, assess the relevance and distinguishing real content from virtual data and knowledge on privacy protection and cybersecurity issues. Finally, social competence, also referred to as emotional competences encompasses communicating effectively, building relationships with others, emotional intelligence, teamwork and self-management skills and leadership and entrepreneurial skills. The shortage of employees' competences is reported to affect operations and the entrepreneurs perceived a short supply of creativity which is the most crucial within cognitive competences. Further, cooperation is vital within social competence; which registers lower shortage while specialized technical competences proved not be problematic for employers. Van Gelderen (2020) explains how corporate entrepreneurship consists of the three sequential phases of a venture and the competencies required for the success of each phase. The invention phase (visionary and creative ability competencies); the business-building phase (hybrid and contradictory competencies like commitment/let go and visionary/hands-on); and the management of growth adoption phase (competencies towards achieving efficiency, growth, and profit). A research study by Biraglia & Kadile (2017) on ‘The role of entrepreneurial passion and creativity in developing entrepreneurial intentions reinforces entrepreneurial activity as a process. The study concludes the existence of three entrepreneurial identities, i.e., i.e. an inventor, a founder, and a developer. Inventors search for new opportunities and use innovation to create change. Founders proceed to commercialize the innovation, while developers operate and grow the start-up. Entrepreneurial passion is known to lead individuals who are not yet entrepreneurs into the founding dimension of entrepreneurship across to being developers (Cardon et al. 2013). Barwińska-Małajowicz and Pyrek (2023) concluded that competencies necessary within the current dynamic environments are creativity and innovation, critical thinking skills, digital competencies, problem-solving skills, communication and collaboration, entrepreneurship and the process of permanent learning. Hudáková et al. (2019) investigated the entrepreneurial competences sustaining teams and projects in start-ups. By the examination of progressive start-up accelerator programs, the study found that startup founders exhibit a range of entrepreneurial competencies crucial for their ventures' progress. These include a foundational understanding of the business ecosystem, proficiency in resource planning and utilization, and the capacity to guide the enterprise through various developmental phases. Furthermore, these individuals demonstrate an awareness of effective communication and lobbying strategies, alongside the ability to engage their target audience and cultivate valuable professional networks. Finally, successful founders possess skills in resource optimization and the critical ability to identify and overcome obstacles that impede the venture's advancement. Study by Ferreras-Garcia et al. (2021) amplifies the same notion that within the different categories of competencies, there are some elements exhibit greater weight than others. Crucial competencies within the generic category include decision making, communication, contracting, organizational culture, working with uncertainty, leadership and creativity. Moreover, those within specific competencies are related to management, economic knowledge, preparing business plans, risk management and entrepreneurship.

5. Conclusion

The distinction between competence and competency is an important precursor in entrepreneurship studies. Entrepreneurial education has been mentioned to prepare individuals to deal with system disequilibria and entrepreneurial education builds entrepreneurial competence to find solutions in times of turmoil. In this regard, organizations use competence profiles to make people operational decisions to obtain strategic directions. Entrepreneurial concepts have been described by a variety of terms and various studies have concluded there is no scientific definition. The concept of entrepreneurial competence can be defined as the standard of an entity's observable output influenced by a set of exhibited knowledge, skills and abilities aimed at successful creation of a venture and growth of a business. Despite the competing schools of thought around entrepreneurship, there are various terms that have revolved around the discussion of who and what entrepreneurship competence encompasses. There are three broad progressive categories for entrepreneurial competence definitions i.e. the behavior-oriented construct, the business-oriented construct and the value-driven dynamic construct. Progressive entrepreneurial literature over the years exhibit a shift from the behavior -oriented construct that focuses on the psychologically rooted individual traits to a value-driven dynamic construct stemming from venture operations. Studies reflect two competing paradigms of entrepreneurial competence i.e. individual trait paradigm as influenced by the behavioral approach and the venture paradigm. Individual intentions and subsequent behaviors of entrepreneurs bring the emergence of new business organizations, and as this process evolves over time, entrepreneurial intentions are witnessed across business formations. The venture paradigm approaches entrepreneurial competence as describing a function of activities influenced by business performance and profitability. Emanating from the process perspective, entrepreneurial competencies are related to the birth, survival and growth of ventures. The future of entrepreneurial competence is marked on progressive development. The internet age has not only removed societal and economic borders but is also reducing the human intervention in routine tasks. Modern social entrepreneurship research is reflecting on the intrapersonal processes of social cognition of entrepreneurial individuals and teams emanating from behavior. Future of entrepreneurial competence research builds upon existing blocks of attrition, heuristics and perception through the numerous developmental phases of the rise of in new ventures to growth in business.

References

Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. (2016). EntreComp: het Entrepreneurship Competence-Framework. Europese Commissie-Joint Research Centre.

Barwińska-Małajowicz, A., & Pyrek, R. (2023, September). Workers' Competencies in the Context of Industry 4.0. The Case of Poland. In The International Conference on Innovative Marketing and Tourism (pp. 1005-1013). Cham: Springer Nature Switzerland.

Biraglia, A., & Kadile, V. (2017). The Role of Entrepreneurial Passion and Creativity in Developing Entrepreneurial Intentions: Insights from American Homebrewers. *Journal of Small Business Management*, *55*(1), 170–188. https://doi.org/10.1111/jsbm.12242

Bird, B. (1995), "Towards a theory of entrepreneurial competency", Advances in Entrepreneurship, Firm Emergence and Growth, Vol. 2 No. 1, pp. 51-72.

Bird, B. (2019). Toward a theory of entrepreneurial competency. In *Seminal ideas for the next twenty-five years of advances* (Vol. 21, pp. 115-131). Emerald Publishing Limited.

Casson, M., & Casson, C. (2012). *The History of Entrepreneurship: Medieval Origins to a Modern Phenomenon?*

Carlsson, B., Braunerhjelm, P., McKelvey, M., Olofsson, C., Persson, L., & Ylinenpää, H. (2013). The evolving domain of entrepreneurship research. *Small Business Economics*, *41*(4), 913–930. https://doi.org/10.1007/s11187-013-9503-y

Chlebiej, J. (2022). Entrepreneurial competences of management students. Problemy Zarządzania, 20(4 (98)), 110-134.

Ebner, A. (2005). Entrepreneurship and economic development: From classical political economy to economic sociology. In *Journal of Economic Studies* (Vol. 32, Issue 3, pp. 256–274).

https://doi.org/10.1108/01443580510611047

Erikson, T. (2001). Revisiting Shapero: A taxonomy of entrepreneurial typologies. New England Journal of Entrepreneurship, 4(1), 9.

Esubalew, A. A., & Raghurama, A. (2020). The mediating effect of entrepreneurs' competency on the relationship between Bank finance and performance of micro, small, and medium enterprises (MSMEs). *European Research on Management and Business Economics*, *26*(2), 87-95.

Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: a new methodology. *Journal of European industrial training*, *30*(9), 701-720.

Ferreras-Garcia, R., Sales-Zaguirre, J., & Serradell-López, E. (2021). Developing entrepreneurial competencies in higher education: a structural model approach. Education+ Training, 63(5), 720-743.

Gartner, W. B. (1985). A Conceptual Framework for Describing the Phenomenon of New Venture Creation. In *Source: The Academy of Management Review* (Vol. 10, Issue 4).

Gartner, W. B., Mitchell, T. R., & Vesper, K. H. (1989). A taxonomy of new business ventures. Journal of Business Venturing, 4(3), 169-186.

Gautam, M. K., & Singh, D. S. K. (2015). Entrepreneurship education: concept, characteristics and implications for teacher education. Shaikshik Parisamvad (An International Journal of Education. 5 (1), 21-35.

Hudakova, M., Urbancova, H., & Vnoučková, L. (2019). Key criteria and competences defining the sustainability of start-up teams and projects in the incubation and acceleration phase. Sustainability, 11(23), 6720.

Katz, J. A. (2003). The chronology and intellectual trajectory of American entrepreneurship education: 1876–1999. Journal of business venturing, 18(2), 283-300.

KMK (2011). Guidelines for the development of framework curricula of the Standing Conference of the Ministers of Education and Cultural Affairs of the Länder in the Federal Republic of Germany for vocational instruction in vocational schools and their coordination with the federal training regulations for recognized training

Lame, G. (2019, July). Systematic literature reviews: An introduction. In *Proceedings of the design society: international conference on engineering design* (Vol. 1, No. 1, pp. 1633-1642). Cambridge University Press.

Lans, T., Baggen, Y., & Ploum, B. (2018). Towards more synergy in entrepreneurial competence research in entrepreneurship education. In A research agenda for entrepreneurship education (pp. 224-242). Edward Elgar Publishing.

Lundvall, B. Å. (2008). Innovation and competence building in the learning economy-Implications for innovation policy: Kunnskapsdugnaden 2008-Delprojekt om Kunnskap og læringsøkonomi.

Martynyshyn, Y., Khlystun, O., Antonivska, M., & Krupa, O. (2022). Entrepreneurship: Theory, Genesis, Socio-Cultural Dimensions and Strategies. *Socio-Cultural Management Journal*, *5*(2), 3–37. https://doi.org/10.31866/2709-846x.2.2022.267494

Miner, J. (2005). *Organizational Behavior: Essential Theories of Motivation and Leadership*.

Mitchelmore, S., & Rowley, J. (2010). Entrepreneurial competencies: a literature review and development agenda. International journal of entrepreneurial Behavior & Research, 16(2), 92-111.

Purzer, S., Fila, N., & Nataraja, K. (2016). Evaluation of current assessment methods in engineering entrepreneurship education. Advances in Engineering Education, 5(1), n1.

Rasmussen, E., Mosey, S., & Wright, M. (2011). The evolution of entrepreneurial competencies: A longitudinal study of university spin-of venture emergence. Journal of Management Studies, 48(6), 1314–1345.

Rivera-Kempis, C., Valera, L., & Sastre-Castillo, M. A. (2021). Entrepreneurial competence: Using machine learning to classify entrepreneurs. Sustainability (Swit]erland), 13(15). https://doi.org/10.3390/su13158252.

Schumpeter, J.A. 1942. Capitalism, Socialism and Democracy, 3rd edition, London: George Allen and Unwin, 1976

Schumpeter, J.A. 1912. The Theory of Economic Development, tenth printing 2004, Transaction Publishers, New Brunswick, New Jersey

Secundo, G., Rippa, P., & Cerchione, R. (2020). Digital Academic Entrepreneurship: A structured literature review and avenue for a research agenda. Technological forecasting and social change, 157, 120118.

Strebler, M. (1997). *Getting the Best Out of Your Competencies*. Grantham Book Services, Isaac Newton Way, Alma Park Industrial Estate, Grantham NG31 9SD, England, United Kingdom.

Tittel, A., & Terzidis, O. (2020). Entrepreneurial competences revised: developing a consolidated and categorized list of entrepreneurial competences. Entrepreneurship Education, 3(1), 1-35.

Thornton, P. (1999). The sociology of entrepreneurship. *Annu. Rev. Sociol*, *25*, 19–46.

Van Gelderen, M. (2020). Entrepreneurs' competencies 12 entrepreneurs' competencies. In *The Psychology of entrepreneurship* (pp. 210–227).