

Article

Bibliometrics of the Entrepreneurial Mindset: The Missing Dynamics

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Abstract: The purpose of this bibliometric analysis is to understand what skill sets are needed for the entrepreneurial mindset, how the entrepreneurial mindset is practically operationalized, and where opportunities can be identified using the entrepreneurial mindset. The entrepreneurial mindset is crucial in entrepreneurship and innovation, leading to value creation, business development, and competitive advantage. The methodological approach involves a bibliometric analysis utilizing seven databases and a total of 478 articles that were selected based on the phrase “entrepreneurial mindset”. Data were extracted on 6 July 2024, and the bibliometric analysis consisted of four separate steps in the methodological approach. The findings identified six different clusters in which the entrepreneurial mindset adopted a process-oriented perspective, a concept that is underexplored in the current literature. The novelty in this study involves a cluster in the findings, labeled “the missing dynamics”, which warrants attention. Overall, the missing dynamics cluster in this bibliometric analysis offers originality and further research suggestions. By continuing to explore the process-oriented views of the entrepreneurial mindset, new value opportunities can be created, while the missing dynamics can be better understood.

Keywords: entrepreneurial mindset; entrepreneurship; innovation; bibliometric analysis; the missing dynamics



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1. Introduction

The entrepreneurial mindset is an integral part of an entrepreneur’s role in entrepreneurial endeavors, business development, and innovation. [Ratten \(2023\)](#) offers a process-oriented definition of entrepreneurship and explains that the phenomenon is about identifying business-related opportunities by the entrepreneur or business owner through processes of new, existing, or recombined resources by being creative and innovative. It is also noted by [Nakajima and Sekiguchi \(2025\)](#) that entrepreneurs are involved in an ongoing process that surrounds their business development. Hence, there is an interplay between entrepreneurship and innovation with an individual element connected to actions and decision-making in the operationalization of the business. The relationship between process-oriented entrepreneurship and the entrepreneur’s role as an innovator was outlined earlier by [Schumpeter \(1942\)](#), where the author’s creative destruction is a process of activities connecting entrepreneurship and innovation, which affects the social and economic spheres of the market and the individual entrepreneur. The aforementioned entrepreneurial endeavors are related to business cycles, in which shorter and longer waves of business cycles occur and include temporal or spatial perspectives. [Schumpeter \(1939\)](#) explained that the entrepreneur’s role as an innovator is to see, feel, and take into

account opportunities that might arise during the business cycle activities that connect entrepreneurship and innovation.

The process-oriented view of [Ratten \(2023\)](#) was also promoted by other researchers, such as [Chiles et al. \(2017\)](#), [Elia et al. \(2020\)](#), [Frese and Gielnik \(2023\)](#), [Goldsby et al. \(2024\)](#), [Nakajima and Sekiguchi \(2025\)](#), and [Nambisan \(2017\)](#), underlining the importance of organizational transformation, product and service development, business planning, psychology, growth, entrepreneurial actors, strategies, interactions and flows, along with the dynamic processes of entrepreneurship. Creativity and innovation are integral parts of entrepreneurship, as noted above, where it is further explained by [Castellacci \(2023\)](#) that innovation promotes and enables social welfare, while organizational and technological changes can develop and create opportunities that can improve human life. Thus, the authors posit that entrepreneurship is a process where different actions are undertaken over time by the entrepreneur, enabling the identification of opportunities that involve elements of innovation and creativity in entrepreneurship.

The entrepreneurial mindset phenomenon is a contemporary theme that has garnered attention in the academic fields of entrepreneurship and innovation during the last couple of decades, where scholars and stakeholders from different academic, business, and industry sectors have shown interest in the topic. The term “entrepreneurial mindset”, on the other hand, lacks a unified understanding and definition where a consensus exists among scholars ([Lynch & Corbett, 2023](#); [Mawson et al., 2023](#); [McLarty et al., 2023](#)). [Kuratko et al. \(2021\)](#) explain that the entrepreneurial mindset has been studied from different research perspectives in recent years by utilizing entrepreneurship, innovation, or other academic fields, which has led to heterogeneous definitions of the term. Thus, different scholarly backgrounds have attempted to understand the phenomenon from their own epistemological perspectives and rationales, where the initial problematization surrounding the phenomenon of the entrepreneurial mindset is the different definitions and viewpoints that exist and interplay across various academic fields.

From the latter definitions, it can be noted that [Daspit et al. \(2023\)](#) and [McLarty et al. \(2023\)](#) consider the entrepreneurial mindset a cognitive perspective that can lead to value creation by the entrepreneur recognizing, identifying, and acting on opportunities. Moreover, [Pidduck et al. \(2023\)](#) focus on beliefs, where dispositional and opportunity beliefs interplay with each other. [Kuratko et al. \(2021\)](#) use perspectives to explain the entrepreneurial mindset, where the authors underline three key perspectives that interplay, namely the cognitive, behavioral, and emotional aspects that the entrepreneur acts upon and engages in when opportunities arise. Subsequently, the abovementioned definitions of the entrepreneurial mindset can be reconnected to the entrepreneur’s role of seeing, feeling, and taking account of the opportunities that might arise during entrepreneurial endeavors, as noted by [Schumpeter \(1939\)](#), whereas different terminologies and nomenclature are used and have been developed over time. Earlier definitions can be found in studies by [McGrath and MacMillan \(2000\)](#), [McMullen and Kier \(2016\)](#), and [Shepherd et al. \(2010\)](#), where the authors focus their respective definitions on the ability or abilities of the entrepreneur and the willingness to identify, mobilize, act, sense, and exploit opportunities. Ultimately, the entrepreneurial mindset is viewed as a set of skills of static or fixed antecedents used by the entrepreneur to identify and capitalize on opportunities whilst conducting business. The understanding of the entrepreneurial mindset has developed over decades and still leaves room for exploring today’s challenges that involve technological innovations, resources, and external relations, which the entrepreneur should capitalize on.

The nexus of process-oriented entrepreneurship, which aims to identify opportunities, contrasts with the static entrepreneurial mindset, along with its perspectives and abilities, for the identification of opportunities by the entrepreneur to enable different

outcomes. These do not align, as noted in the problematization above, and offer a research gap that demands further attention. Suggestions for future research also underline this interception, as [Kuratko et al. \(2021\)](#) highlighted the need to probe into the cognitive, behavioral, and emotional aspects, along with the influences and factors that contribute to shaping the entrepreneurial mindset in different contextual settings. [McLarty et al. \(2023\)](#) add that the present outlooks, knowledge, and conditions regarding the entrepreneurial mindset—and how it is growing, developed, and maintained—can impact and affect vital economic considerations and outcomes in the long run. Ultimately, [Daspit et al. \(2023\)](#) also outline different research avenues, where the authors take on a broader approach to the entrepreneurial mindset and explain that future research can include process-focused, configurational, methodological, and multidisciplinary opportunities. Hence, several calls have recently been made for further advanced studies regarding the entrepreneurial mindset, focusing on the phenomenon in itself and the processes, operationalizations, contexts, dynamics, and opportunities surrounding the entrepreneur's role.

By addressing the current research gap and problematization surrounding the entrepreneurial mindset, this study advances the established knowledge and maintains that future research regarding the entrepreneurial mindset should incorporate the phenomenon with its antecedents and outcomes along with the fluid circumstances and processes in which the entrepreneur finds themselves. The purpose of this bibliometric analysis is based on the abovementioned argumentation to explore the novelty surrounding the entrepreneurial mindset, offering new insights on a macro level, where the following three research questions are used in this study:

RQ1: What skill sets are needed for the entrepreneurial mindset?

RQ2: How is the entrepreneurial mindset practically operationalized?

RQ3: Where can opportunities be identified with the entrepreneurial mindset?

In order to answer the three research questions, there is a need to understand the fundamental components surrounding the theoretical framework of the entrepreneurial mindset, which is presented in the following section. Firstly, this is performed by outlining what skill sets are of importance for the entrepreneurial mindset, where the focus is on the antecedents that the entrepreneur needs to access, obtain, or acquire. Secondly, by moving from the traditional static approach of the entrepreneurial mindset to a more process-oriented view, it is imperative to recognize how the entrepreneurial mindset is practically operationalized during the entrepreneurial processes when the entrepreneur moves between antecedents and outcomes. Lastly, it is necessary to understand where opportunities can be identified from the actions of the entrepreneurial mindset, which contains different outcomes for the entrepreneur that can lead to value creation.

This study undertakes a bibliometric analysis of the entrepreneurial mindset to answer the three research questions, address the current research gap, and advance the current research frontier. This approach can offer an added spectrum of nuances regarding what is known, which novelty can be identified, and how it can contribute to the academic field. Earlier research has been oriented towards different types of reviews on the micro and meso levels, mainly literature reviews that can be found in [Daspit et al. \(2023\)](#) but also previously in [Larsen \(2022\)](#) and [Naumann \(2017\)](#). Hence, less attention has been given to bibliometric review types, which opens the possibility of conducting this type of research on a macro level. Subsequently, this bibliometric analysis offers a new approach on a different aggregate level than earlier reviews to synthesize the established knowledge base.

The introduction to this study will be followed by a theoretical outline of the entrepreneurial mindset, a section containing the methodological approach, and then the findings. The research paper ends with a discussion, implications, and suggestions for future research.

2. Entrepreneurial Mindset

The theoretical framework is a three-fold overview divided into antecedents, processes, and outcomes of the entrepreneurial mindset. Each part of the theoretical framework aligns with the respective research questions, and this setup continues through the following sections.

2.1. Antecedents

The skill sets needed for the entrepreneurial mindset can be outlined as antecedents that the entrepreneur accesses, obtains, or acquires over time during the development of the business. [Daspit et al. \(2023\)](#) explain that antecedents can be divided into different parts, which affects the entrepreneurial mindset, highlighting individual, environment, group, and venture antecedents that interplay with each other and aid the entrepreneur. The respective part of the antecedents consists of different elements, in which the individual part contains the most elements, whereas [Daspit et al. \(2023\)](#) include personality, disposition, genetic traits, metacognition, experience, self-efficacy, and self-exploration as integrated elements in the individual part of the antecedents. Subsequently, the individual part of the antecedents interplay with the elements in the environment, group, and venture parts to comprise the antecedents for the entrepreneurial mindset ([Daspit et al., 2023](#)). Moreover, [Goldsby et al. \(2024\)](#) also relate the entrepreneurial mindset to entrepreneurial activity and link it to antecedents of support, rewards, time, autonomy, and organizational boundaries, indicating the alignment of entrepreneurship and the entrepreneurial mindset. Hence, it is noted that antecedents play a vital role in the early stages of the entrepreneurial mindset and are necessary for entrepreneurship to thrive.

Another possibility for viewing the entrepreneurial mindset and its skill sets is presented by [Kuratko et al. \(2021\)](#), where the authors explain that three key perspectives interact with each other. The interaction is between cognitive, behavioral, and emotional aspects and visualized as a triad ([Kuratko et al., 2021](#)). The cognitive aspect is linked to thinking, whilst the behavioral aspect is attached to acting, and the emotional aspect is connected to the feeling of the entrepreneur ([Kuratko et al., 2021](#)). Hence, there are similarities to the historical views of [Schumpeter \(1939\)](#) on the entrepreneur's role, where the author underlines seeing, feeling, and taking account of opportunities during entrepreneurial endeavors, business creation, and innovation. The entrepreneurial mindset triad is not weighted, measured, or assessed, where one of the aforementioned aspects has a higher or lower impact than the other. Instead, the authors strike a balance between the three key perspectives with an interplay that is a part of the skill sets ([Kuratko et al., 2021](#)). Subsequently, there is a lack of quantitative or qualitative measurement or assessment methods within the entrepreneurial mindset triad's cognitive, behavioral, and emotional aspects. Similarly, [Morris and Tucker \(2023\)](#) utilize the thinking, acting, and feeling of the entrepreneur to conceptualize the entrepreneurial mindset without the use of the aforementioned triad, instead focusing on influences, processing, and orientation, which indicates there is a dynamic or flexible approach to the antecedents of the entrepreneurial mindset. Moreover, a theory-based approach to antecedents of the entrepreneurial mindset is presented by [Kwapisz et al. \(2024\)](#), and [Larsen and Neergaard \(2024\)](#), where the authors focus on empathy, attitude, growth, self-efficacy, self-regulation, passion, control and goals, which comprise attributes that the entrepreneur or business owner can utilize during entrepreneurial endeavors and business creation.

Furthermore, based on the three key perspectives of the antecedents, [Daspit et al. \(2023\)](#), [Mawson et al. \(2023\)](#), and [McLarty et al. \(2023\)](#) place more emphasis on the cognitive aspect as an important part of the entrepreneurial mindset. They explain that the cognitive aspect enables value creation where the individual, such as the entrepreneur or business

owner, acts upon opportunities while making decisions and remaining adaptable in complex situations (Daspit et al., 2023; Mawson et al., 2023; McLarty et al., 2023). Moreover, Barth et al. (2017) also emphasize circumstances where the entrepreneur, manager, or business owner, with their attitudes to innovation and change, leads to value intentions at an early stage of the entrepreneurial endeavor, which also incorporates sustainability aspects and business models. The aforementioned intentions are also underlined by Akbari et al. (2024), Pinto et al. (2024), Seoke et al. (2024), and Zemlyak et al. (2022) regarding intentions, self-esteem, self-efficacy, orientation, and motivations for starting a sustainable business where the focus is on education, risk-taking, creativity and innovativeness. Similarly, motivations, problem-solving and exposures concerning business performance are also highlighted by Achi (2024), De la Gala-Velasquez et al. (2024), and Santhosha Shetty et al. (2024), who explain that positions involving trainees, students, and directors in the early stages of business development can thrive with an entrepreneurial mindset. McLarty et al. (2023) explain and emphasize that the cognitive process and the willingness of the entrepreneur to act on opportunities are needed for the entrepreneurial mindset. Hence, more weight is placed on the entrepreneur's cognition and the entrepreneurial process, which differs from the earlier argumentation, where a static interplay between different aspects is used instead, without any quantitative or qualitative measurements or assessments. Pidduck et al. (2023) explain that the entrepreneurial mindset contains antecedents in the form of dispositional beliefs along with opportunity beliefs that interact. The authors give attention to the individual, such as the entrepreneur or business owner, and various dimensions of value beliefs that are connected to innovativeness, proactiveness, autonomy, risk-taking, and competitiveness (Pidduck et al., 2023). Subsequently, this outlook differs from earlier argumentations where weight is put into certain skill sets whilst other perspectives have been given less or no attention.

From earlier influences that have shaped the current knowledge base of the entrepreneurial mindset, a more heterogeneous view is stressed by McGrath and MacMillan (2000), McMullen and Kier (2016), and Shepherd et al. (2010), where the authors explain that the ability or abilities of the entrepreneur are part of the skill sets needed for the entrepreneurial mindset. Shepherd et al. (2010) also underline that the entrepreneurial mindset demands the entrepreneur's willingness to act and make decisions. On the other hand, Ciarli et al. (2021) add that set of skills are necessary for inclusion and structural changes where several factors, such as innovation, actors and interactions, play an important role on different structural levels, which affects not only the individual entrepreneur but also the meso and macro level of the entrepreneurship. These skill sets are part of the antecedents needed for the entrepreneurial mindset and partially align with each other, but they also show discrepancies, heterogeneous definitions, and a lack of consensus between the authors and their research on the topic.

Even if the entrepreneurial mindset has garnered scholarly attention during the last couple of decades, the roots can be traced back to studies and research within the fields of both entrepreneurship and innovation sciences, where individual and organizational advancements and developments can not only lead to success in the modern economy but also to solutions for future challenges which involve sustainability, policies, and welfare (Achi, 2024; Ávila-Robinson et al., 2022; Kuratko et al., 2021; Martin, 2016; Schumpeter, 1942). Hence, the entrepreneurship and innovation factors add dimensions to the entrepreneurial mindset, where the individual entrepreneur is part of an organizational context, whereas different innovations can diffuse so both incremental and disruptive technologies can lead to new opportunities for value creation.

2.2. Processes

The entrepreneurial mindset is outlined as static, where antecedents lead to an outcome, whereas less attention is given to the operationalization and processes that are integrated into the phenomenon. Linear or singular progressions of the entrepreneurial mindset are outlined and exemplified by [Daspit et al. \(2023\)](#), [Kuratko et al. \(2021\)](#), and [McLarty et al. \(2023\)](#). A presentation of moderators that intercept the entrepreneurial mindset after the antecedents but before the outcomes is noted by [Daspit et al. \(2023\)](#) in their linear progression. These moderators are based on triggering events, regulatory focus, degree of environmental dynamism, combinatorial effects, and sociocultural influences, which indicate that there is a process orientation that surrounds the entrepreneurial mindset, where the authors add that only some of the aforementioned moderators are highlighted, creating boundaries for the entrepreneurial mindset ([Daspit et al., 2023](#)). Moreover, [Daspit et al. \(2023\)](#) underline the need for future research on moderators' effects on the entrepreneurial mindset, indicating a need to further advance the knowledge surrounding the operationalization and processes of the phenomenon, which can enable novel understandings that are more iterative or circular. Notably, [Frese and Gielnik \(2023\)](#) also emphasize the psychological aspect of entrepreneurship, with a focus on cognition, motivation, and emotion, where the authors acknowledge antecedents and outcomes that are derived from the actions of the entrepreneur but stress that processes are an integral part of the decision-making. Moreover, this is connected to a temporal perspective and linked to innovation, business opportunity development, growth, and organizational structure, which the entrepreneur has to navigate through ([Frese & Gielnik, 2023](#)).

An attempt for a process-focused approach has been outlined by [Pidduck et al. \(2023\)](#). Instead of a linear or singular progression, the authors focus on the circularity and feedback loop of the entrepreneurial mindset. [Pidduck et al. \(2023\)](#) explain that flows and processes of the entrepreneurial mindset are constituted by antecedents that interplay with each other and an outcome that is reconnected to the antecedents, which enables circularity or a feedback loop. Hence, the process-focused approach differs from earlier argumentation, with more focus on circularity and feedback loops and less on linear or singular progressions. In comparison to [Daspit et al. \(2023\)](#), there are no interceptions from moderators or external factors, but instead, there are different dimensions within the processes. Subsequently and noticeably, the difference is not only in linear or singular progressions versus circularity and feedback loops but also in internal or external factors that affect the entrepreneurial mindset. However, for future research surrounding the entrepreneurial mindset, [Pidduck et al. \(2023\)](#) highlight several possibilities, such as belief origins, internal moderators, external moderators, and outcomes, which indicate that a clear picture of the entrepreneurial mindset is not yet established. Moreover, [Lynch and Corbett \(2023\)](#) add that cycles are part of elaborating and implementing the entrepreneurial mindset where new opportunities are capitalized on within an iterative process. This can further be reconnected to the business cycles where innovative activities and entrepreneurial endeavors can lead to creative destruction which affects the social and economic spheres of the market, as well as the entrepreneur, where the shortest wave is about three years long and can provide effects seen on markets and individuals ([Schumpeter, 1939, 1942](#)). Hence, explanations based on iterations, circularity, or feedback loops contrast and differentiate explanations based on linear or singular progressions of the entrepreneurial mindset and demand further attention and understanding.

Other views of the entrepreneurial mindset have little or no attention given to processes. [McLarty et al. \(2023\)](#) do not offer a clear process orientation, but the authors highlight that a need for future research lies in the exploration of the processes surrounding the entrepreneurial mindset. On the other hand, the authors underline that there is a cogni-

tive process that can lead to the individual entrepreneur's willingness to act on different opportunities that might arise to solve entrepreneurial undertakings and tasks (McLarty et al., 2023). Similarly to the previous argumentation, Kuratko et al. (2021) do not offer any process or operationalization to the entrepreneurial mindset triad, which consists of three perspectives: the cognitive, behavioral, and emotional aspects of the entrepreneurial mindset, where the progression is singular and fixed. However, the authors use processes as an integrated part of the perspectives and explain that the entrepreneurial mindset is a dynamic process and contains creation, change, and vision to recognize, identify, and act on opportunities (Kuratko et al., 2021). As noted above, the mentioned views of the processes surrounding the entrepreneurial mindset, as external, internal, or integrated, leave an unclear picture of the entrepreneurial mindset where consensus and agreement have not yet been reached on this matter in the academic field.

Earlier research on the entrepreneurial mindset has given less attention to the processes, but some perspectives should be highlighted, such as action-taking, uncertainty, and the psychology of individuals, which indicate the heterogeneity of the phenomenon (McGrath & MacMillan, 2000; McMullen & Kier, 2016; Shepherd et al., 2010). McGrath and MacMillan (2000) explain that the individual entrepreneur needs to be able to act in situations or contexts that are highly uncertain. Hence, the focus is on the highly uncertain situations that operationalize the antecedents and outcomes into the entrepreneurial mindset. Other views are more static or fixed in explaining that the action taken is performed at one point in time by the individual, with less focus on the context, organization, or situation in which the entrepreneurs find themselves (McMullen & Kier, 2016; Shepherd et al., 2010). This deviates from the process-oriented view of entrepreneurship that Ratten (2023) outlines and emphasizes the current diversity surrounding the entrepreneurial mindset, which could align more with the current and contemporary view of entrepreneurship.

Both Ávila-Robinson et al. (2022) and Martin (2016) have recently given attention to the processes by which entrepreneurship and innovation intertwine due to the individual entrepreneur or business owner playing a key role in these processes. Subsequently, the entrepreneurial mindset needs a new theoretical lens that enables and encapsulates a current and contemporary alignment to the entrepreneurial endeavors and innovative activities in which the entrepreneur works with or towards different processes (Chiles et al., 2017; Elia et al., 2020; Nambisan, 2017). By focusing on current and contemporary alignment, understanding the operationalization of the entrepreneurial mindset can enable new value opportunities involving technological innovations, resources, and external relations, which can lead to value creation and a nuanced knowledge of the entrepreneur's role in business development.

2.3. Outcomes

Different opportunities can be identified and capitalized on by the entrepreneur with an entrepreneurial mindset, which can lead to a variety of outcomes with value creation for the business. Daspit et al. (2023) explain that the outcomes from the entrepreneurial mindset can be divided into parts that consist of the individual, venture, and group, which in turn have different elements and can be reconnected to the antecedents. The venture part has the most elements and includes financial performance, orientations, leadership and culture, competitive advantage, resource management, startup decisions, and strategy (Daspit et al., 2023). Notably, in the antecedents, the individual part has the most elements, while in the outcomes, the venture part has more elements attached to it, according to Daspit et al. (2023), where another difference can be found in that the environment part from the antecedents is removed and not in the outcomes at all. Hence, there is a possibility of advancing the knowledge base by paying attention to environmental sustainability,

which can add more value to the outcomes of the entrepreneurial mindset and offer novelty to the phenomenon. Similarly, [Patricio and Ferreira \(2024\)](#) also emphasize the outcomes of the entrepreneurial mindset, which is connected to entrepreneurial activity, where the authors underline the life cycles of the business, that is leading to social and economic development, which can be compared to [Schumpeter's \(1939\)](#) views of business cycles and the entrepreneur's role.

Instead of a linear or singular progression from the antecedents to the outcomes, [Pidduck et al. \(2023\)](#) demonstrate a circular view of the entrepreneurial mindset. The authors explain that entrepreneurial behavior is the outcome of the entrepreneurial mindset, but instead of the process ending there, a feedback loop is created, which returns to the antecedents ([Pidduck et al., 2023](#)). Similarly, [Cui and Bell \(2022\)](#) explain how entrepreneurial behavior is connected to entrepreneurial education activities and entrepreneurial intention, where a feedback loop is once again used in their example. Moreover, [Pidduck et al. \(2023\)](#) use fewer parts and elements in their explanation of the entrepreneurial mindset but explain it as a schema that is opportunity-based and dispositional, which stimulates the goal-oriented entrepreneurial behavior of the entrepreneur. [Pidduck et al. \(2023\)](#) use the same dimensions, which are outlined above in the antecedents throughout and have more focus on soft or qualitative measures and values, in comparison to [Daspit et al. \(2023\)](#), who instead emphasize hard measures and values that enable quantitative approaches and evaluations, even if there is a modest amount or lack of such assessments surrounding the entrepreneurial mindset. Hence, the similarities that can be found in the antecedents of the theoretical framework become more stratified and diverse when highlighting the outcomes of the entrepreneurial mindset, where possibilities exist to understand the phenomenon further with quantitative or qualitative measurements or assessments.

Less focus is placed on the outcomes by [Kuratko et al. \(2021\)](#), where the authors explain that adaptable and flexible cognitions of the entrepreneurial mindset are important and relevant to achieving desirable outcomes. Subsequently, [Kuratko et al. \(2021\)](#) add a well-being element to the discourse and explain the importance and value of physical activity to relieve and alleviate stress, which is associated with entrepreneurial activity, but also underline the importance of the context or milieu in which the entrepreneurs find themselves. The context, or environment of the individual, and its connection to emotions and well-being are also underlined by [Mawson et al. \(2023\)](#), and [Binder and Blankenberg \(2017\)](#), who explain that behavior is connected to factors such as the green economy and sustainability, which can be reconnected and compared to [Daspit et al. \(2023\)](#), who left out the environment part in the outcomes of the entrepreneurial mindset. Hence, even among the outcomes of the entrepreneurial mindset, there are contradictions and a lack of alignment between different scholarly views and academic fields. Moreover, [McLarty et al. \(2023\)](#) give attention to the cognitive aspect of the entrepreneurial mindset in the antecedents, but similarly to [Kuratko et al. \(2021\)](#), less focus is on the outcomes. Hence, the explanations are mainly oriented towards what the entrepreneur has for skill sets to identify opportunities and act on them, but what the result or value is from this process in quantitative or qualitative assessments or measures remains less known and underexplored, which demands further attention.

Earlier research on the entrepreneurial mindset has focused on identifying and exploiting opportunities, but the outcomes are less explained, where value creation is one of the possibilities ([McMullen & Kier, 2016](#); [Shepherd et al., 2010](#)). [Ireland et al. \(2003\)](#) explain that the outcomes can be in the promotion of continuous innovation, renewal, creativity, and flexibility, which is attached to the individual entrepreneur or business owner. However, as noted above, the focus lies on the skill sets on which the entrepreneurial mindset is developed and less on what the actual outcomes and value creation are from the oppor-

tunities identified by the entrepreneur, which underlines the heterogeneous views on the phenomenon of the entrepreneurial mindset.

Continuing the argumentation of the entrepreneurial mindset as an integral part of entrepreneurship and innovation, where current economic, environmental and social challenges can be solved in the future by applying new views and ideas, several outcomes can be the result of identified opportunities ([Ávila-Robinson et al., 2022](#); [Kuratko et al., 2021](#); [Martin, 2016](#); [Schumpeter, 1942](#)). Identifying opportunities or even identifying uncaptured value that can lead to new opportunities is integral today in several entrepreneurial endeavors, such as in sustainable business model innovation, which gives attention to the individual entrepreneur but also to the business operationalization ([Osmanovic et al., 2024](#); [Yang et al., 2017](#)). This is something that can further be understood by exploring the processes of the entrepreneurial mindset to identify opportunities or uncaptured value that can turn into constructive outcomes and new value creation for the entrepreneurship.

3. Methodological Approach

The methodological approach in this research paper is a bibliometric analysis, which is based on the guidelines and procedures from [Donthu et al. \(2021\)](#), where inspiration and insight is taken from [Broadus \(1987\)](#), [Kessler \(1963\)](#), [Lim et al. \(2024\)](#), [Perianes-Rodriguez et al. \(2016\)](#), and [Zupic and Čater \(2015\)](#) to answer the three research questions. Due to the three research questions covering a wide range of possibilities and opportunities surrounding the entrepreneurial mindset, a bibliometric analysis offers large quantities of data to summarize and present the current emerging trends and intellectual structure of the research field, according to [Donthu et al. \(2021\)](#), where the authors add that this is an appropriate methodological approach when there is a broad scope to review and where the available data are too vast to manage and review manually. Hence, a macro-level approach to the entrepreneurial mindset, as in this research paper, benefits from the possibilities of bibliometric analysis as a methodological approach. Moreover, [Donthu et al. \(2021\)](#) explain that large data sets, broad scopes, and quantitative analysis with a focus on evaluation and interpretation, as well as qualitative analysis with a focus on interpretation only, are possible with bibliometric analysis.

The toolbox of bibliometric analysis consists of two main techniques, performance analysis and science mapping, as well as an enrichment technique based on network analysis ([Donthu et al., 2021](#)). The performance analysis consists of citation-related metrics, publication-related metrics, and citation-and-publication-related metrics, whilst science mapping consists of bibliographic coupling, citation analysis, co-citation analysis, co-authorship analysis, and co-word analysis, according to [Donthu et al. \(2021\)](#), whereas the network analysis consists of clustering, network metrics, and visualization. Hence, a certain set of possibilities and opportunities for analysis exists that the researcher can navigate through in order to answer the research questions. Moreover, [Lim et al. \(2024\)](#) offer guidelines and directions for the use of techniques for analysis, which have been adopted to be systematic throughout the research in this bibliometric analysis. [Zupic and Čater \(2015\)](#) also add that each technique applied from the arsenal of bibliometrics analysis has its advantages and disadvantages, which the researcher needs to reflect, argue, and decide on.

The procedure of the bibliometrics analysis in this research paper is based on the four steps by [Donthu et al. \(2021\)](#), which are the (i) definition of the aim and scope, (ii) choice of techniques, (iii) collection of data, and (iv) running the bibliometric analysis and report the findings, as visualized in Figure 1. [Donthu et al. \(2021\)](#) explain that the first step is two-fold, where apart from defining the aim and scope, it is also necessary to have a definition that is broad and wide enough to warrant and argue for the practical use of bibliometric analysis in the research. The second step is, as explained above, focusing on choosing appropriate

and suitable techniques based on the defined aim and scope of the research. The third step consists of designing the research terms based on the aim and scope along with selecting databases that are adequate for the bibliometric analysis, which is derived from the first step, according to Donthu et al. (2021), whereas retrieving the data based on the second step and then remove duplicates, errors and clean the data before proceeding. The fourth step is divided into the bibliometric analysis techniques that are previously outlined and lead to the results and curation of a summary of the findings, a discussion, and the research implications (Donthu et al., 2021).

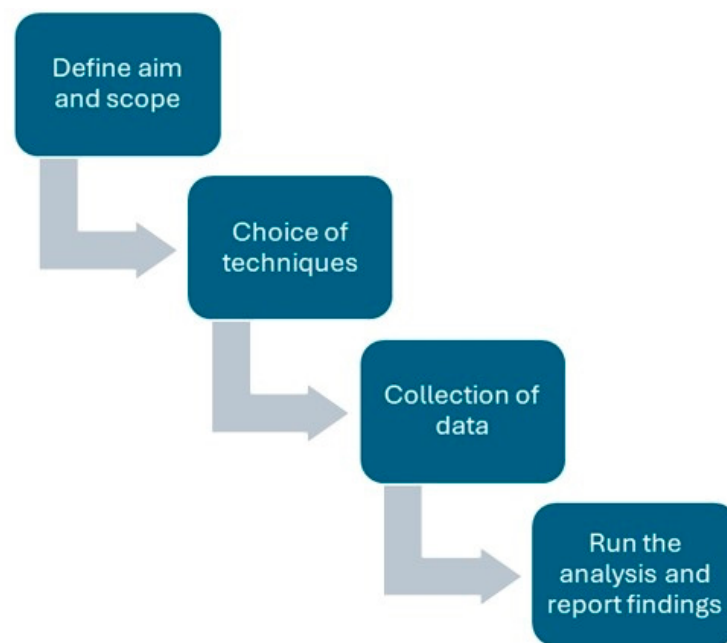


Figure 1. Process for the bibliometric analysis (adapted from Donthu et al., 2021). Source: Author's own creation.

The practical work with the methodological approach started with defining the aim and scope of this bibliometric analysis, which culminated in three separate research questions in accordance with Donthu et al. (2021). Due to the phenomenon of the entrepreneurial mindset being given less attention to the topic on a macro level, as outlined in the earlier sections, there is a research gap that can be further studied and provide novelty to this research paper. Since this research paper has three different research questions, both evaluation and interpretation are needed for the upcoming analysis, where the analysis approach is quantitative to include the broad scope and large database set. Subsequently, the choice of techniques relies on the main technique of science mapping and is complemented with the enrichment technique of network analysis to have a quantitative approach that includes both evaluations and interpretations in the analysis part (Donthu et al., 2021; Lim et al., 2024; Zupic & Čater, 2015). This was followed by the collection of data where databases offered by the university library were used in this research paper with their unique profiles that scan and cover broad types of subject areas, publishers, citations, journal storages, along with general and multidisciplinary types, due to the entrepreneurial mindset being part of various academic fields and disciplines. The profiles of the database search for the collection of data are found in Table 1 below, along with the database name, type of database, date of extraction, search words, and number of hits in each database.

Table 1. The profiles of the bibliometric analysis. Source: Author’s own creation.

Database	Type	Date	Search	Hits
Emerald	Subject area/publisher	6 July 2024	“entrepreneurial mindset”	130
JSTOR	Subject area/journal storage	6 July 2024	“entrepreneurial mindset”	11
Science Direct	Publisher	6 July 2024	“entrepreneurial mindset”	60
Scopus	Citation	6 July 2024	“entrepreneurial mindset”	523
Taylor & Francis	General/multidisciplinary	6 July 2024	“entrepreneurial mindset”	35
Web of Science	Citation	6 July 2024	“entrepreneurial mindset”	283
Wiley	General/multidisciplinary	6 July 2024	“entrepreneurial mindset”	11

Since the entrepreneurial mindset can be found and identified in different academic fields and disciplines, a total of seven databases were chosen and consist of different types that include a vast number of fields of study types and are multidisciplinary. The search words used in each of the databases include the term entrepreneurial mindset, where citation marks were utilized in accordance with the technical options provided by the respective database to center the search on the phenomenon. Moreover, the database search focused on the search words being used in the title, abstract, or keywords since this bibliometric analysis aims for the entrepreneurial mindset to be the primary study object and not a secondary term found in appendices, reference lists, or other texts. Hence, the included studies in this bibliometric had to be academic articles and meet the following three criteria in each case: be peer-reviewed, be written in the English language, and contain the search words. Ultimately, all the previously mentioned inclusion criteria had to be met for the academic articles to be included in the bibliometric analysis. The total number of articles identified in the first search was 1053, and the date of the data extraction was 6 July 2024. After removing duplicates, the final number of articles was 478 in this bibliometric analysis, where the oldest article is from 1991. In the final step, the analysis was run in the software program VOSviewer and will be presented with visualizations in the upcoming section, where the reporting of the findings will be found, in accordance with [Donthu et al. \(2021\)](#) and the guidelines from [Lim et al. \(2024\)](#). Albeit there are other software programs that can be used, as highlighted by [Donthu et al. \(2021\)](#), this research paper relies on VOSviewer due to this methodological approach being used to aid the research with its aim and scope in answering the research questions. Subsequently, from the main and enrichment techniques that were chosen in earlier steps, the bibliometric analysis was centered on and narrowed to network and overlay visualizations to meet the defined aim and scope of the research paper and to answer the research questions. The bibliometric analysis consisted of co-occurrences of words and fractional counting with at least one occurrence, which led to 237 hits and a total of 180 co-occurrences that are visualized below. The benefits of co-occurrences rely on the number of occurrences of the keyword, the link between keywords, the number of times the occurrences happen, the size of the occurrences, and the number of links of the occurrences ([Donthu et al., 2021](#)). Subsequently, the benefits of fractional counting rely on the notion that each action, such as publications or links, is given equal weight in order not to have a single keyword being re-used and given a greater impact in the bibliometric analysis ([Perianes-Rodriguez et al., 2016](#)).

[Donthu et al. \(2021\)](#), [Lim et al. \(2024\)](#), [Perianes-Rodriguez et al. \(2016\)](#), and [Zupic and Čater \(2015\)](#) explain that there are limitations associated with bibliometric analysis which includes the extraction of data since the databases are not solely made for bibliometric analysis, along with limitations found in either having qualitative or quantitative analysis approaches, as well as the forecast from the bibliometric analysis is short term oriented, whereas the researcher ought to be aware of the long term implications changing

and varying while discussing the findings. For the transparency of this research paper, and its reasons for reliability and validity, the author has considered the limitations and presents the shortcomings openly when they occur, which can eventually be addressed in future research.

4. Findings

The findings in the bibliometric analysis are dual and consist of two parts, which will be presented in this section. The first part covers the evaluation of this bibliometric analysis, whilst the second part focuses on the interpretation, which is in accordance with the outlined methodological approach in the former section. Subsequently, the first part will have its foundation in a network analysis whilst the second part will contain an overlay analysis where both the main and enrichment technique is used for the respective parts of the findings.

The bibliometric analysis has keywords that occur in different frequencies and with a heterogeneous profile, which form clusters that can be seen in the following network and overlay analysis. A first indication of the keywords and their occurrences can be found in Table 2, where the keywords with the ten most occurrences are presented and enable an overview of the interplay and setup of the main keywords in this research paper. The term entrepreneurial mindset has the highest number of occurrences, a total of 21, and is followed by the keywords of entrepreneurship and entrepreneurship education with 16 occurrences each, whereas all of the most frequent keywords have at least five occurrences, respectively. A further detailed description of the keywords in this bibliometric analysis is provided below.

Table 2. Keywords and the number of occurrences. Source: Author’s own creation.

Keyword	Occurrences
Entrepreneurial mindset	21
Entrepreneurship	16
Entrepreneurship education	16
Entrepreneurial intention	14
Entrepreneurial self-efficacy	8
Entrepreneurial education	6
Higher education	6
Entrepreneurial passion	5
Students	5
Education	5

The network analysis can be found in Figure 2 below and highlights the co-occurrences of color-coded words that can be sorted into six different clusters. As noted in the evaluation of the visualization, the entrepreneurial mindset is the main cluster in blue color, whereas the other clusters have less attention but can be classified into different keywords and the identification of themes through the interpretation of the visualization. Moreover, some of the clusters dominate certain keywords or themes, whilst others are more stratified with outliers where the keywords and themes are balanced and utilized differently. Hence, from the evaluation of the visualization, there is a heterogeneity in the network analysis that aligns with the entrepreneurial mindset’s theoretical framework, which demands further interpretation of the findings.

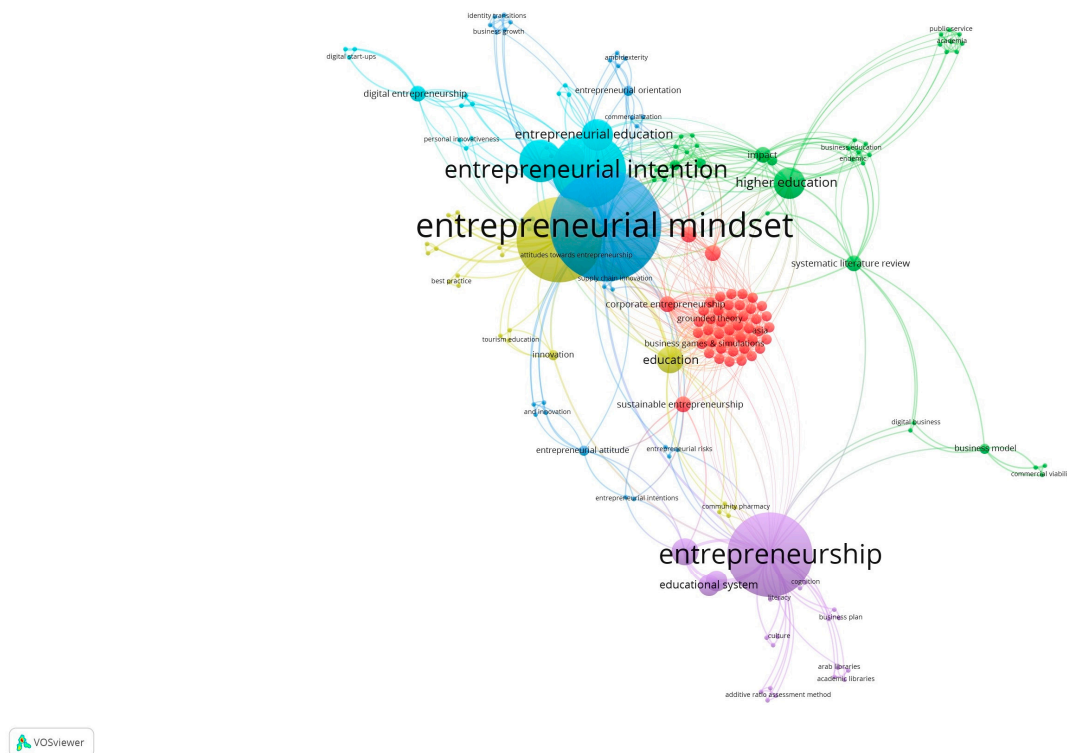


Figure 2. Network analysis. Source: Author's own creation with VOSviewer.

The clustering of the findings in the network analysis is found in Table 3, which includes keywords and identified themes. The core cluster is the entrepreneurial mindset, which is followed by the identified themes of entrepreneurship in purple, entrepreneurship education in yellow, entrepreneurial intention in turquoise, higher education in green, and lastly, a cluster in red labeled “the missing dynamics” in this research paper. The clusters are notably moving from a homogenous collection of keywords within the themes to more variety and assortments, where some of the keywords are found in several clusters whilst others are isolated, new, or outliers in the visualization.







Notably, in the findings, three different keywords connect the entrepreneurial mindset's core cluster with the other clusters, apart from the missing dynamics cluster. The first keyword is innovation, which is found in the entrepreneurship education cluster as well as in the entrepreneurial intention cluster as innovativeness. The second keyword is based on business, including business growth, business plans, and business models, which is found in the core cluster, along with the entrepreneurship and higher education clusters. The final keyword is behavior, which connects the core cluster with the clusters of entrepreneurial intention and higher education.

When focusing on the keywords, the missing dynamics cluster is mainly detached from the other clusters with no direct keyword connections. Moreover, as the clusters become more heterogeneous, the number of keywords also expands and increases quantitatively, including interdisciplinary terms and embedded associations into the already-outlined clusters. Hence, this creates a dynamic in the last cluster where there is a mix of interdisciplinary and embedded keywords, which offers, enables, and highlights another dimension of the entrepreneurial mindset that is less connected to the theoretical framework.

The overlay analysis is found in Figure 3 and focuses on the development and progress of the entrepreneurial mindset during the last years with time scales that are color-coded in navy, green, and yellow and chronologically presented. The time scales are inspired and based on business life cycles by Schumpeter (1939), where the shortest wave is about three years. Hence, the overlay analysis is divided into three stages: an early stage in navy color,

an intermediary stage in green color, and a recent stage in yellow color, where each stage covers three years, which backtracks and aligns with the shortest wave of business cycles.

Table 3. Clustering of networks. Source: Author's own creation.

Cluster	Keywords	Themes
1 	behavior, attitude, orientation, hustle, ambidexterity, performance, identity, innovation, supply chains, business growth	Entrepreneurial mindset
2 	decision-making, cognition, culture, spirit, students, educational system, occupation, investors, business plan	Entrepreneurship
3 	best practice, training, health, innovation, ideation, experimental learning, game-based learning, curriculum analysis	Entrepreneurship education
4 	passion, self-efficacy, start-up, behavior, commercialization, motivation, innovativeness, emerging economies, digitalization, education	Entrepreneurial intention
5 	academia, behavior, impact, digitalization, strategy, pandemic, public service, business models, teaching, management, alumni, inspiration	Higher education
6 	sustainability, corporate, university, hybrid, embedded, economic growth, disturbance, youth, environment, simulations, doubt, perception, games, Asia, Middle East, activities, journey	Missing dynamics

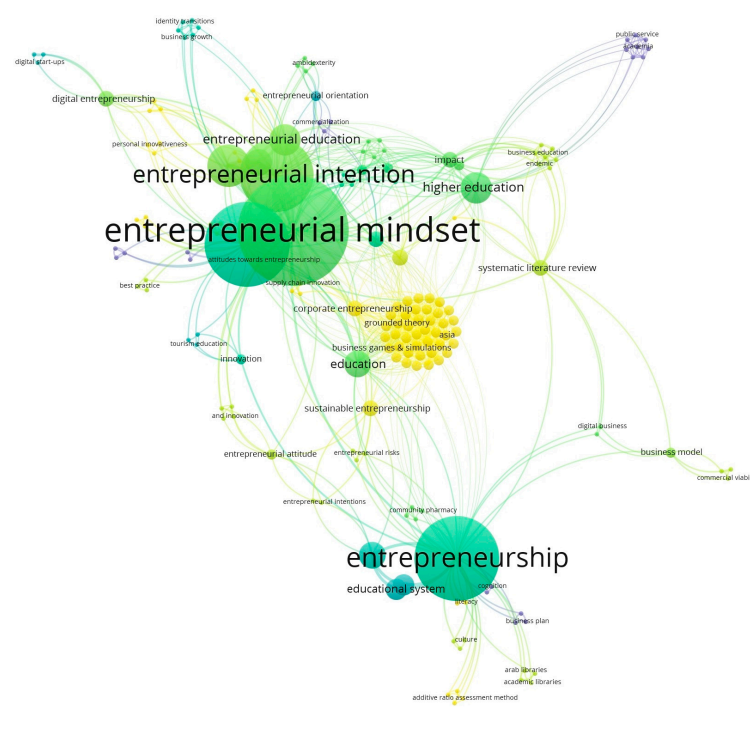


Figure 3. Overlay analysis. Source: Author's own creation with VOSviewer.




The network analysis is used as a foundation and template for the overlay analysis, where the different clusters are colored in a scheme that highlights the time scales of co-occurrences of words that have been conducted and enables a view that incorporates a spectrum of changes and advancements to the phenomenon of the entrepreneurial mindset

during the last years. Hence, the overlay analysis indicates development and progress that has matured over the last years, whereas the core cluster of the entrepreneurial mindset has been the focus of the studies in this bibliometric analysis, and notably, there are only a few co-occurrences that are recent and outliers of the matured clusters.

However, the cluster that has been labeled “the missing dynamics” from the clustering in the network analysis has, in this overlay analysis, an exclusiveness in being new and recent in the studies with fewer connections to the other clusters, as previously noted in the network analysis. Hence, the whole cluster of the missing dynamics has seen its development over the last months from the data extraction and leaves room for even more evaluation and interpretation to further understand and explore the entrepreneurial mindset as a phenomenon, along with opening up new research avenues.

The development and progress during the last years, which have been presented in the overlay analysis, are divided into a time scale to highlight the changes and adaptations to the entrepreneurial mindset, which can be seen in Table 4. The time scale focuses on the early stage of development, the intermediary stage of progress, and the most recent stage, which is the current and contemporary state of the entrepreneurial mindset.

Table 4. Overlay time scale. Source: Author’s own creation.

Early 2016–2018	Intermediary 2019–2021	Recent 2022–2024
Periphery Outliers 	Core Clusters 	Missing dynamics Outliers 

It is noted that the early stages of the development of the entrepreneurial mindset are today in the periphery and mostly outliers to the clusters. This is followed by an intermediary stage, which focuses on the core cluster of the entrepreneurial mindset but also on the clusters of entrepreneurship, entrepreneurship education, entrepreneurial intention, and higher education. The intermediary stage contains most of the clusters in this bibliometric analysis. Lastly, the recent stage is attached to the missing dynamics cluster and outliers to the already-established clusters.

Notably, both the network analysis and the overlay analysis highlight a combination of static or fluid views and approaches of the entrepreneurial mindset, which can be noted on the aggregated macro level that this bibliometric analysis enables. Hence, the findings indicate that the phenomenon of the entrepreneurial mindset has developed and progressed over the years but still leaves room for further exploration and research with a focus on the missing dynamics cluster and the outliers, which are the most recent adaptations and changes to the entrepreneurial mindset and demand additional attention.

5. Discussion

There are several points to be discussed in this section, such as where the findings align with or deviate from the theoretical framework and enable nuances regarding what is known, which novelty can be identified, and how it can contribute to the academic field. The discussion will provide answers to the three research questions in this research paper. Moreover, both novelty but also already established knowledge can be outlined from the findings and add to the current research frontier with new suggestions for future research.

From the findings, it is noted that the cluster of the entrepreneurial mindset aligns with the theoretical framework when it comes to antecedents and outcomes. This is primarily connected in the form of the entrepreneurial mindset triad, where cognitive, behavioral,

and emotional aspects make up skill sets for the antecedents, in accordance with [Kuratko et al. \(2021\)](#). On the other hand, the outcomes are venture and business-oriented, where opportunities can be identified, as noted by [Daspit et al. \(2023\)](#). Moreover, keywords such as innovation, business and behavior connect the entrepreneurial mindset to the other clusters, apart from the missing dynamics, where common ground can be identified and reconnected to the theoretical framework which covers the antecedents and outcomes of various extents ([Goldsby et al., 2024](#); [Kuratko et al., 2021](#); [Pidduck et al., 2023](#)). Hence, the core findings in this bibliometric analysis align with already established knowledge, which is outlined in the theoretical framework section, surrounding the entrepreneurial mindset.

The second cluster of entrepreneurship also aligns with the theoretical framework but is more oriented towards outcomes and processes. The duality of assessments, where [Daspit et al. \(2023\)](#) focus on hard measures and values for the outcomes, which can eventually be quantified, whilst [Pidduck et al. \(2023\)](#) use soft measures and values which are qualitative, whereas both can be identified in the findings and enable opportunities for the entrepreneurial mindset. Moreover, [Ávila-Robinson et al. \(2022\)](#), [Frese and Gielnik \(2023\)](#), [Martin \(2016\)](#), [Nakajima and Sekiguchi \(2025\)](#), and [Ratten \(2023\)](#) have highlighted processes in entrepreneurship and its endeavors, which this cluster also has fragments of and could benefit from further studies. Subsequently, identifying opportunities by the entrepreneur, which the entrepreneurial mindset has as a possible outcome, can be attached to the context or milieu of which entrepreneurship enables and provides to the individual entrepreneur.

The cluster of entrepreneurship education is mostly process-oriented in the findings, where the focus is on several soft measures and values, such as learning, best practice, health, and training, which can be connected to [Pidduck et al. \(2023\)](#) and the circularity and feedback loop that the authors highlight. Hence, the entrepreneurship education cluster aligns with the process-oriented view of entrepreneurship that [Ratten \(2023\)](#) utilizes. However, this cluster also has a well-being and work–life balance approach, which deviates from the current theoretical framework and demands more attention. However, there is an emotional and well-being element in the outcomes of the entrepreneurial mindset and the context of the individual but not concerning processes, which can be further explored ([Binder & Blankenberg, 2017](#); [Kuratko et al., 2021](#); [Mawson et al., 2023](#)). By further exploring the cluster of entrepreneurship education, new perspectives on the entrepreneurial mindset, such as the well-being and work–life balance of the entrepreneur, can be further understood, measured, and explored.

The fourth cluster, entrepreneurial intention, is linked to the antecedents, but the theoretical framework has given less attention to the intentions of the entrepreneur in comparison to other clusters. [Barth et al. \(2017\)](#) have explained that the entrepreneur, manager, or business owner can have value intentions at the early stages of the entrepreneurial endeavor, but this argumentation demands more attention in order to understand the connections to value building blocks, innovation, and attitudes during business developments. Similarly, [Akbari et al. \(2024\)](#), [Pinto et al. \(2024\)](#), [Seoke et al. \(2024\)](#) and [Zemlyak et al. \(2022\)](#) also argue for entrepreneurial intention as a key part of the entrepreneurial mindset when it comes to intentions, self-esteem, self-efficacy and motivations of the entrepreneur or business owner. Both [Daspit et al. \(2023\)](#) and [McLarty et al. \(2023\)](#) have indicated that value creation can be enabled by the individual entrepreneur remaining adaptable in complex situations, which can be further explored in relation to the entrepreneurial intention that the entrepreneur has. Hence, this cluster leaves room for further studies that can be connected to business growth, business plans, and business models, as noted in the findings section regarding keywords that link the clusters.

Moreover, the cluster of higher education is peripheral in the findings and has outliers also that are at the early stage of the time scale, which can be a sign of the cluster having saturated and matured enough and not offering as much value, originality, and novelty as before. This can be reconnected to business life cycles and that the cluster is declining, which can be in favor of other clusters surrounding the entrepreneurial mindset that are emerging (Patricio & Ferreira, 2024; Schumpeter, 1939). However, this cluster has several similarities to the cluster of entrepreneurship education, with its process-oriented alignments, but is more general and static in its orientation and substance. Hence, fragments of a process orientation can be noted, in line with Daspit et al. (2023) and Pidduck et al. (2023), but this cluster has fewer co-occurrences to highlight and could be on the decline, which the overlay analysis also visualizes. Subsequently, the higher education cluster could be of less interest to further study.

The final cluster of this bibliometric analysis, which has been labeled “the missing dynamics”, has few connections to the theoretical framework and cannot be clearly sorted into antecedents, processes, or outcomes of the entrepreneurial mindset. Several keywords that the missing dynamics cluster consists of, such as sustainability, hybrid, youth, doubt, journey, and perception, have little, modest, or no relation to the theoretical framework surrounding the entrepreneurial mindset. However, the keywords can be contextualized and explained with examples such as the level of sustainability changing over time, having a journey that is ongoing or doubt being turned into certainty, which can be connected to processes, but not directly to the views presented amongst the entrepreneurial mindset literature (Daspit et al., 2023; Pidduck et al., 2023). Moreover, this cluster has explicitly grown over the last months before the data extraction in this study and offers many interesting ideas and opportunities for future research, where the novelty identified in this research paper can be further explored and given attention to from different academic fields.

Reconnecting to the three research questions, this bibliometric analysis of the entrepreneurial mindset has provided both validation of what is already established in the academic topic and offered novelty that can be a stepping stone for future research on a topic still emerging. Looking at what skill sets are needed for the entrepreneurial mindset, it is already a close alignment to the already established theoretical framework, but an addition can be found in the entrepreneurial intention. This skill set could create value for the entrepreneur and eventually be integrated with the entrepreneurial mindset and its antecedents. Hence, an integration of entrepreneurial intention into a framework or conceptualization of the entrepreneurial mindset could enhance and utilize the phenomenon.

The second research question, regarding how the entrepreneurial mindset is operationalized practically, offers a dual answer from the findings. Firstly, the theoretical framework gives less attention to the processes of the entrepreneurial mindset, but this bibliometric analysis highlights that processes are an integral part of the entrepreneurial mindset and can be noted in the network analysis, which aligns with views of entrepreneurship by Ratten (2023). Secondly, how the operationalization is practically enabled and achieved is not explained in this bibliometric analysis, but the cluster of the missing dynamics has several process-oriented perspectives that demand more attention, especially as the overlay analysis emphasizes its recent emergence. Hence, the entrepreneurial mindset can be operationalized practically by further exploring the missing dynamics and understanding the interplay of keywords, such as sustainability, hybrid, youth, doubt, journey, and perception, with what is already known regarding the entrepreneurial mindset to advance and expand the current knowledge base. Moreover, there is a possibility to further explore the measurements and assessments of the operationalization to have quantitative or qualitative comparisons or benchmarks.

When it comes to where opportunities can be identified with the entrepreneurial mindset, alignments can be found with the outcomes of the entrepreneurial mindset. However, less novelty is found in this argumentation. Instead, it is possible to underline the importance of practices that can balance entrepreneurship education and higher education, which is part of the entrepreneurial mindset. Subsequently, this bibliometric analysis has a heavy orientation towards the cluster of entrepreneurship, where it is noted that the opportunity identification is mainly in the practical work of the entrepreneur, the entrepreneurial endeavors, and the business or venture. Hence, with its entrepreneurial endeavors, the need for entrepreneurship is key for the entrepreneurial mindset to have a context or milieu in which to exist and thrive for the entrepreneur to identify opportunities and achieve new value creation.

6. Implications

The implications of this bibliometric study are centered on the alignment of the entrepreneurial mindset with processes that can enable value creation for entrepreneurship. As noted previously, [Ratten \(2023\)](#) outlined that entrepreneurship is process-oriented, and having a transition from a static to a more fluid, dynamic, and operationalized entrepreneurial mindset can lead to new opportunities that can be identified by the entrepreneur and, in turn, yield value creation. The bibliometric analysis has aligned with the antecedents of the entrepreneurial mindset, in accordance with [Kuratko et al. \(2021\)](#) and the entrepreneurship mindset triad, but has the possibility to expand further to include intentions, as discussed in the former section, which would align with [Barth et al. \(2017\)](#). Hence, enabling or constructing a concept of moving from a triad to a quadrant of the entrepreneurial mindset could be of interest to observe and explore.

The processes of the entrepreneurial mindset have received scant interest earlier, even though entrepreneurship is a process-oriented field ([Ratten, 2023](#)). This bibliometric analysis underlines that processes are part of the entrepreneurial mindset, whilst there is also a cluster that highlights several process-oriented factors that demand more attention to further advance the research regarding the entrepreneurial mindset. By examining and delving into the operationalizations surrounding phenomena such as sustainability, innovation, work–life balance, or inclusiveness of entrepreneurs, the entrepreneurial mindset has the potential to further develop, progress, and adapt. This can be related to the keywords of innovation, business, and behavior, which connect most clusters and can eventually be transferred to the missing dynamics cluster. The implications surrounding the process-oriented view of the entrepreneurial mindset, as revealed by the findings of this bibliometric analysis, offer the possibility and opportunity to enhance our understanding of the phenomenon of the entrepreneurial mindset.

The outcomes of the entrepreneurial mindset align with the theoretical framework with an emphasis on the practices of entrepreneurship. The bibliometric analysis shows the importance of the entrepreneurial mindset for the outcomes, and this can further be sorted and divided into hard or soft measures, assessments, and values, which aligns with [Daspit et al. \(2023\)](#) and [Pidduck et al. \(2023\)](#) and can offer further research possibilities. Having a context or milieu, which is provided by entrepreneurship, enables the entrepreneurial mindset to thrive and for the entrepreneur to identify opportunities that can lead to new value creation, overcoming challenges surrounding technological innovations, resources, and external relations.

7. Suggestions for Future Research

This bibliometric analysis shows the development, progress, and contemporary state of the entrepreneurial mindset, where new research gaps have emerged that demand more

attention in relation to processes, including keywords such as innovation, business, and behavior. Kuratko et al. (2021) proposed an entrepreneurial mindset triad, which, in combination with the value intentions of the entrepreneur, explained by Barth et al. (2017), can lead to further adjustments to the antecedents of the entrepreneurial mindset.

Another suggestion is to further research the practical implications of outcomes from entrepreneurship, which can be viable through small-scale pilots or case studies, in order to identify opportunities, soft and hard measures, and value creation (Daspit et al., 2023; Pidduck et al., 2023). Subsequently, the main suggestion for future research is to explore the processes of the entrepreneurial mindset, which remains underexplored. This bibliometric analysis presents connections to a cluster labeled “the missing dynamics”, which gained attention in the last few months before data extraction.

Hence, future research could circulate around questions such as what processes are of importance for the entrepreneurial mindset, how they can be assessed or measured, and where they can be capitalized on. The possible answers could further align views of the entrepreneurial mindset with the process-oriented views of entrepreneurship in accordance with Ratten (2023). Ultimately, this bibliometric analysis leaves a spectrum of possibilities and opportunities to further advance research on the entrepreneurial mindset, understand its connection to processes, and unravel the missing dynamics.

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