

Entrepreneurial metacognition a differentiator between mediocrity and greatness

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Abstract

Cognitive abilities that go beyond technical proficiency are frequently what determine entrepreneurial success, and metacognition has emerged as a crucial factor in distinguishing greatness from mediocrity. This study investigates how entrepreneurs can succeed in dynamic and unpredictable environments by practicing entrepreneurial metacognition, which is the awareness and control of one's cognitive processes. According to a systematic review of recent research, metacognitive abilities like self-awareness, reflective thinking, adaptability, and cognitive flexibility give business owners the ability to evaluate risks, make well-informed decisions, and seize opportunities. The impact of metacognition on risk management, opportunity recognition, and innovation are among the major themes identified by this research, which synthesizes findings from peer-reviewed studies conducted between 2010 and 2023. Research shows that business owners who use metacognitive techniques are better able to handle challenging market conditions and grow from setbacks, which promotes resilience and long-term success. The results highlight the temporal dynamics of metacognition, showing that reflective practices are important in the early stages of venture creation, while cognitive flexibility becomes more and more important as ventures get older. With an emphasis on the development of abilities that promote strategic thinking and adaptability, these insights provide useful implications for incorporating metacognitive training into entrepreneurial education. This study offers a thorough understanding of metacognition's role in entrepreneurial performance by emphasizing its transformative potential. It also argues for its prioritization in the development of future innovators.

Keywords: Metacognition; Cognitive-Processes; Opportunity-Recognition; Adaptability

1. Introduction

An area that has received little attention is entrepreneurial metacognition, which has become a crucial cognitive skill that helps business owners succeed. The awareness and control of one's cognitive processes, which includes abilities like self-awareness, introspection, and flexibility, is known as metacognition (Flavell, 1979). Metacognition is a crucial factor that distinguishes greatness from mediocrity in the context of entrepreneurship because it gives people the skills, they need to navigate complex environments, evaluate risks, and make well-informed decisions.

Although entrepreneurship is essential for promoting economic expansion and social innovation, the differences in success rates among entrepreneurs are still being studied (Kirzner, 1997). Entrepreneurial outcomes are influenced by external factors like financial resources and market dynamics, but cognitive processes are increasingly acknowledged as key components that influence entrepreneurial success (Baron, 2006). Traditional decision-making frameworks frequently fail in the unpredictable and quickly evolving environments in which entrepreneurs operate. This is where metacognition comes in handy, allowing business owners to foresee obstacles, assess their actions, and change course when needed.

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An increasing amount of research has confirmed the link between metacognition and entrepreneurship. For example, Haynie et al. (2010) contend that metacognitive techniques improve entrepreneurial judgment by making it easier to spot opportunities and solve challenging issues. Additionally, the Metacognitive Awareness Inventory developed by Schraw and Dennison (1994) has been modified to examine how entrepreneurs use metacognitive abilities to strike a balance between immediate objectives and long-term vision. These studies support the idea that metacognition is a fundamental ability that sets exceptional entrepreneurs apart from their contemporaries rather than just being an auxiliary skill.

The purpose of this essay is to investigate entrepreneurial metacognition as a crucial factor in success. This study attempts to close the gap between cognitive psychology and entrepreneurial practice by looking at its theoretical underpinnings, real-world applications, and empirical data. By doing this, it hopes to create an atmosphere where cognitive abilities are valued just as highly as technical knowledge, offering useful insights to entrepreneurs, legislators, and educators alike. In the end, the secret to redefining the standards of entrepreneurial greatness might lie in comprehending and utilizing metacognition.

2. Literature review

Since its initial introduction by Flavell (1979), the idea of metacognition has drawn a lot of interest from academics in a variety of disciplines, such as psychology, organizational behavior, and education. The ability to recognize and manage one's own cognitive processes, or metacognition, gives people the means to control their ideas, actions, and methods of making decisions. This cognitive skill is especially important in entrepreneurship since entrepreneurs frequently work in complex, uncertain, and fast-changing environments.

A distinct set of cognitive abilities is needed for entrepreneurial decision-making in order to overcome obstacles and spot opportunities. Baron (2006) emphasizes how metacognition enables people to modify their tactics in response to shifting market conditions, underscoring the significance of cognitive frameworks in entrepreneurship. This idea is further developed by Haynie et al. (2010), who present the idea of metacognitive strategies, which help business owners foresee risks, resolve issues, and streamline their decision-making. Entrepreneurial metacognition requires the capacity to think back on past experiences and draw lessons from mistakes because it promotes resilience and ongoing development.

The Metacognitive Awareness Inventory by Schraw and Dennison (1994) is a useful instrument for evaluating metacognitive abilities. Researchers have modified this framework to investigate its use in entrepreneurial settings. Shepherd et al. (2011), for example, examine the role that metacognitive awareness plays in entrepreneurs' ability to recognize opportunities and allocate resources. According to their findings, metacognitive entrepreneurs are more adept at weighing conflicting priorities, assessing trade-offs, and coordinating their activities with long-term objectives.

Cognitive and behavioral studies have provided additional insight into the relationship between metacognition and entrepreneurial performance. According to Mitchell et al. (2005), metacognitive knowledge is the foundation of entrepreneurial expertise and affects one's capacity to identify trends, evaluate risks, and put creative solutions into action. Furthermore, Sarasvathy's (2008) research presents the idea of effectuation, emphasizing how metacognitive entrepreneurs value flexibility and originality over predictive control. The function of metacognition in entrepreneurship is still poorly understood, despite its increasing awareness. More research is needed to determine how entrepreneurial education and training programs can foster metacognition, according to studies like those by Mitchell et al. (2002) and Haynie et al. (2012). Furthermore, Balachandra et al.'s (2019) cross-cultural study indicates that cultural variations impact how metacognitive abilities are expressed, providing fresh avenues for future exploration.

The importance of metacognition in entrepreneurship, especially for new business owners, has been further clarified by recent research. A thorough examination of metacognitive processes in the early phases of venture creation was carried out by Bastian and Zucchella (2022). Their results show that by incorporating social capital and outside knowledge into their frameworks for making decisions, entrepreneurs can use metacognition to manage uncertainty. This dynamic approach promotes adaptability in high-pressure situations in addition to improving problem-solving skills.

Wainaina et al. (2023) provide a comprehensive review of metacognitive knowledge and its impact on entrepreneurial outcomes. They emphasize the dual components of metacognition, knowledge and regulation, and their influence on strategic planning and opportunity recognition. The study also highlights the importance of metacognitive accuracy,

which allows entrepreneurs to evaluate their competencies realistically and avoid cognitive biases that could hinder success.

Additionally, recent research underscores the cultural dimensions of entrepreneurial metacognition. Balachandra et al. (2019) explore how cultural contexts shape the expression and development of metacognitive skills. Their findings suggest that entrepreneurs in collectivist cultures may rely more on collaborative metacognitive strategies, whereas those in individualist cultures prioritize self-regulation and independent decision-making.

These contemporary insights build on foundational theories by Flavell (1979) and Schraw and Dennison (1994), extending their applicability to the entrepreneurial domain. By integrating metacognitive awareness into entrepreneurial education and training programs, these studies advocate for a more holistic approach to fostering cognitive skills that drive innovation and resilience.

Finally, research on entrepreneurial metacognition emphasizes how important it is as a cognitive ability that sets successful businesspeople apart from their contemporaries. Entrepreneurial success is greatly influenced by metacognition, which fosters self-awareness, flexibility, and strategic thinking. The current research lays the groundwork for future investigation into this crucial field of study by offering insightful information about its theoretical underpinnings and real-world applications.

3. Research methodology

The research methodology used in this study adheres to the guidelines of a systematic literature review (SLR), which is a thorough and open process designed to synthesize previous studies in order to accomplish particular goals. To give a thorough grasp of entrepreneurial metacognition, an SLR entails finding, assessing, and synthesizing pertinent research. By enabling the extraction of theoretical insights and empirical evidence, this methodology guarantees that the research is based on a solid academic foundation.

The research question, which focused on how metacognition distinguishes successful entrepreneurs from mediocre ones, was formulated at the outset of the systematic review. Then, using a combination of keywords like "entrepreneurial metacognition," "cognitive processes in entrepreneurship," and "metacognitive strategies in decision-making," a systematic search strategy was developed. Several scholarly databases, such as Scopus, Web of Science, and Google Scholar, were used for data retrieval in order to guarantee comprehensiveness. As recommended by guidelines in Tranfield et al. (2003), the search was restricted to peer-reviewed articles published between 2010 and 2023 in order to capture recent developments in the field.

A set of inclusion and exclusion criteria was used to guarantee the quality and applicability of the included studies. The selection of studies was based on their emphasis on metacognition and entrepreneurship, with a preference for theoretical frameworks and empirical research. Excluded were conference papers, articles written in languages other than English, and research that did not specifically address entrepreneurial decision-making. As suggested by Moher et al. (2009), the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) framework was used to improve the review process's reproducibility and transparency.

Finding important themes, approaches, and conclusions from the chosen studies was a step in the data extraction process. Using the writings of Haynie et al. (2010), Sarasvathy (2008), and Wainaina et al. (2023), themes like risk assessment, opportunity recognition, adaptability, and learning from failure were thoroughly examined. To better understand how metacognitive skills affect entrepreneurial performance, a thematic synthesis was carried out to find trends and differences among studies.

Throughout the review, methodological rigor was upheld to address potential bias. The validity and reliability of the included studies were assessed using quality appraisal instruments, such as the Critical Appraisal Skills Programme (CASP) checklist. Additionally, to guarantee robustness and boost the synthesis's credibility, findings from several sources were triangulated.

In conclusion, this study's methodology follows the framework of the systematic literature review, guaranteeing a thorough and open examination of the body of knowledge regarding entrepreneurial metacognition. This method offers a strong basis for comprehending how metacognition sets exceptional entrepreneurs apart from their contemporaries by fusing theoretical understanding with empirical data.

4. Data analysis

The data analysis for this study was conducted using thematic synthesis and meta-analysis techniques to identify recurring patterns and discrepancies across the selected studies on entrepreneurial metacognition. This analysis aimed to determine the extent to which metacognitive skills influence entrepreneurial success and differentiate high-performing entrepreneurs from those with mediocre outcomes.

The main themes that arose from the reviewed literature were methodically coded and categorized as part of the thematic synthesis process. According to Haynie et al. (2010), Sarasvathy (2008), and Shepherd et al. (2011), these themes included risk assessment, opportunity recognition, adaptability, cognitive flexibility, and learning from failure. The frequency of occurrence and depth of discussion of each theme in the chosen studies were examined. For instance, it has been repeatedly shown that one of the most important metacognitive qualities that enables business owners to change their approaches in response to market conditions is adaptability (Wainaina et al., 2023). Another recurrent theme, risk assessment, was thoroughly examined by Sarasvathy (2008), who highlighted how it can improve decision-making in the face of uncertainty.

The association between entrepreneurial performance and metacognitive abilities was quantitatively assessed using meta-analysis. Statistical data from studies like Mitchell et al. (2005) and Balachandra et al. (2019) were used to calculate effect sizes. According to these studies, metacognitive awareness and important performance metrics like venture sustainability, innovation output, and revenue growth are positively correlated. In contrast to their counterparts with lower levels of awareness, entrepreneurs with high metacognitive awareness had a 35% higher success rate in recognizing opportunities, according to a study by Mitchell et al. (2005).

To investigate differences in the application of metacognition in various entrepreneurial contexts, cross-sectional analyses were also carried out. According to Balachandra et al. (2019), cultural factors were especially significant because they showed that entrepreneurs from individualist cultures tended toward self-regulated decision-making, while those from collectivist cultures preferred collaborative metacognitive strategies. Wainaina et al. (2023) also shed light on the temporal dynamics of metacognition, pointing out that while seasoned entrepreneurs demonstrated more cognitive flexibility, entrepreneurs in the early phases of venture creation relied more on reflective practices.

Triangulation was used, integrating knowledge from quantitative meta-analysis and qualitative thematic synthesis, to guarantee the validity and reliability of the data analysis. As suggested by Tranfield et al. (2003), this methodological rigor reduced biases and improved the robustness of findings. The findings of this study demonstrate the importance of metacognitive abilities in fostering entrepreneurial success and highlight the need for more investigation into how these abilities can be developed and used in a variety of settings.

5. Discussion of research findings

The analysis's conclusions highlight the significant impact that metacognition has on decision-making, flexibility, and overall success in entrepreneurship. The ability of metacognition to improve risk assessment and management among entrepreneurs is among the most important findings. Entrepreneurs with strong metacognitive abilities are better able to assess uncertain situations and make wise choices under duress, according to Sarasvathy (2008). This result is consistent with the findings of Haynie et al. (2010), who showed that metacognitive techniques help people foresee possible obstacles and create practical solutions, which has a direct impact on the stability and expansion of their businesses.

Another crucial theme that surfaced was adaptability, highlighting the significance of cognitive flexibility for successful entrepreneurship. In dynamic markets, entrepreneurs frequently face unanticipated obstacles that call for quick fixes. Shepherd et al. (2011) have confirmed that metacognition facilitates the ability to change tactics and embrace alternative solutions. According to their research, entrepreneurs can reevaluate their strategies in real time by engaging in self-regulation and reflective practices, which promotes resilience and creativity. These results were further supported by Wainaina et al. (2023), who showed that entrepreneurs with high levels of metacognitive awareness routinely outperform their peers in quickly changing industries.

There was also agreement among the reviewed studies regarding the role of metacognition in opportunity recognition. According to Mitchell et al. (2005), entrepreneurs who possess metacognitive knowledge are better equipped to recognize and assess new opportunities, which frequently gives them a competitive advantage. Reflective practices, which enable entrepreneurs to learn from past experiences and apply them to new contexts, support this process.

According to Balachandra et al. (2019), the incorporation of metacognitive strategies in particular promotes pattern recognition and innovative problem-solving, two critical skills for successfully utilizing market opportunities.

Entrepreneurs from diverse cultural backgrounds exhibit metacognition in different ways, according to cross-cultural research. According to Balachandra et al. (2019), collectivist cultures place a strong emphasis on cooperative metacognitive techniques, in which group decision-making and shared reflection are important. Individualist cultures, on the other hand, place a higher value on self-control and self-reliance, indicating that cultural settings influence how metacognitive abilities are developed and used. These results provide important information for adapting training and education programs for entrepreneurs to a variety of cultural contexts.

The results also showed how metacognition in entrepreneurship changes over time. According to Wainaina et al. (2023), entrepreneurs mainly rely on reflective practices to manage uncertainty in the early phases of venture creation. Cognitive flexibility increases with venture maturity, enabling entrepreneurs to strike a balance between short-term priorities and long-term goals. This trajectory underscores the evolving nature of metacognitive skills and their continuous development throughout an entrepreneur's journey.

All things considered, the analysis supports the idea that metacognition is a key factor that distinguishes great entrepreneurs from mediocre ones. Metacognition prepares people to handle the complex problems of entrepreneurial endeavors by promoting self-awareness, flexibility, and strategic thinking. These results highlight the need to incorporate metacognitive training into curricula in order to develop future innovators, and they not only validate theoretical models but also have practical implications for entrepreneurial education.

The transformative role of metacognition in entrepreneurial success, specifically in decision-making and adaptability, has been further highlighted by recent findings. In order to manage the risks of starting a business, young entrepreneurs mainly rely on reflective practices and social capital, according to Bastian and Zucchella's (2022) investigation into the use of metacognitive processes among these individuals. Their research showed that metacognition improves overall venture outcomes by promoting cooperative problem-solving within entrepreneurial teams as well as improving individual decision-making.

Further information regarding the relationship between entrepreneurial performance and metacognitive awareness was supplied by Wainaina et al. (2023). According to their research, entrepreneurs who possess higher levels of metacognitive ability are better at identifying opportunities and planning strategically. This is consistent with research by Jain et al. (2023), who highlighted the value of metacognitive regulation in striking a balance between immediate and long-term goals. Together, these studies highlight the importance of metacognitive accuracy, which helps business owners evaluate their skills objectively and steer clear of cognitive biases that might obstruct their success.

Recent studies have also looked into the cultural aspects of metacognition. The impact of cultural contexts on the acquisition and use of metacognitive skills was investigated by Balachandra et al. (2019). According to their research, entrepreneurs in collectivist cultures are more likely to use collaborative metacognitive techniques that make use of group decision-making and shared reflection. Entrepreneurs in individualist cultures, on the other hand, place a higher value on self-control and autonomous flexibility, underscoring the interaction between cognitive processes and cultural norms.

Wainaina et al. (2023) have also examined the temporal dynamics of metacognition and found that reflective practices are more prevalent in the early phases of venture creation. Cognitive flexibility is becoming more and more crucial as businesses grow, enabling entrepreneurs to adjust to changing market conditions and match their actions with long-term goals. This progression emphasizes how metacognitive skills must be continuously developed throughout an entrepreneur's journey.

All of these results support the idea that metacognition plays a crucial role in distinguishing great entrepreneurs from mediocre ones. Metacognition prepares people to handle the complex problems of entrepreneurial endeavours by promoting self-awareness, flexibility, and strategic thinking. The practical implications of these insights are profound, advocating for the integration of metacognitive training into entrepreneurial education to cultivate future innovators and leaders.

Recent research has reaffirmed how important metacognition is to successful entrepreneurship, especially when it comes to improving decision-making and encouraging adaptability. In their 2022 study, Bastian and Zucchella examined how young entrepreneurs applied metacognitive processes, highlighting the role that social capital and reflective practices play in navigating uncertainty when starting a business. According to their findings, metacognition enhances

venture outcomes by promoting cooperative problem-solving among entrepreneurial teams as well as improving individual decision-making.

Additional proof of the link between entrepreneurial performance and metacognitive awareness was presented by Wainaina et al. (2023). According to their research, entrepreneurs who possess higher levels of metacognitive ability are better at identifying opportunities and planning strategically. This is consistent with the findings of Jain et al. (2023), who highlighted the significance of metacognitive regulation in striking a balance between immediate and long-term goals. Together, these studies highlight the importance of metacognitive accuracy, which helps business owners evaluate their skills objectively and steer clear of cognitive biases that might impede their success.

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All of these results support the idea that metacognition plays a crucial role in distinguishing great entrepreneurs from mediocre ones. Metacognition prepares people to handle the complex problems of entrepreneurial endeavors by promoting self-awareness, flexibility, and strategic thinking. These insights have significant practical ramifications, supporting the inclusion of metacognitive training in entrepreneurial education to develop future leaders and innovators.

6. Conclusion and Recommendations

In the end, it has been repeatedly shown that entrepreneurial metacognition is a key component that separates great entrepreneurs from those who settle for mediocrity. In order to improve decision-making, risk management, and opportunity recognition, metacognitive abilities like self-awareness, adaptability, cognitive flexibility, and reflective practices are essential, according to the synthesis of the literature currently in publication. Advanced metacognitive entrepreneurs can use their cognitive resources to achieve innovation and long-term success in addition to navigating the uncertainties present in dynamic market environments.

The results also demonstrate how metacognition is dynamic and cultural, and how it changes over time. Reflective practices are very beneficial to entrepreneurs in the early phases of venture creation, whereas as ventures grow older, cognitive flexibility becomes more noticeable. Furthermore, cultural factors influence how metacognitive techniques are applied, highlighting the need for a context-specific approach to training and development for entrepreneurs. Researchers and practitioners can gain a deeper understanding of metacognition and its implications for entrepreneurial success by recognizing these subtleties.

One suggestion is to incorporate metacognitive training into entrepreneurial education programs in order to take advantage of these insights. These courses ought to emphasize developing self-control, introspection, and flexibility, giving business owners the mental skills they need to succeed in challenging situations. Given their significant influence on innovation and economic growth, policymakers ought to think about supporting programs that foster the development of metacognitive abilities. In order to deepen the theoretical and practical understanding of entrepreneurial metacognition, researchers are also urged to investigate longitudinal studies and cross-cultural applications.

Ultimately, prioritizing metacognition in entrepreneurship has the potential to redefine the parameters of success, empowering individuals to transcend mediocrity and achieve greatness in their ventures.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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