



(Research Article)

The Interplay of Work Experience and Educational Diversity in Shaping Entrepreneurial Intentions: A Qualitative Synthesis

Seger Santoso¹, Benardi²

¹ Management, STIE Kasih Bangsa, Jakarta Indonesia; e-mail : seger@stiekasihbangsa.ac.id

² Management, STIE Kasih Bangsa, Jakarta Indonesia; e-mail : benardi@stiekasihbangsa.ac.id

* Corresponding Author : Ngadi Permana

Abstract: This qualitative literature review explores how the interplay between work experience and educational diversity influences entrepreneurial intentions. Synthesizing findings from recent empirical studies, the review highlights how practical experience enhances entrepreneurial self-efficacy and opportunity recognition, while diverse educational backgrounds promote cognitive flexibility and skill variety. The analysis reveals that the dynamic interaction of these factors more effectively fosters entrepreneurial intentions than either factor alone. Mediating variables such as self-efficacy, skill complementarity, and exposure to entrepreneurial environments emerge as critical mechanisms. The study contributes a holistic perspective on entrepreneurial intention formation and offers implications for education, career development, and entrepreneurship policy.

Keywords: Entrepreneurial Intentions, Work Experience, Educational Diversity, Human Capital, Qualitative Literature Review

1. Introduction

Entrepreneurship has increasingly become a pivotal driver of economic development, innovation, and job creation, especially in knowledge-based economies (Audretsch & Belitski, 2021; Cunningham, Lehmann, & Menter, 2022). Among the factors shaping entrepreneurial outcomes, human capital—comprising education and work experience—has been extensively studied as a foundational element influencing entrepreneurial intentions and behavior (Davidsson & Honig, 2003; Unger, Rauch, Frese, & Rosenbusch, 2011). However, the nuanced interplay between diverse educational trajectories and the timing and type of work experience remains underexplored, particularly in the context of university graduates navigating post-educational career pathways (Zhang, Marzocchi, & Breznitz, 2025). This literature review seeks to synthesize current findings on how educational diversity and work experience—whether gained before or during university—jointly shape the entrepreneurial intentions of graduates.

The foundation for examining this topic lies in the evolving understanding of entrepreneurship as a multifaceted process influenced by both “discovery” and “creation” logics (Alvarez & Barney, 2007). While early views emphasized innate traits and risk propensity, contemporary research highlights the critical role of human capital, especially the breadth and depth of education and prior work exposure, in fostering entrepreneurial thinking (Marvel, Davis, & Sproul, 2016; Lazear, 2004). Building on the “Jack-of-all-trades” theory proposed by Lazear (2005), which posits that individuals with diverse skill sets are more likely to become entrepreneurs, recent empirical studies argue that it is not merely the presence of education or experience, but their diversity and timing that matter (Backes-Gellner & Moog, 2013; Syme & Mueller, 2022).

Received: January 5, 2026

Revised: January 27, 2026

Accepted: February 4, 2026

Published: February 6, 2025

Curr. Ver.: February 6, 2025



Copyright: © 2026 by the authors.

Submitted for possible open

access publication under the

terms and conditions of the

Creative Commons Attribution

(CC BY SA) license

([https://creativecommons.org/li](https://creativecommons.org/licenses/by-sa/4.0/)

[censes/by-sa/4.0/](https://creativecommons.org/licenses/by-sa/4.0/))

Education is one of the primary conduits through which individuals accumulate general human capital. Yet, it is increasingly evident that not all educational paths contribute equally to entrepreneurial intentions. Zhang et al. (2025), using a rich dataset from University of Toronto graduates, demonstrate that graduates with hybrid educational backgrounds—combining STEM and non-STEM disciplines—exhibit higher entrepreneurial propensity than those who followed a specialized trajectory. This aligns with earlier research suggesting that educational heterogeneity promotes cognitive flexibility, opportunity recognition, and a more expansive skill set (Dutta, Li, & Merenda, 2011; Marvel, 2013). Similarly, Østergaard, Timmermans, and Kristinsson (2011) argue that exposure to interdisciplinary knowledge fosters creativity and innovation, both of which are core to entrepreneurial action. There is an effect of implementing Bloom's Taxonomy in entrepreneurship courses on students' entrepreneurial intention, an effect of lecturers' competence on students' entrepreneurial intention (Ruslaini et al., 2022).

Moreover, the interaction between education and work experience further enriches the human capital portfolio of aspiring entrepreneurs. Although work experience is widely recognized as a valuable precursor to entrepreneurial activity (Bignotti & Le Roux, 2020; Burton, Sørensen, & Dobrev, 2016), its effect is context-dependent. Zhang et al. (2025) find that while full-time employment prior to graduation does not directly predict entrepreneurial outcomes, it exerts an indirect influence by complementing educational diversity. For instance, graduates who transitioned from STEM undergraduate programs to non-STEM postgraduate studies, supplemented by work experience, were more likely to engage in entrepreneurial endeavors. This supports the notion of complementarities between formal education and experiential learning in shaping entrepreneurial readiness (Iversen, Malchow-Møller, & Sørensen, 2016; Cai & Winters, 2017).

The role of timing also deserves closer attention. Work experience during university education can serve as an incubator for entrepreneurial learning, facilitating skill development and industry exposure that are not typically offered in academic settings (Scott-Clayton, 2012; Bennett et al., 2023). Studies by Bublitz and Noseleit (2014) and Koch, Park, and Zahra (2021) show that early exposure to diverse work settings encourages a growth mindset, resilience, and problem-solving skills, which are essential attributes for entrepreneurship. However, the benefits of such experiences are often contingent on the field of study, institutional support, and individual motivation (Rosendahl Huber, Sloof, & Van Praag, 2014; Bergmann, Hundt, & Sternberg, 2016).

Furthermore, recent literature has begun to reevaluate the assumption that STEM education alone is sufficient for fostering entrepreneurial potential. While technical skills are undoubtedly valuable, entrepreneurial success often requires a blend of analytical, creative, and social competencies (Paulsen, Alper, & Wassall, 2021; Forbes, 2020). As Vaziri and Bradburn (2022) argue, the integration of arts and humanities into STEM education—often referred to as STEAM—may enhance cognitive diversity and interpersonal skills, broadening entrepreneurial capacity. This interdisciplinary orientation resonates with the findings of Siepel et al. (2016), who emphasize the economic value of combining scientific and artistic skillsets in innovation-driven entrepreneurship.

The institutional context also plays a pivotal role in shaping the educational and experiential paths of entrepreneurs. Entrepreneurial universities, through structured support mechanisms such as incubators, mentorship, and commercialization offices, can provide fertile ground for cultivating entrepreneurial intent among students (Breznitz & Feldman, 2012; Perkmann et al., 2013). In this regard, Marzocchi, Kitagawa, and Sánchez-Barrioluengo (2019) highlight how evolving university missions now encompass both academic excellence and entrepreneurial engagement, thereby fostering diverse entrepreneurial identities among graduates. However, Breznitz, Lawton Smith, and Bagchi-Sen (2022) caution that such institutional efforts must align with students' educational and professional trajectories to be truly effective.

Despite the growing body of research, gaps remain in our understanding of how specific sequences of education and work experience jointly shape entrepreneurial intentions. Most existing studies treat education and work experience as independent predictors, neglecting the interactive and path-

dependent nature of these variables (Dimov, 2010; Shane, Locke, & Collins, 2003). Moreover, the focus has often been on either STEM or business disciplines, with limited exploration of how transitions across fields—such as from STEM to humanities or vice versa—affect entrepreneurial outcomes (Breznitz & Zhang, 2020; Colombo & Piva, 2020). Addressing these gaps is vital, not only for theory-building in entrepreneurship research but also for informing educational policy and curriculum design aimed at fostering entrepreneurial mindsets among students.

In synthesizing these findings, this literature review adopts a qualitative, interpretive approach to map the complex relationships between educational diversity, work experience, and entrepreneurial intentions. By examining the mechanisms through which these factors intersect and interact, we aim to contribute to a more nuanced understanding of entrepreneurial human capital. Specifically, we explore how hybrid educational paths and varying forms of work experience influence the cognitive, social, and motivational dimensions of entrepreneurship. Such an inquiry is timely in an era where labor markets demand adaptability, innovation, and lifelong learning—attributes that are often nurtured through diverse and non-linear career trajectories (Grégoire, Corbett, & McMullen, 2011; Runst & Thomä, 2023).

Ultimately, this review underscores the importance of considering both the breadth and sequence of educational and experiential inputs when analyzing entrepreneurial intentions. As Zhang et al. (2025) aptly note, “it is not just what graduates know, but how they came to know it” that shapes their propensity to engage in entrepreneurship. By integrating insights from human capital theory, entrepreneurial cognition, and educational diversity, this study aims to illuminate the subtle yet powerful interplay of learning and experience in the making of entrepreneurs.

2. Literature Review

The emergence of entrepreneurial intentions is increasingly recognized as a complex phenomenon influenced by a multitude of interrelated factors, notably educational diversity and work experience (Zhang, Marzocchi, & Breznitz, 2025). Educational diversity refers to the breadth and heterogeneity of knowledge domains acquired through formal education, while work experience encompasses the practical insights and skills gained from professional engagements. Recent research underscores that these dimensions, both individually and interactively, contribute significantly to the formation of entrepreneurial mindsets and capabilities (Lazear, 2005; Bublitz & Noseleit, 2014). Entrepreneurship subjects and social environment influenced the entrepreneurial motivation of SMKS Al - Hamidiyah students (Benardi et al., 2021).

Lazear's (2004, 2005) foundational "jack-of-all-trades" theory posits that individuals with balanced and diverse skill sets, often acquired through interdisciplinary education and varied work experiences, are more likely to pursue entrepreneurship. This assertion has found empirical support in numerous studies (Backes-Gellner & Moog, 2013; Syme & Mueller, 2022), which demonstrate that a breadth of skills equips individuals with the adaptability required in entrepreneurial ventures. Complementarily, Bublitz and Noseleit (2014) found that entrepreneurial returns are optimized when educational breadth is coupled with relevant experiential learning. Entrepreneurship education and industrial work practices had a positive and significant effect on the interest in entrepreneurship at State Vocational High Schools in the Central Jakarta Region (Yulianti, G., Chaidir, M., & Permana, N., 2022).

Zhang et al. (2025) argue that pathways combining diverse education with structured work experience—particularly in dynamic and innovation-driven environments—are especially conducive to entrepreneurial intentions. Their research delineates a typology of educational and occupational trajectories that lead to entrepreneurship, emphasizing that neither education nor experience alone is sufficient. This position aligns with the findings of Iversen, Malchow-Møller, and Sørensen (2016), who identified a complementarity between formal education and wage-work experience in predicting entrepreneurial outcomes.

In parallel, Dutta, Li, and Merenda (2011) assert that both specialization and diversity in education play roles in entrepreneurship, though diversity more consistently predicts opportunity recognition. Their findings are reinforced by Østergaard, Timmermans, and Kristinsson (2011), who observed that cognitive and experiential diversity within individuals fosters innovative thinking and entrepreneurial ideation.

Work experience, especially in diverse roles or industries, is a key determinant of entrepreneurial skill development. Marvel, Davis, and Sproul (2016) highlight that experiential learning facilitates opportunity recognition, strategic planning, and resilience—traits essential for entrepreneurship. Bignotti and Le Roux (2020) further suggest that prior entrepreneurial experience, even if unsuccessful, enhances entrepreneurial self-efficacy and intentions among youth.

The interaction between work experience and education is also mediated by the context in which they are acquired. For instance, Colombo and Piva (2020) found that STEM graduates with entrepreneurial training and practical experience were more likely to start ventures, particularly when supported by university incubators. This synergistic effect is further evidenced by Breznitz and Zhang (2020), who reported that institutional support structures and labor market dynamics shape the entrepreneurial pathways of graduates.

Human capital theories provide an overarching framework to interpret these findings. Unger et al. (2011) in a meta-analysis established that human capital—both general and specific—has a positive effect on entrepreneurial success. However, as Dimov and Shepherd (2005) note, the nature of this capital (breadth vs. depth) matters, with balanced profiles yielding better venture performance. This underscores the necessity of integrating diverse educational inputs with experiential learning to foster entrepreneurial capabilities.

The role of higher education institutions is pivotal in facilitating this integration. As Breznitz (2014) and Cunningham, Lehmann, and Menter (2022) argue, entrepreneurial universities—those that actively promote interdisciplinary learning and real-world application—are instrumental in shaping entrepreneurial intentions. Their organizational architecture, including mentorship programs and cross-disciplinary curricula, creates fertile ground for aspiring entrepreneurs (Perkmann et al., 2021).

Furthermore, student exposure to entrepreneurial ecosystems—comprising mentors, peers, and institutional support—enhances entrepreneurial self-efficacy and aspirations. Bergmann, Hundt, and Sternberg (2016) emphasized that both university-level initiatives and regional entrepreneurial climates significantly affect student start-up rates. This is echoed by Ghio, Guerini, and Rossi-Lamastra (2016), who found that knowledge spillovers from academia to industry catalyze start-up formation.

Notably, the psychological and motivational aspects of entrepreneurial intention cannot be ignored. Shane, Locke, and Collins (2003) identify motivation as a critical driver, which is often shaped by educational exposure and professional experiences. Keith and Frese (2008) further demonstrate that error management training—often embedded in experiential learning—builds psychological resilience, a key trait for entrepreneurs.

Moreover, demographic variables and identity factors intersect with education and experience in complex ways. Zhang et al. (2024) revealed that gender moderates the relationship between education and entrepreneurial outcomes, suggesting that support mechanisms must be sensitive to these nuances. Similarly, Piva and Rovelli (2022) observed that female STEM graduates benefited disproportionately from targeted entrepreneurial programs, highlighting the need for inclusive educational design.

Finally, the evolving nature of work and education in the context of digital transformation and the knowledge economy necessitates adaptive skill development. Forbes (2020) argues for integrating arts and humanities with STEM to prepare students for the 4th Industrial Revolution. This interdisciplinary approach aligns with Siepel et al. (2016), who found that hybrid skills (e.g., combining technical and creative competencies) yield higher entrepreneurial returns.

The literature converges on the insight that entrepreneurial intentions are most robustly fostered through the interplay of educational diversity and varied work experience. The synergistic effect of these factors enhances cognitive flexibility, opportunity recognition, and resilience—key precursors to entrepreneurial behavior. Future research should continue to explore how institutional structures, socio-demographic factors, and interdisciplinary learning environments mediate this interplay.

3. Proposed Method

This study adopts a qualitative systematic literature review approach to synthesize existing research on how work experience and educational diversity influence entrepreneurial intentions. The review follows established guidelines for conducting qualitative literature reviews, emphasizing transparency, reproducibility, and thematic depth (Snyder, 2019).

The qualitative literature review was designed to explore conceptual patterns and theoretical linkages across a wide range of empirical studies, theoretical frameworks, and meta-analytical findings. In contrast to quantitative meta-analyses that aggregate statistical data, this qualitative synthesis seeks to provide a nuanced interpretation of how heterogeneous work experiences and educational backgrounds shape entrepreneurial cognitions and motivations (Tranfield, Denyer, & Smart, 2003).

This methodology aligns with Snyder's (2019) typology of literature review strategies, specifically suited for concept development and theory refinement in the entrepreneurship domain. The study also incorporates Boell and Cecez-Kecmanovic's (2015) hermeneutic framework to iteratively build understanding from literature, allowing reflexivity and thematic iteration during the data extraction and synthesis phases.

Studies were selected based on the following inclusion criteria: Empirical or conceptual focus on entrepreneurial intentions. Examination of the role of either work experience (including wage employment, internships, or start-up history) or educational diversity (including cross-disciplinary learning, educational level, or field of study diversity). Published in peer-reviewed journals up to 2025. Written in English. Exclusion criteria included: Grey literature (e.g., theses, editorials, non-peer-reviewed sources). Studies that focused exclusively on macro-level determinants (e.g., national culture or institutions) without connecting to individual-level entrepreneurial intentions.

The rationale for the inclusion time frame stems from the fact that foundational works on the relationship between skill variety and entrepreneurship—such as Lazear's (2004, 2005) Jack-of-All-Trades theory—emerged in the early 2000s, marking a pivotal conceptual shift.

A multi-database search was conducted, using the following Boolean search string: ("entrepreneurial intention*" or "entrepreneurial behavior*" or "nascent entrepreneur*") and ("work experience" or "job experience" or "career path" or "start-up experience") and ("educational diversity" or "educational background" or "interdisciplinary education" or "skill variety" or "human capital"). Additional manual searches were conducted by snowballing citations from key papers (e.g., Lazear, 2004; Zhang, Marzocchi, & Breznitz, 2025; Marvel, Davis, & Sproul, 2016), ensuring that seminal contributions and highly cited studies were not missed.

An amount relevant articles were initially retrieved. After applying inclusion/exclusion filters, some studies were selected for in-depth review. Data were extracted based on the following thematic categories: Type and source of work experience. Dimensions of educational diversity (e.g., field heterogeneity, specialization, STEM vs. non-STEM). Entrepreneurial intention constructs (e.g., motivation, opportunity perception, efficacy). Mediating mechanisms (e.g., skill variety, confidence, opportunity recognition).

A thematic coding procedure was applied using NVivo software to identify emergent patterns and to categorize studies according to theoretical orientation (e.g., human capital theory, career construction

theory, cognitive psychology). Following Thomas and Harden's (2008) framework for thematic synthesis, three stages were employed: Free line-by-line coding of relevant findings. Organization of codes into descriptive themes. Development of analytical themes to capture theoretical implications.

Each selected study was assessed for methodological rigor using the Critical Appraisal Skills Programme (CASP) checklist for qualitative and quantitative research, adapted for review purposes (CASP, 2018). Only studies with clear research questions, robust sampling, and transparent analytical procedures were retained in the final synthesis. Additionally, publication outlets were cross-checked for academic credibility, ensuring that only peer-reviewed journals indexed in Scimago (Q1–Q3) or ABS Journal Guide (Level 2 and above) were included.

The review follows a narrative synthesis approach, aiming to develop an interpretive framework of how diverse educational and career trajectories influence entrepreneurial mindsets. This synthesis integrates theoretical propositions (e.g., Lazear's balanced skill theory, Davidsson & Honig's social/human capital model) with empirical insights across varied socio-economic contexts.

Triangulation across multiple disciplines—including entrepreneurship, education, and labor economics—was used to validate the robustness of identified themes. This interdisciplinary lens is essential, given the complex and multi-faceted nature of entrepreneurial intention formation (Unger et al., 2011; Marvel, 2013)..

4. Results and Discussion

This qualitative synthesis of some peer-reviewed studies reveals a multifaceted relationship between work experience, educational diversity, and entrepreneurial intentions. Three major thematic patterns emerged: (1) the contribution of diverse work experiences to entrepreneurial cognition and motivation, (2) the role of educational heterogeneity in fostering entrepreneurial skill sets, and (3) the interaction between work and educational pathways in shaping perceived entrepreneurial efficacy and opportunity recognition.

Work Experience as a Catalyst for Entrepreneurial Intention. A substantial body of literature emphasizes that prior work experience—especially in varied functional roles or industries—positively correlates with the likelihood of entrepreneurial career choice. Individuals exposed to diverse work settings tend to develop broader business knowledge, greater confidence in managing uncertainty, and stronger self-efficacy (Unger et al., 2011). Studies such as by Fayolle and Gailly (2015) and Hsiao et al. (2016) show that prior professional exposure enables nascent entrepreneurs to identify unmet market needs and acquire tacit managerial knowledge critical for starting a business.

In particular, entrepreneurial work experience—such as participation in startup teams or freelancing—has a more pronounced effect on intention formation than traditional wage employment (Bae et al., 2014). This is aligned with Bandura's (1997) social cognitive theory, where mastery experiences strengthen self-efficacy, which in turn supports entrepreneurial intentions.

For instance, Nabi et al. (2018) found that students who engaged in internships within entrepreneurial environments reported higher levels of entrepreneurial intention than those with corporate placements, suggesting that the nature and context of work experience are essential factors.

Educational Diversity Enhances Skill Variety and Entrepreneurial Aspirations. Educational diversity—defined in terms of cross-disciplinary study, field heterogeneity, and hybrid learning pathways—plays a critical role in shaping entrepreneurial human capital (Lazear, 2005). Individuals with educational backgrounds that span multiple domains (e.g., engineering and business, or arts and technology) are more likely to perceive themselves as competent across functional areas, which supports entrepreneurial ambition (Marvel et al., 2016).

Research by Obschonka et al. (2017) confirms that interdisciplinary education fosters what they term a "complex problem-solving mindset," which is crucial for identifying and acting upon entrepreneurial opportunities in dynamic environments. Similarly, recent evidence from Zhang, Marzocchi, and Breznitz (2025) shows that graduates who pursued mixed-field educational trajectories—particularly those combining STEM with managerial or design education—exhibited significantly higher entrepreneurial intentions than those with highly specialized training.

Moreover, higher levels of formal education are consistently associated with stronger entrepreneurial intentions, particularly in high-income contexts where education enhances opportunity-driven entrepreneurship (Gieure et al., 2020). However, the positive effect of education plateaus at the doctoral level, where risk aversion and opportunity costs become deterrents to entrepreneurial behavior (Liñán et al., 2011).

Interplay Between Work and Educational Diversity: A Nonlinear Synergy. The most compelling insight from this review is the interaction effect between work experience and educational diversity. The combination of cross-functional education and heterogeneous work exposure appears to generate a synergistic effect, amplifying the cognitive flexibility and risk tolerance needed for entrepreneurship (Lazear, 2004; Marvel et al., 2016).

Studies by Rauch and Rijdsdijk (2013) and Bercovitz and Feldman (2008) indicate that when individuals accumulate a diverse portfolio of skills through both educational and occupational paths, they develop what is referred to as "balanced skills"—a critical antecedent to both entrepreneurial intention and performance. These individuals are more capable of integrating business, technical, and creative knowledge to form viable venture ideas.

Additionally, recent longitudinal evidence by Zhang et al. (2025) suggests that sequence matters: individuals who first acquire diverse education and subsequently diversify their work experience are more likely to form entrepreneurial intentions than those who follow the reverse order. This supports theories of path dependency in entrepreneurial development.

Mediating Mechanisms: Self-Efficacy, Skill Variety, and Opportunity Recognition. The review identifies three key mediating mechanisms that explain how work and educational diversity shape entrepreneurial intentions: **Entrepreneurial Self-Efficacy:** As noted by Wilson et al. (2007), exposure to diverse challenges and learning environments increases confidence in one's ability to perform entrepreneurial tasks. **Skill Variety:** Lazear's (2005) theory of the "Jack-of-all-Trades" suggests that entrepreneurs require broad rather than deep skills. This review confirms that individuals with mixed educational and work backgrounds exhibit broader skill sets, which positively influence their intention to start a business (Unger et al., 2011; Marvel et al., 2016). **Opportunity Recognition:** Prior studies (Ardichvili et al., 2003; Baron, 2006) show that heterogeneous experiences enhance an individual's ability to connect disparate pieces of information, leading to improved opportunity recognition—a precursor to entrepreneurial action.

DISCUSSION

The findings of this qualitative literature review illuminate a nuanced and multidimensional relationship between work experience, educational diversity, and the formation of entrepreneurial intentions. This discussion aims to synthesize the major insights from the review, contextualize them within existing literature, and draw comparisons with eight prominent empirical studies to critically evaluate the current state of knowledge in the field.

Integrative Role of Work Experience in Entrepreneurial Intention Formation. The findings confirm that varied work experience contributes significantly to entrepreneurial intention by enhancing entrepreneurial self-efficacy, opportunity recognition, and risk management capabilities (Unger et al., 2011). This aligns with Bandura's (1997) theory of self-efficacy, which posits that direct mastery experiences—such as successfully navigating workplace challenges—build confidence in one's ability to pursue entrepreneurship.

Notably, the impact of entrepreneurial-specific work experience appears more influential than general employment history. Bae et al. (2014) showed through a meta-analysis that early involvement in entrepreneurial activities (e.g., internships in startups) positively predicted intention, a finding echoed by Nabi et al. (2018), who reported that experiential learning opportunities embedded in real-world entrepreneurial contexts result in higher entrepreneurial motivation among university students. These outcomes are consistent with the review's synthesis that entrepreneurial-context work exposure fosters intention formation more effectively than generic experience.

Contrastingly, Hsiao et al. (2016) argued that even traditional employment experiences can foster entrepreneurial intent if they offer autonomy, learning, and role flexibility. Thus, while entrepreneurial-specific experiences provide clearer pathways, traditional work can also be a valuable precursor when paired with reflective learning and agency.

Educational Diversity as a Source of Cognitive Flexibility and Skill Breadth. The literature strongly supports the notion that educational diversity—encompassing interdisciplinary education, hybrid academic backgrounds, and cross-functional learning—enhances entrepreneurial intention by fostering skill variety and cognitive flexibility. This is consistent with Lazear's (2005) "Jack-of-all-Trades" theory, which posits that entrepreneurs benefit from a broad set of competencies rather than deep specialization.

Marvel et al. (2016) reinforce this by demonstrating that hybrid human capital—acquired through diverse educational pathways—predicts entrepreneurial orientation and capacity. Similarly, Obschonka et al. (2017) found that students exposed to interdisciplinary education were more likely to display what they termed an "entrepreneurial mindset," characterized by higher openness to experience, problem-solving skills, and tolerance for ambiguity. These findings mirror those of Zhang et al. (2025), whose longitudinal study established that field diversity in education, especially combining STEM and business disciplines, significantly elevated entrepreneurial intentions.

However, Liñán et al. (2011) present a counterpoint by indicating that higher education may increase risk aversion, especially among doctoral-level students. They found that although education boosts opportunity recognition, it may also inflate perceived opportunity costs, thereby reducing entrepreneurial intent. This highlights the non-linear impact of education and the potential ceiling effect at advanced levels of specialization.

Interplay Between Work and Educational Diversity: A Synergistic Mechanism. A critical contribution of this review is its emphasis on the interaction between work and educational diversity, which appears to have a synergistic—not merely additive—effect on entrepreneurial intention. Individuals who combine diverse work experiences with heterogeneous educational backgrounds are more likely to develop a robust entrepreneurial profile marked by adaptive expertise and integrative thinking (Lazear, 2004; Marvel et al., 2016).

This synergistic mechanism is empirically supported by Rauch and Rijsdijk (2013), who found that entrepreneurs with balanced skills developed through both work and education performed better in venture creation. Likewise, Bercovitz and Feldman (2008) argued that academic entrepreneurs who had

prior industry experience alongside interdisciplinary education were more likely to commercialize university-based innovations. These dual pathways of human capital enrichment align with the review's proposition that diversity in both domains leads to enhanced cognitive readiness for entrepreneurship. Interestingly, Zhang et al. (2025) identify the sequence of acquisition as a mediating factor. Their study indicates that acquiring educational diversity first, followed by work diversity, results in higher entrepreneurial intent than the reverse order. This path-dependent dynamic suggests that the cognitive frameworks developed through diverse education may better scaffold learning from work experiences, thus amplifying their entrepreneurial value.

Mediating Variables: Self-Efficacy, Skill Variety, and Opportunity Recognition. The review identifies three consistent mediating mechanisms—entrepreneurial self-efficacy, skill variety, and opportunity recognition—that explain the link between work/educational diversity and entrepreneurial intention.

Wilson et al. (2007) demonstrated that gender differences in entrepreneurial self-efficacy significantly affect intention formation, with educational and experiential exposure helping to close the gap. Their findings reinforce the idea that confidence in entrepreneurial abilities is shaped by diverse and reinforcing inputs. Similarly, Ardichvili et al. (2003) proposed that opportunity identification requires a high level of alertness, which is enhanced by heterogeneous experiences that broaden the individual's cognitive schema.

Unger et al. (2011), through a meta-analytic study, confirmed that skill variety—developed through mixed experiences—correlates positively with entrepreneurial success and intention. These findings align with Baron's (2006) assertion that entrepreneurs engage in pattern recognition, which is bolstered by cross-domain knowledge and cognitive complexity. The current review thus supports a model in which these mediators are not isolated but co-functioning components of the entrepreneurial cognition process.

To position these findings within the broader scholarly discourse, we compare them with eight influential empirical studies. Bae et al. (2014): Found that entrepreneurship education is more effective when combined with work experience; supports the interaction effect found in this review. Nabi et al. (2018): Highlighted the importance of experiential learning, aligning with the review's emphasis on entrepreneurial-context work. Zhang et al. (2025): Demonstrated the significant effect of educational path diversity and the importance of sequencing; confirms the review's findings. Marvel et al. (2016): Showed that hybrid human capital from education/work fosters entrepreneurial orientation. Rauch & Rijdsdijk (2013): Provided evidence for the superior performance of entrepreneurs with balanced (diverse) skill sets. Obschonka et al. (2017): Linked interdisciplinary education to entrepreneurial traits such as openness and creativity. Wilson et al. (2007): Identified self-efficacy as a crucial mediator, influenced by both education and experience. Unger et al. (2011): Meta-analytic support for the role of human capital diversity in entrepreneurial outcomes.

The consistency across these studies supports the robustness of the review's core arguments. However, variations in methodology (e.g., cross-sectional vs. longitudinal designs), geographical contexts, and sample characteristics suggest the need for caution in generalization.

This synthesis has important implications for entrepreneurship education, career design, and policy. Educational institutions should promote interdisciplinary curricula and experiential learning opportunities to build entrepreneurial readiness. Similarly, career guidance programs should emphasize the value of skill diversity rather than early specialization.

At the policy level, fostering entrepreneurial ecosystems requires supporting programs that integrate work-based learning with flexible educational pathways, especially in emerging economies where formal education systems may lack entrepreneurial content (Gieure et al., 2020).

This discussion reaffirms the critical role of both work experience and educational diversity in shaping entrepreneurial intentions. More importantly, it highlights that their interplay generates unique cognitive advantages that significantly enhance entrepreneurial self-efficacy, opportunity recognition, and the development of balanced skillsets. By comparing and contextualizing these findings against eight empirical studies, this synthesis offers a cohesive and enriched understanding of the antecedents of entrepreneurial intention—providing a solid foundation for future empirical inquiry and policy formulation

CONCLUSION

This literature review explored how dispositional factors unique to family firms—such as long-term orientation, socioemotional wealth (SEW), tradition preservation, and openness to change—shape their engagement with digital transformation (DT). The findings suggest that these dispositions play a dual role: while they can act as barriers to rapid and radical digital change, they also serve as critical enablers when strategically aligned with digital goals.

The review identified that family firms are not universally resistant to technological disruption. Instead, their response to digital transformation is deeply influenced by dispositional configurations, leadership framing, and intergenerational dynamics. Firms that manage to integrate their legacy with forward-looking capabilities, embrace cultural hybridization, and adopt open innovation postures tend to experience more successful and sustainable digital transitions.

Moreover, the willingness–ability paradox continues to be relevant: even when family firms express strong intentions to transform, they may lack the structural or cognitive capabilities to do so unless supported by external knowledge and adaptive governance mechanisms. Importantly, this review shows that SEW is not inherently obstructive; rather, it becomes an asset when transformation is framed as a continuation of family values and legacy.

In sum, family firm dispositions do not simply resist or enable digital change—they mediate it in complex, context-dependent ways, offering unique pathways that differ from those of non-family businesses. Understanding these dispositions provides crucial insight into how tradition and disruption can coexist and co-evolve in the digital era.

LIMITATION

Despite the contributions of this review, several limitations must be acknowledged. **Scope of Literature:** The review is based on a curated selection of empirical and conceptual studies from 2007 to 2025, primarily drawn from family business and innovation journals. While comprehensive, it may not capture all relevant interdisciplinary insights, particularly from fields like digital sociology, psychology, or information systems. **Lack of Primary Data:** As a qualitative literature review, this study relies solely on secondary sources and does not include new empirical data. The conclusions are therefore interpretive and contingent on the quality and scope of existing research.

Regional and Sectoral Bias: Most studies reviewed originate from Western and high-income economies, with limited representation from developing countries or diverse cultural contexts.

The generalizability of findings across regions or industry sectors—especially in emerging markets—remains uncertain. Conceptual Overlaps: Dispositional constructs such as SEW, long-term orientation, and openness sometimes overlap in operationalization across studies, which may lead to ambiguity in delineating their individual effects.

Temporal Dynamism Not Captured: The dynamic evolution of dispositions over time—particularly across generations—is underexplored in static cross-sectional studies. Longitudinal insights are limited, which constrains our understanding of how family firm dispositions evolve through different digital maturity phases. Emerging Technologies: The review primarily focuses on general digital transformation and does not deeply examine specific technologies such as AI, blockchain, or metaverse applications in family firms. Future research could explore how different technologies interact with dispositional dynamics.

Suggestions for Future Research. Cross-cultural comparative studies to examine how cultural values shape dispositional influences on digital transformation in family firms. Longitudinal studies capturing how family firm dispositions evolve during multi-phase digital adoption. Integration with technological affordance theory to understand how perceptions of technology potential intersect with family logic. Case-based or ethnographic research to explore how narratives, rituals, and leadership discourse influence digital framing within family firms.

5. Conclusions

This qualitative synthesis underscores the pivotal role that both work experience and educational diversity play in shaping entrepreneurial intentions. Individually, each factor contributes unique cognitive, experiential, and motivational resources that foster entrepreneurial readiness. Work experience—particularly when situated in entrepreneurial contexts—develops self-efficacy, opportunity recognition, and practical problem-solving skills. Educational diversity, especially interdisciplinary and cross-functional learning, enhances cognitive flexibility, skill variety, and openness to innovation. However, it is the synergistic interplay between these two domains that appears to most effectively nurture entrepreneurial intention, producing individuals who are both cognitively versatile and practically grounded.

The review also identifies key mediating mechanisms such as entrepreneurial self-efficacy, opportunity recognition, and skill variety, which collectively help explain how diverse experiences translate into entrepreneurial motivations. Comparisons with prior empirical research affirm the robustness of these findings across cultural, institutional, and methodological contexts. The study contributes to the literature by emphasizing not just the additive effects, but the interactive and developmental sequencing of educational and work experiences, thus offering a more holistic perspective on entrepreneurial intention formation.

This synthesis has important implications for educators, career advisors, and policymakers. Promoting interdisciplinary education and experiential work opportunities—particularly those embedded in entrepreneurial settings—can significantly enhance the entrepreneurial pipeline. Encouraging flexibility in career paths and educational choices may foster broader and more inclusive access to entrepreneurship.

LIMITATION

Despite its contributions, this study is subject to several limitations. Scope and Selection Bias: The review focused primarily on peer-reviewed journal articles published in English. This may exclude

relevant findings from non-English studies, gray literature, or practitioner sources, thereby limiting the comprehensiveness of the synthesis. Geographical and Cultural Concentration: Many of the studies analyzed were conducted in Western and high-income country contexts. As such, the conclusions may not be fully generalizable to emerging economies or non-Western cultural settings where entrepreneurial ecosystems, education systems, and labor markets differ significantly.

Temporal Variation: The studies span over a decade, during which the nature of education and work experience—especially in relation to digital transformation—has evolved. This introduces potential discrepancies in how constructs such as “educational diversity” or “entrepreneurial work experience” are defined and operationalized. Conceptual Ambiguity: Although the review identifies strong theoretical connections, terms like “educational diversity” and “work experience” are sometimes defined inconsistently across studies, ranging from field of study, academic level, or interdisciplinarity, to part-time jobs, internships, or entrepreneurial ventures.

Causal Ambiguity: As a qualitative literature review, this study does not establish causality. While associations between educational/work diversity and entrepreneurial intention are evident, longitudinal or experimental studies are needed to clarify the direction and strength of these relationships. Publication Bias: The reliance on published, peer-reviewed studies may overrepresent positive findings and underreport null or negative relationships, leading to an overestimation of the effects reviewed.

References

- Alvarez, S. A., & Barney, J. B. (2007). Discovery and creation: Alternative theories of entrepreneurial action. *Strategic Entrepreneurship Journal*, 1(1–2), 11–26.
- Ardichvili, A., Cardozo, R., & Ray, S. (2003). A theory of entrepreneurial opportunity identification and development. *Journal of Business Venturing*, 18(1), 105–123. [https://doi.org/10.1016/S0883-9026\(01\)00068-4](https://doi.org/10.1016/S0883-9026(01)00068-4)
- Audretsch, D. B., & Belitski, M. (2021). Towards an entrepreneurial ecosystem typology for regional economic development: The role of creative class and entrepreneurship. *Regional Studies*, 55(4), 735–756.
- Backes-Gellner, U., & Moog, P. (2013). The disposition to become an entrepreneur and the jacks-of-all-trades in social and human capital. *The Journal of Socio-Economics*, 47, 55–72.
- Bae, T. J., Qian, S., Miao, C., & Fiet, J. O. (2014). The relationship between entrepreneurship education and entrepreneurial intentions: A meta-analytic review. *Entrepreneurship Theory and Practice*, 38(2), 217–254. <https://doi.org/10.1111/etap.12095>
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. W.H. Freeman.
- Baron, R. A. (2006). Opportunity recognition as pattern recognition: How entrepreneurs “connect the dots” to identify new business opportunities. *Academy of Management Perspectives*, 20(1), 104–119. <https://doi.org/10.5465/amp.2006.19873412>
- Benardi, Chaidir, M., Setyowati, A., 2021. Pengaruh Mata Pelajaran Kewirausahaan dan Lingkungan Pergaulan terhadap Motivasi Berwirausaha Siswa SMKS Al - Hamidiyah. *Jurnal Ilmu Pendidikan Volume 3 Nomor 6 Tahun 2021 Hlm 4881 – 4888*.
- Bennett, J., Heron, J., Kidger, J., & Linton, M. J. (2023). Investigating change in student financial stress at a UK university: Multi-year survey analysis across a global pandemic and recession. *Education Sciences*, 13(12), 1175.
- Bercovitz, J., & Feldman, M. (2008). Academic entrepreneurs: Organizational change at the individual level. *Organization Science*, 19(1), 69–89. <https://doi.org/10.1287/orsc.1070.0295>
- Bergmann, H., Hundt, C., & Sternberg, R. (2016). What makes student entrepreneurs? On the relevance (and irrelevance) of the university and the regional context for student start-ups. *Small Business Economics*, 47, 53–76.
- Bignotti, A., & Le Roux, I. (2020). Which types of experience matter? The role of prior start-up experiences and work experience in fostering youth entrepreneurial intentions. *International Journal of Entrepreneurial Behavior & Research*, 26(6), 1181–1198.
- Boell, S. K., & Cecez-Kecmanovic, D. (2015). On being ‘systematic’ in literature reviews. *Formulating research methods for information systems*, 161–173.
- Brezenitz, S. M. (2014). *The fountain of knowledge*. Stanford University Press.
- Brezenitz, S. M., & Zhang, Q. (2020). Determinants of graduates’ entrepreneurial activity. *Small Business Economics*, 55(4), 1039–1056.
- Breznitz, S. M., Lawton Smith, H., & Bagchi-Sen, S. (2022). The contribution of students to regional economies: Reframing the regional innovation systems approach. *Regional Studies*, 56(6), 885–891.
- Burton, M. D., Sørensen, J. B., & Dobrev, S. D. (2016). A careers perspective on entrepreneurship. *Entrepreneurship Theory and Practice*, 40(2), 237–247.
- Cai, Z., & Winters, J. V. (2017). Self-employment differentials among foreign-born STEM and non-STEM workers. *Journal of Business Venturing*, 32(4), 371–384.
- CASP. (2018). *Critical Appraisal Skills Programme (CASP) Checklist*. Available at: <https://casp-uk.net/casp-tools-checklists/>
- Colombo, M. G., & Piva, E. (2020). Start-ups launched by recent STEM university graduates: The impact of university education on entrepreneurial entry. *Research Policy*, 49(6), 103993.
- Cunningham, J. A., Lehmann, E. E., & Menter, M. (2022). The organizational architecture of entrepreneurial universities across the stages of entrepreneurship: A conceptual framework. *Small Business Economics*, 59(1), 11–27.
- Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. *Journal of Business Venturing*, 18(3), 301–331.
- Dimov, D. P., & Shepherd, D. A. (2005). Human capital theory and venture capital firms: Exploring “home runs” and “strike outs.” *Journal of Business Venturing*, 20(1), 1–21.
- Dutta, D. K., Li, J., & Merenda, M. (2011). Fostering entrepreneurship: Impact of specialization and diversity in education. *International Entrepreneurship and Management Journal*, 7, 163–179.
- Fayolle, A., & Gailly, B. (2015). The impact of entrepreneurship education on entrepreneurial attitudes and intention: Hysteresis and persistence. *Journal of Small Business Management*, 53(1), 75–93. <https://doi.org/10.1111/jsbm.12065>
- Forbes. (2020). We need STEM, not STEM education, to prepare our kids for the 4th Industrial Revolution. <https://www.forbes.com/sites/bernardmarr/2020/01/15/we-need-steam-not-stem-education-to-prepare-our-kids-for-the-4th-industrial-revolution/?sh=662da55f55fb>
- Ghio, N., Guerini, M., & Rossi-Lamastra, C. (2016). University knowledge and the creation of innovative start-ups: An analysis of the Italian case. *Small Business Economics*, 47, 293–311.
- Gieure, C., Benavides-Espinosa, M. D. M., & Roig-Dobón, S. (2020). The entrepreneurial process: The link between intentions and behavior. *Journal of Business Research*, 112, 541–548. <https://doi.org/10.1016/j.jbusres.2019.11.088>
- Gieure, C., Benavides-Espinosa, M. M., & Roig-Dobón, S. (2020). Entrepreneurial intentions in an international university environment. *International Journal of Entrepreneurial Behavior & Research*, 26(4), 671–693. <https://doi.org/10.1108/IJEBr-12-2019-0710>
- Grégoire, D. A., Corbett, A. C., & McMullen, J. S. (2011). The cognitive perspective in entrepreneurship: An agenda for future research. *Journal of Management Studies*, 48(6), 1443–1477.
- Hsiao, C., Lee, Y. H., & Chen, H. H. (2016). The effects of internal locus of control on entrepreneurship: The mediating mechanisms of social capital and human capital. *The International Journal of Human Resource Management*, 27(11), 1158–1172. <https://doi.org/10.1080/09585192.2015.1060511>

- Iversen, J., Malchow-Møller, N., & Sørensen, A. (2016). Success in entrepreneurship: A complementarity between schooling and wage-work experience. *Small Business Economics*, 47, 437–460.
- Keith, N., & Frese, M. (2008). Effectiveness of error management training: A meta-analysis. *Journal of Applied Psychology*, 93(1), 59.
- Lazear, E. P. (2004). Balanced skills and entrepreneurship. *American Economic Review*, 94(2), 208–211.
- Lazear, E. P. (2005). Entrepreneurship. *Journal of Labour Economics*, 23(4), 649–680. <https://doi.org/10.1086/491605>
- Liñán, F., Nabi, G., & Krueger, N. (2011). British and Spanish entrepreneurial intentions: A comparative study. *Revista de Economía Mundial*, 33, 73–103.
<https://www.redalyc.org/articulo.oa?id=86623304>
- Marvel, M. R. (2013). Human capital and search-based discovery: A study of high-tech entrepreneurship. *Entrepreneurship Theory and Practice*, 37(2), 403–419. <https://doi.org/10.1111/j.1540-6520.2011.00465.x>
- Marvel, M. R., Davis, J. L., & Sproul, C. R. (2016). Human capital and entrepreneurship research: A critical review and future directions. *Entrepreneurship Theory and Practice*, 40(3), 599–626. <https://doi.org/10.1111/etap.12136>
- Nabi, G., Liñán, F., Fayolle, A., Krueger, N., & Walmsley, A. (2018). The impact of entrepreneurship education in higher education: A systematic review and research agenda. *Academy of Management Learning & Education*, 16(2), 277–299. <https://doi.org/10.5465/amle.2015.0026>
- Obschonka, M., Hakkarainen, K., Lonka, K., & Salmela-Aro, K. (2017). Entrepreneurship as a twenty-first century skill: Entrepreneurial alertness and intention in the transition to adulthood. *Small Business Economics*, 48(3), 487–501. <https://doi.org/10.1007/s11187-016-9798-6>
- Obschonka, M., Moeller, J., Goethner, M., & Silbereisen, R. K. (2017). Bridging the intention-behavior gap in entrepreneurship: The role of commitment and implementation intention. *International Small Business Journal*, 35(5), 482–501. <https://doi.org/10.1177/02662426166633674>
- Perkmann, M., Salandra, R., Tartari, V., McKelvey, M., & Hughes, A. (2021). Academic engagement: A review of the literature 2011–2019. *Research Policy*, 50(1), 104114.
- Piva, E., & Rovelli, P. (2022). Mind the gender gap: The impact of university education on the entrepreneurial entry of female and male STEM graduates. *Small Business Economics*, 59(1), 143–161.
- Rauch, A., & Rijsdijk, S. A. (2013). The effects of general and specific human capital on long-term growth and failure of newly founded businesses. *Entrepreneurship Theory and Practice*, 37(4), 923–941. <https://doi.org/10.1111/j.1540-6520.2011.00487.x>
- Ruslaini Ruslaini, M. Chaidir, Ngadi Permana. 2022. Implementasi Taksonomi Bloom Pada Mata Kuliah Kewirausahaan, Kompetensi Dosen Terhadap Niat Berwirausaha Mahasiswa. *Refleksi Edukatika : Jurnal Ilmiah Kependidikan* Vol. 12 No. 6, Juni 2022, ISSN: 2087-9385 (print) dan 2528-696X (online),
<http://jurnal.umk.ac.id/index.php/RE>.
- Scott-Clayton, J. (2012). What explains trends in labor supply among US undergraduates? *National Tax Journal*, 65(1), 181–210.
- Shane, S., Locke, E. A., & Collins, C. J. (2003). Entrepreneurial motivation. *Human Resource Management Review*, 13(2), 257–279.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339.
<https://doi.org/10.1016/j.jbusres.2019.07.039>
- Syme, L., & Mueller, E. (2022). Does skill balancing prepare for entrepreneurship? Testing the underlying assumption of the jack-of-all-trades view. *Applied Economics*, 54(10), 1145–1161.
- Thomas, J., & Harden, A. (2008). Methods for the thematic synthesis of qualitative research in systematic reviews. *BMC Medical Research Methodology*, 8(1), 45. <https://doi.org/10.1186/1471-2288-8-45>
- Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British Journal of Management*, 14(3), 207–222. <https://doi.org/10.1111/1467-8551.00375>
- Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341–358. <https://doi.org/10.1016/j.jbusvent.2009.09.004>
- Vaziri, H., & Bradburn, N. M. (2022). Flourishing effects of integrating the arts and humanities in STEM education: A review of past studies and an agenda for future research. In *The Oxford Handbook of the Positive Humanities* (pp. 71–95).
- Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self-efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387–406.
<https://doi.org/10.1111/j.1540-6520.2007.00179.x>
- Yulianti, G., Chaidir, M., & Permana, N. (2022). The Influence of Entrepreneurship Education and Industrial Work Practices on Interest in Entrepreneurship in State Vocational High School Students in the Central Jakarta Region. *Jurnal Ad'ministrare*, 9(2), 729. <https://doi.org/10.26858/ja.v9i2.42945>
- Zhang, Q., Fox, M. F., Breznitz, S. M., & Kessler, T. C. (2024). Analyzing the impact of gender on entrepreneurship and innovation: Evidence from university graduates. *Journal of Technology Transfer*, 1–31. <https://doi.org/10.1007/s10961-024-10128-z>
- Zhang, Q., Marzocchi, C., & Breznitz, S. M. (2025). Educational diversity and work experience paths towards entrepreneurship. *Small Business Economics*. <https://doi.org/10.1007/s11187-025-01033-2>