

Entrepreneurial Self-Identity Learning from Failure, and Academic Entrepreneurship: A Systematic Literature Review and Future Research Agenda

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Abstract

Purpose

To conduct a systematic review of the increasingly popular relationship between Entrepreneurial Self-Identity (ESI), Learning from Failure (LFF), and Academic Entrepreneurship (AE) to establish an integrated perspective on the impact of identity development and failure learning on entrepreneurial activity.

Design/Methodology/Approach

The study is based on PRISMA 2020 methodology and synthesizes evidence from 46 peer-reviewed journal articles published in 2015-2025. Articles have been retrieved from reputable international databases and subjected to systematic thematic synthesis, methodological classification, and theory integration.

Findings

The findings demonstrate that Entrepreneurial Self-Identity and Learning from Failure constitute interdependent developmental mechanisms through which academics interpret entrepreneurial experiences, sustain engagement, and navigate commercialization challenges. However, the literature remains constrained by theoretical fragmentation and methodological limitations, underscoring the need for integrated multilevel frameworks and longitudinal investigations capable of explaining the co-evolution of identity, learning, and entrepreneurial behavior within university environments.

Research Implications

Among the shortcomings of existing studies are a lack of longitudinal designs, insufficient contextual heterogeneity excluding non-Western contexts besides China,

and a poor track record in developing context-dependent measures of academic entrepreneurship. Further research needs to build on process-based approaches, exploring how interactions between identity development, emotion management, institutions, and failure learning can be accounted for during the entrepreneurial process.

Originality/Value

This systematic review contributes to the field of academic entrepreneurship through being one of the pioneering works examining the interrelation between ESI, LFF, and AE using the same theoretical lens.

Keywords: Entrepreneurial Self-Identity; Learning from Failure; Academic Entrepreneurship; Identity Integration; Entrepreneurial Resilience; Systematic Literature Review

1. Introduction

The international structure of higher education has undergone a deep and lasting transformation during the past two decades. The university is no longer considered merely an organization that is responsible for producing and diffusing scientific knowledge. Instead, it is seen as a key institution for promoting innovation, commercialization, and socio-economic development (Scorsatto, Fischer, & Schaeffer, 2019) The advent of the entrepreneurial university model has dramatically altered the set of expectations that are placed on academic professionals. Modern academics are not only supposed to publish their research findings and obtain external funding but also to commercialize science, launch start-ups, interact with the private sector, and become active participants in national innovation systems (Hayter, Fischer, & Rasmussen, 2022). Academic entrepreneurship has become a significant means for universities to realize their intellectual assets.

While significant focus continues to be accorded to policies and institutions supporting academics' engagement in entrepreneurship-related actions, actual practice by academics towards this direction still seems sporadic and relatively low worldwide (Pattnaik, Mmbaga, White, & Reger, 2024) As universities continue to develop structures like technology transfer centers, incubation units, innovation parks, and commercialization facilities, there is still relatively few academics who take up an entrepreneurial activity on a consistent basis, with fewer still maintaining this action. This persistent imbalance between expectations and behavior has drawn scholarly interest to the psychological underpinnings of academic entrepreneurship. It is increasingly argued that merely offering structural support mechanisms is not enough to encourage entrepreneurs among academics. In fact, academic entrepreneurship entails a delicate balancing act of certain individual features, identification structures, emotions, and learning experiences which would make it possible for academics to cope with uncertainties associated with commercialization (Melo Filho, Lobo, Câmara, Torres Junior, & Magalhães, 2025).

Entrepreneurial Self-Identity (ESI), on the other hand, has become an extremely significant and fast-growing concept in the realm of entrepreneurship studies within the wider context of academic literature. The term "entrepreneurial self-identity" refers to

the extent to which people incorporate entrepreneurship as a key aspect of their self-concepts (Obschonka, Silbereisen, Cantner, & Goethner, 2015). Instead of considering entrepreneurial activities as something that is secondary or an external imposition, people who possess a high level of entrepreneurial self-identity believe that engaging in such activities is consistent with their true selves (L. Chen, Xiaohu, Mengze, & De'en, 2023). In the case of academic entrepreneurship, ESI signifies the extent to which academics psychologically integrate their conventional scholarly identity with entrepreneurial identity associated with commercialization and venture creation.

The importance of entrepreneurial self-identity (ESI) in the context of academic entrepreneurship cannot be overstated. Research findings have shown that academics with strong ESI demonstrate high levels of entrepreneurial intention, effective opportunity identification skills, higher resilience in the process of commercialization, and tolerance towards entrepreneurial uncertainty (Gregori, Holzmann, & Schwarz, 2021; Hayter et al., 2022). Moreover, entrepreneurial self-identity also plays an important role in influencing the interpretation of institutional support, reaction to the obstacles in the process of commercialization, and generation of intrinsic motivation in carrying out entrepreneurial activities (Majoor-Kozlinska, Hytti, & Stenholm, 2024). In addition, ESI is related to entrepreneurial intention as well as commitment to entrepreneurship.

The development and stabilization of entrepreneurial identity among scholars are inherently difficult and psychologically strenuous. Traditionally, universities function under principles based on scientific rigor, scholarship independence, camaraderie, and scholarship for public welfare. On the other hand, entrepreneurship thrives on competition, commercialization, market orientation, risk-taking, and value creation (Giunti & Duberley, 2023). The combination of these contradictory institutional logics usually results in significant identity conflict for scholars who wish to venture into entrepreneurial activities. Therefore, scholars may find themselves dealing with role conflict, identity conflict, and psychological conflict while trying to reconcile their entrepreneurial roles with their scholarly identity (Choi, Siegel, Waldman, Frandell, & Kim, 2024).

In recent years, researchers have become more convinced that identity conflict is one of the foremost psychological obstacles to sustaining entrepreneurship among academics (Pattnaik et al., 2024). There is a constant struggle between the decision whether entrepreneurial actions would fit within the acceptable boundaries of scientific professionalism. In many cases, entrepreneurial behavior may be regarded as a threat to the scientific identity or integrity of an individual (Bousfiha, 2020). Therefore, for an effective cultivation of an entrepreneurial self-concept, it becomes essential to undergo cognitive as well as affective learning experiences that can help overcome frequent failures and uncertainties.

It is at this juncture that the study of LFF assumes greater importance. In the past decade, failure in entrepreneurship has begun to be viewed not as an end but as a developmental and epistemological journey whereby entrepreneurs develop strategic wisdom, emotional maturity, and adaptability (Cope, 2021). LFF can thus be defined as the cognitive and emotional process whereby individuals make sense of failed

entrepreneurial episodes and then use the same to derive useful knowledge for future entrepreneurial ventures (Yamakawa, Peng, & Deeds, 2015). Contrary to the belief that it acts as a permanent disincentive to entrepreneurship, failure can strengthen resilience, sharpen strategic decision-making skills, and promote entrepreneurship if handled effectively.

When considering the topic of academic entrepreneurship, learning from failure becomes especially important. Academic entrepreneurship can be described as involving a great deal of uncertainty, bureaucracy, resource scarcity, technology ambiguity, and institutional inflexibility. Often, academic entrepreneurs face failed patents, attempts at commercializing grants, failed partnerships with the industry, venture disruptions, and failed spin-offs (M. Wang, Soetanto, Cai, & Munir, 2022). These failures are common occurrences and should not come as a surprise, since they are a natural component of entrepreneurship activities conducted within academia. It follows that learning from entrepreneurial failures is critical for maintaining such behaviors.

Research suggests that those academics who successfully learn from their failures have higher levels of emotional intelligence, are more resilient, demonstrate greater strategic adaptability, and show more entrepreneurial persistence (Paudel, 2025). By learning from failure, an individual can reframe it from being a sign of incompetence into a chance to develop cognitively and experience-wise. This becomes relevant within academic settings due to the importance of reputation and professionalism when facing entrepreneurship failure.

Modern studies seem to indicate that failure learning and entrepreneur self-identity operate as interdependent concepts. Indeed, the two motivational mechanisms demonstrate reciprocal effects during entrepreneurship. On one hand, the self-identity of an entrepreneur influences the way he/she perceives and emotionally deals with entrepreneurial failures, whereas on the other hand, entrepreneurial failures determine the development, maintenance, or dissolution of entrepreneur self-identity over time (L. Chen et al., 2023; Y. Chen, Klyver, & Zhang, 2024). People who have strong self-identities as entrepreneurs might be more inclined to positively interpret failures because entrepreneurship has become an inseparable part of their life experience and career. On the contrary, entrepreneurs who experience multiple entrepreneurial failures can strengthen their identities through reflective learning or break down their identities by means of emotional exhaustion.

Though theoretically significant, the connection between these two factors has not received comprehensive attention in existing research, which is fragmented by both disciplines and theoretical perspectives. Research in the domain of entrepreneurial self-identity commonly focuses on the significance of intentionality, identity aspiration, and centrality; however, the impact of entrepreneurial failure and experiential learning is overlooked (Radu-Lefebvre, Lefebvre, Crosina, & Hytti, 2021). At the same time, research that examines entrepreneurial learning through failure emphasizes the concept of resilience and recovery, ignoring the role played by entrepreneurial identities in constructing meanings out of experiences (Lattacher, Wdowiak, Schwarz, & Audretsch,

2024). In turn, there is no integrated model that could explain how these phenomena affect academic entrepreneurship.

The fragmentation described above is a major theoretical weakness within the body of management and entrepreneurship research. Entrepreneurship within academia should not be treated as a static behavior that can be sufficiently explained by psychology alone. Rather, it is a dynamic process marked by continuous interaction between identity construction, emotional adjustment, experience, and the environment. Without integrating the concepts of ESI and LFF, researchers cannot satisfactorily explain the phenomenon of some academics continuing their entrepreneurial endeavors despite numerous obstacles, whereas others drop out early on despite adequate support systems being present.

These limitations found within existing literature become further exacerbated considering geographical considerations. Literature pertaining to the topic of entrepreneurial self-identity and failure-based learning is overwhelmingly biased towards Western countries, including the U.S., Germany, UK, Netherlands, among others. Other studies have noted that more attention is paid to entrepreneurship in advanced innovation systems rather than developing economies. In addition, developing country settings are generally characterized by institutions that are substantially different from those in more advanced economies (Amankwah-Amoah, Khan, Ifere, Nyuur, & Khan, 2022).

The above-stated contextual inequality raises theoretical questions, since institutions play a vital role in shaping an individual's entrepreneurial cognition, the process of developing entrepreneurial identity, as well as interpreting entrepreneurial failure. For academic entrepreneurs in developing countries, institutional voids, bureaucracy, lack of venture capital, inefficient systems of intellectual property rights protection, and undeveloped entrepreneurial commercialization ecosystem become typical conditions (Bruton, Ahlstrom, & Li, 2023). Consequently, entrepreneurial failure might not only happen more often but also have greater psychological and financial consequences. Moreover, entrepreneurship identity is likely to be difficult to develop because of a lack of role models, poor commercialization infrastructure, and negative socio-cultural perceptions of entrepreneurial activity among academics.

Pakistan represents a highly relevant but largely understudied arena within this discussion. Being a developing nation with significant issues regarding socioeconomic matters and innovations, Pakistan is increasingly perceiving academic entrepreneurship as a vital approach for economic growth, technological advancement, and job generation (Munir, Wang, Ramzan, Sahibzada, & Jianfeng, 2021). Universities are called upon to accelerate their commercialization efforts, foster university-industry partnerships, and develop an entrepreneurial ecosystem. However, academics in Pakistan still face many institutional and psychological obstacles, such as poor commercialization support, limited funding, bureaucratic hurdles, and enhanced apprehension of entrepreneurial failures (Ahmad & Bashir, 2023).

This makes the analysis of the dynamics of the relationship between self-identity and learning from failure in the context of entrepreneurship at universities in less developed countries, even more relevant. Unfortunately, current research in the area is poorly

connected and conceptualized. If there is no synthesis of the existing ideas, policymakers and university leaders may develop mechanisms of supporting entrepreneurship without considering the psychological factors involved.

It is for these reasons and others that systematic literature review becomes necessary. To begin with, the number of studies on the topics of interest increased dramatically during the last decade (Asif, Mohammad Abdu Shakur, & Hashim, 2025). On the one hand, this development is encouraging, but it is problematic from the perspective of theoretical inconsistency and fragmentation, since the way that concepts are measured varies from study to study, theories employed in research are incompatible with each other, and results obtained empirically are not synthesized. (Saeed, Mahmood, & Anwar, 2026)

Secondly, although there have been several calls in previous scholars to undertake an interdisciplinary synthesis, there has not been any attempt at a systematic literature review to systematically synthesize both aspects of entrepreneurial self-identity and learning from failure in terms of academic entrepreneurship. Previous literature reviews tend to address either the topic of identity-related studies separately (N. A. Mmbaga, Mathias, Williams, & Cardon, 2020; Radu-Lefebvre et al., 2021) or that of learning from failure as a concept in entrepreneurship alone (Lattacher & Wdowiak, 2020). As a result, there is yet to be developed a consistent conceptual framework on the interrelation between identity construction and learning from failure as key psychological processes shaping entrepreneurial activity in university settings.

Thirdly, theoretical literature concerning the mediating and moderating psychological processes through which entrepreneurial self-identity and learning from failure affect outcomes of academic entrepreneurship is rather underdeveloped. While some recent publications have started to introduce concepts such as resilience, emotional regulation, entrepreneurial passion, and frustration tolerance (Ahmed, Ucbasaran, Cacciotti, & Williams, 2022; Obschonka, Moeller, & Goethner, 2019), they still remain fragmented in separate empirical studies. Such fragmentation does not allow researchers to create cumulative theoretical frameworks explaining intricate psychological dynamics driving sustainable academic entrepreneurship.

The fourth point concerns a critical examination of the methodological framework used in previous studies. It is pertinent to note that current studies use highly diversified methodological approaches ranging from qualitative case studies, cross-sectional survey research, bibliometrics, phenomenology, and conceptual analysis. Though diversification is beneficial to research, it brings about issues such as inconsistencies in measurements, sampling techniques, and causal analysis. In other words, a systematic review would be crucial to help evaluate the methodological strengths and weaknesses, determine any neglected methodological approaches, and propose future research directions.

On this note, the current research conducts an elaborate Systematic Literature Review to explore the relationship between Entrepreneurial Self-Identity, Learning from Failure, and Academic Entrepreneurship. Specifically, the study conducts a SLR using forty-six peer-reviewed articles within the period of 2011-2025 that cover different methodological approaches across various country settings and employ theoretical

frameworks in their analysis of Entrepreneurial Self-Identity, Learning from Failure, and Academic Entrepreneurship. The main purpose of conducting the review is to provide a holistic perspective of understanding the interrelationship between these three variables.

The four main issues covered by the current review are the following. Firstly, what theoretical perspectives were used to explore the phenomena of entrepreneurial self-identity, learning from failure, and academic entrepreneurship? Secondly, how were these phenomena operationalized from conceptual and methodological perspectives in different contexts? Thirdly, what is the existing knowledge about the relationship between entrepreneurial identity and entrepreneurial learning from failure in academic entrepreneurship? Finally, what major gaps, contradictions, and future directions remain unexplored within the body of literature?

This review makes the number of important contributions to the existing scientific knowledge base. The first one is a pioneering attempt to synthesize entrepreneurial self-identity and learning from failure in the context of academic entrepreneurship. With the use of systematic analysis of the evidence, the study provides a more complete psychological perspective on entrepreneurial activity in universities.

Second, the review points to some important gaps in existing theories and concepts. The review clearly indicates that the relationship between identity construction and failure learning is not theoretically well addressed, especially with regard to developing nations. Moreover, the review makes it clear that the psychological factors like entrepreneur's passion, regulation of emotions, resilience, and frustration tolerance have been neglected in empirical research although they seem highly relevant in explaining entrepreneurial behavior.

Third, review methodological discussions in the field of entrepreneurship. In this connection, the review emphasizes the overuse of self-reporting and cross-sectional studies that require researchers to use a longitudinal design and different kinds of methodologies to study processes of entrepreneurial identity construction and learning from failure over time.

The paper is significant in terms of context because it captures the imbalance of evidence in Western economies and highlights the pressing need for greater academic interest in the development of entrepreneurship in developing countries. By setting the context with examples like Pakistan, the research makes it clear that institutional environments affect the cognition of entrepreneurship, integration of entrepreneurial identities, and coping with entrepreneurial failures.

In essence, this paper does not seek to compile the available literature on academic entrepreneurship but tries to provide a framework for conceptual advancement in the field. The paper is set to make sense of the role played by entrepreneurial self-identity and failure learning in academic entrepreneurship through a structured analysis of available literature.

The rest of the paper is organized in the following manner. The next section will focus on outlining the systematic review approach used in this paper, which covers the PRISMA approach, the choice of databases to use, as well as the inclusion and exclusion criteria as well as the process of data extraction. Afterward, the findings

section will focus on synthesizing the literature within various thematic areas including entrepreneurship self-identity, learning from mistakes as well as the relationship between the two in academic entrepreneurship. The discussion section will then provide a critique of the implications of the literature synthesis and outline a clear agenda for future research.

2. Methodology

2.1 Research Design and Systematic Review Protocol

The current study utilizes a Systematic Literature Review (SLR) to systematically review the scattered yet fast-growing literature on Entrepreneurial Self-Identity (ESI), Learning from Failure (LFF), and Academic Entrepreneurship (AE). A systematic literature review is suitable due to the current lack of conceptual coherence within the literature on ESI, LFF, and AE, which spans entrepreneurship, organizational psychology, innovation science, and higher education scholarship. The literature on ESI, LFF, and AE has resulted in theoretical discrepancies, conceptual vagueness, and methodological diversity, preventing the accumulation of knowledge and inhibiting the creation of a cohesive explanation of how the two concepts impact academic entrepreneurship (N. A. Mmbaga et al., 2020; Radu-Lefebvre et al., 2021).

As opposed to conventional narrative reviews, systematic reviews provide a reproducible and scientifically sound approach for reviewing scholarly evidence by following pre-defined methods and analysis criteria (Asif et al., 2025; Lattacher & Wdowiak, 2020). The scientific value of the SLR methodology is based on its ability to avoid subjectivity in the interpretation of research results and, at the same time, provides an opportunity to integrate various empirical findings into a logical and coherent analysis. Such a feature is especially important in current research since the existing body of knowledge about ESI and LFF has developed separately with little scholarly consideration given to the interaction between the two constructs in academic entrepreneurship (Melo Filho et al., 2025).

To maintain transparency in the methodology and ensure consistency in reporting, the study was undertaken in line with the guidelines laid out in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020, as developed by Page et al. (2021). The PRISMA tool provides internationally accepted procedural guidelines for conducting a systematic evidence synthesis process and is widely used in entrepreneurial and managerial studies as a measure to enhance reliability, transparency, and replicability of research studies (Ahmed et al., 2022). In the pre-data collection phase, the researchers drafted a review protocol that specified all aspects of the review process including objectives, search strategy, inclusion and exclusion criteria, article selection process, data extraction process, and analysis procedure.

The review process was carried out independently by two reviewers to strengthen the reliability of analysis and prevent bias selection. The titles, abstracts, and full-text articles were independently screened according to the pre-determined criteria for inclusion. Any disagreements related to the inclusion or exclusion of the articles were sorted out through discussion until consensus was reached. In case of disagreement, a third reviewer was consulted (Lattacher et al., 2024; N. A. Mmbaga et al., 2020).

2.2 Research Questions Guiding the Review

Four related research questions were used to organize this review based on the theoretical and empirical research gaps identified in the existing scholarship on Entrepreneurial Self-Identity (ESI), Learning from Failure (LFF), and Academic Entrepreneurship (AE).

1. What are some of the dominant theories used to explore the nexus between ESI, LFF, and AE?
2. What types of methodologies dominate existing studies on ESI and LFF? Are there any limitations in the current approaches used in the analyses of these concepts?
3. What is the influence of ESI and LFF on academic entrepreneurial activity, intentions, persistence, and commercialization success?
4. What gaps remain in the existing literature that require further academic investigation in this field?

Such a structure has been chosen deliberately not only to provide an overview of the existing literature on these concepts but also to create a basis for further analysis of the psychological and behavioral factors driving academic entrepreneurship. Specifically, the review will focus on the processes of entrepreneurial identity creation and post-failure learning at institutions with complex structures, high levels of professional role conflict, and conflicting normative pressures (Giunti & Duberley, 2023; Hayter et al., 2022; Zhao, Lu, Wang, & Pang, 2024).

2.3 Database Selection and Search Strategy

The following methodology was employed to ensure an exhaustive approach toward collecting scholarly material related to the goals set forth in this review. A systematic search strategy was adopted to collect scholarly articles from peer-reviewed journals on entrepreneurship, management, organizational studies, psychology, innovation, and higher education from internationally recognized academic databases. These databases included Scopus, WoS, Google Scholar, ScienceDirect, Emerald Insight, and Taylor & Francis Online.

Such databases have been chosen due to their wide coverage of journals included into such sources as SSCI, Scopus, and Web of Science, as well as their good reputation as indexers of high impact authors in the field of entrepreneurship and management (Bruton et al., 2023; Rizki & Susanto, 2021). Such a broad inclusion of databases is helpful in avoiding potential oversights related to the use of a single database while increasing the comprehensiveness of the literature identification process. The time frame for searching was selected in January-March and covers publications from January 2015 to December 2025. Such a selection made sense there was an increasing interest in the topics of entrepreneurial identity, academic entrepreneurship, and entrepreneurship failures during that time.

Boolean logic, truncation, and indexing-controlled vocabulary were among the techniques used in conducting the literature search based on the indexing structures of each database. A total of three main theme-based keyword groups were developed.

2.3.1 Group One - Constructs related to Entrepreneurial Self-Identity:

("entrepreneurial self-identity" OR "entrepreneurial identity" OR "academic entrepreneur identity" OR "entrepreneurial role identity" OR "hybrid identity")

2.3.2 Group Two - Constructs related to Learning from Failure:

("learning from failure" OR "failure learning" OR "entrepreneurial failure" OR "post failure learning" OR "failure recovery")

2.3.3 Group Three - Constructs related to Academic Entrepreneurship:

("academic entrepreneurship" OR "academic entrepreneurial intention" OR "university entrepreneurship" OR "technology transfer" OR "academic spin off" OR "commercialization")

The Boolean "AND" operator was utilized in the integration of these keyword groups to ensure conceptual compatibility and focus on empirical studies that explored the relationship between the key constructs of the current paper (Cope, 2021; Karimi, Mollaei, Mohammadian, & Zargaran Khouzani, 2021; Yamakawa et al., 2015). The literature search was deliberately made wide at the initial stages to increase sensitivity. Apart from database searches, additional methods for citation tracking were also adopted to capture those seminal works that could not be found through the main search method. Citation chaining using backward citation searches for bibliographies and forward citation searches of widely cited works were also done. In addition, the authors consulted experts and asked the authors of papers to suggest recent works that are relevant to the topic under review (Majoor-Kozlinska et al., 2024; Mäkinen & Esko, 2023).

2.4 Inclusion and Exclusion Criteria

For the sake of clarity in concept and methodology, inclusion and exclusion criteria were set out before screening began. The aim was to have only those studies which were theoretically relevant and empirically sound included in the review.

Studies were included if they satisfied all the following criteria:

- (a) the study explicitly examined Entrepreneurial Self-Identity, Learning from Failure, or both constructs within entrepreneurial and academic entrepreneurial contexts;
- (b) the study investigated outcomes associated with Academic Entrepreneurship, including entrepreneurial intention, spin-off creation, commercialization activities, patenting, technology transfer, licensing behavior, entrepreneurial persistence, or entrepreneurial engagement among academics;
- (c) the study employed empirical quantitative, qualitative, mixed-methods, or systematic review designs;
- (d) the article was published in a peer-reviewed academic journal;
- (e) the publication was written in English; and
- (f) the article was published between 2015 and 2025.

The inclusion criteria ensured that the review remained focused on empirically grounded scholars directly relevant to understanding the psychological and behavioral dynamics underpinning academic entrepreneurship (L. Chen et al., 2023; Hayter et al., 2022; Paudel, 2025).

Studies were excluded if they met any of the following conditions:

- (a) the study focused exclusively on general entrepreneurship or corporate entrepreneurship without relevance to university-based entrepreneurship;

- (b) the article examined student entrepreneurial intention without explicit linkage to academic entrepreneurship or university researcher populations;
- (c) the publication consisted of conference abstracts, editorials, commentaries, dissertations, book chapters, or non-peer-reviewed material;
- (d) the study lacked explicit operationalization of ESI or LFF constructs;
- (e) the article did not provide sufficient methodological detail or systematic empirical analysis; or
- (f) the full text could not be accessed after institutional retrieval procedures.

The selection criteria were intentionally strict to preserve the consistency and integrity of the evidence base in the final analysis. The rejection of theoretical commentaries and non-peer-reviewed literature was done to ensure that the analysis is based only on scholarly work that meets international academic standards (Radu-Lefebvre et al., 2021; Scorsatto et al., 2019).

2.5 Study Selection Process and PRISMA Procedures

The search strategy utilized PRISMA 2020 guidelines, consisting of four stages, namely, identification, deduplication, screening, and eligibility assessment for selecting articles.

Initially, searches were conducted in six databases selected for the purpose. As a result, 1,847 records were identified. Additionally, 43 records were identified using citation tracking and consultations with experts, making the total number of identified records 1,890.

All the items identified were imported into EndNote X9 for organizing and identifying duplicate records. Besides the automated deduplication technique, the process was additionally verified manually to avoid errors. Following the procedure, 645 duplicates were detected and excluded. Consequently, 1,245 records remained after the deduplication step.

For the screening stage, the titles and abstracts of 1,245 studies were independently assessed according to pre-set eligibility criteria. If the titles/abstracts suggested any conceptual irrelevancy with Entrepreneurial Self-Identity (ESI), Learning from Failure (LFF) or Academic Entrepreneurship then those studies were automatically excluded from further analyses. Moreover, the following publications were excluded based on title and abstract alone: editorials; books chapter; conference papers and non-English language publications.

Furthermore, 366 full-text papers were obtained for detailed analysis regarding their suitability for inclusion based on conceptual validity; methodological rigor; clarity of construct operationalization and relevance to the academic entrepreneurship outcomes. During the full-text screening process, those studies that failed to provide any operationalization of either ESI or LFF; those which were irrelevant to academic entrepreneurship outcomes and papers containing duplicating data were automatically excluded.

After applying the inclusion/exclusion criteria, only 46 studies met all the eligibility requirements and were included in this systematic review for qualitative analysis.

2.6 Data Extraction Process

A structured data extraction model was developed to ensure consistency, comparative analysis capability, and transparency regarding the methodologies used within the included literature. Before being applied, the extraction model went through a pilot phase involving some selected articles to test its clarity, comprehensiveness, and consistency before proceeding with the data extraction exercise.

The information extracted from each paper included the following:

- (a) bibliographical information (authors, publication year, journal name, and title of the study);
- (b) objectives and constructs examined within the paper;
- (c) theoretical paradigms underpinning the work;
- (d) methodological approach and analytical technique;
- (e) description of the sample and organizational setting;
- (f) operational definitions and measurement procedures of ESI and LFF constructs;
- (g) major findings of the research;
- (h) mediators and moderators highlighted in the study;
- (i) methodological weaknesses discussed; and
- (j) further research directions suggested by the author.

Data extraction was performed independently by two reviewers using the standardized Microsoft Excel data extraction spreadsheet. Any inconsistencies in coding were sorted out through discussions between the two coders, thereby enhancing reliability. This methodology helped increase reviewer objectivity during data synthesis (Ahmed et al., 2022; Asif et al., 2025).

2.7 Quality Appraisal Procedures

To establish the robustness of methods used within the selected articles, a formal assessment process was applied with the help of standard assessment frameworks relevant to the methodology used.

In particular, the adapted version of the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) checklist was used for the review of quantitative studies, concentrating on such aspects as sampling, construct validity, reliability, statistics, common method bias and its handling, and analytical appropriateness (Obschonka et al., 2015; Hughes et al., 2021).

For qualitative studies, the Critical Appraisal Skills Programmer (CASP) qualitative checklist was employed, considering such criteria as methodological compatibility, data collection rigor, reflexivity, analysis clarity, and interpretation credibility (Cope, 2021; Giunti & Duberley, 2023).

For mixed methods papers, the framework provided by the 2018 Mixed Methods Appraisal Tool (MMAT) framework was used, considering quality of integration, coherence, and consistency of interpretations. No study was omitted from the final analysis based on the results of this stage. However, it helped in determining the degree to which the findings can be taken into consideration and analyzed. The described method of evidence appraisal corresponds to the best practices recommended in management and entrepreneurship systematic reviews, where methodological differences are recognized as natural (Melo Filho et al., 2025; Scorsatto et al., 2019).

2.8 Data Synthesis Strategy

Considering the wide variability in theoretical concepts and research methodologies that characterized the selected studies, the use of thematic synthesis became more appropriate compared to meta-analysis. This is because thematic synthesis is well suited for synthesizing the results of empirical research conducted using a range of research paradigms since it allows one to recognize repeated themes, mechanisms, and controversies in the reviewed literature (Lattacher & Wdowiak, 2020; N. Mmbaga, Ayres, & Lewis, 2020).

The analysis involved three distinct stages of analysis. Firstly, findings from the selected literature were analyzed using inductive open coding for the purposes of identifying recurrent themes associated with ESI, LFF, and outcomes of AE. Secondly, related codes would be clustered to form descriptive themes representing theoretical relationships and underlying behavioral mechanisms. Finally, the process of synthesis would lead to the formulation of analytical themes which sought to address the research questions and uncover the conceptual inconsistencies present in literature.

Attention would be directed specifically towards the identification of:

- (a) theoretical mechanisms for the relationship between ESI and academic entrepreneurship;
- (b) the contribution of LFF towards the development of entrepreneurial resilience and identity reconstruction;
- (c) mediation and moderation mechanisms for outcomes of AE; and
- (d) conceptual inconsistencies and gaps in literature.

This approach favored analytical themes over the mere aggregation of information. Therefore, the objectives of the current paper are not only the summary of the extant literature, but its conceptual integration as well.

2.9 Methodological Rigor, Reflexivity, and Potential Biases

While the purpose of a systematic review is to improve methodological clarity and scientific rigor, it inevitably faces certain limitations. Firstly, publication bias can play a role in determining the pool of information, as articles with statistically significant and theoretically positive results will be more prevalent in top-tier journals than studies showing null or negative outcomes (Ahmed et al., 2022; Bruton et al., 2023). Secondly, excluding non-English literature from the analysis could cause a language bias since not all relevant scholars write in English. However, such an approach was required to maintain methodological coherence and since most international entrepreneurial research appears in English-language periodicals.

Third, despite the scope of the search approach, some relevant papers could have been out of reach due to the database indexing system or lack of access to full-text articles. In response to this limitation, additional citation searches and expert consultations were incorporated into the literature review phase.

Lastly, the interpretive element of thematic synthesis inevitably introduces a measure of analytic bias. To overcome this limitation, the coding process was conducted independently, multiple reviews were conducted, decision points were explicitly described, and comparisons were made between extracted results.

The methodology utilized in this study provides an objective and systematic foundation for synthesizing the burgeoning literature on the topics of Entrepreneurial Self-Identity,

Learning from Failure, and Academic Entrepreneurship. Through the combination of findings from various paradigms, the study creates a solid foundation for further research in the field of academic entrepreneurship.

3. Prisma Diagram

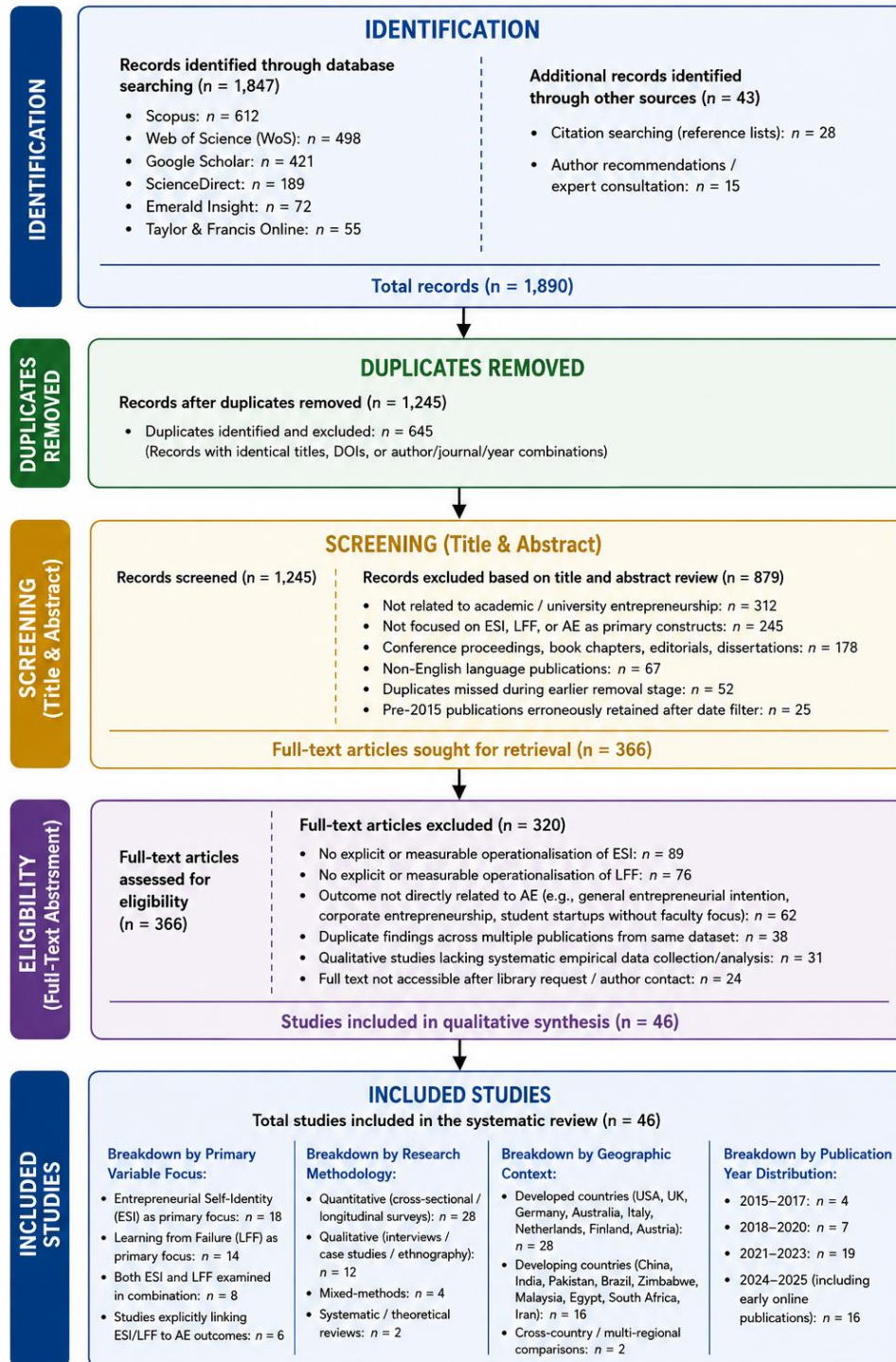


Figure 3.1
PRISMA DIAGRAM

Finding
Descriptive Analysis

4.1 Variable-Wise Distribution of Included Articles

Distribution of the included articles in relation to variables provides an initial insight into the epistemological framework underlying modern research on ESI, LFF, and AE. The classification of the 46 chosen articles not only sheds light on the occurrence rate of the mentioned themes but, first, reflects a change in epistemological perspective taken by entrepreneurship researchers towards the issues of identity formation, experiential knowledge acquisition, and behavior adjustment in academic entrepreneurial settings. Analytical classification also implies that researchers realize the role played not only by institutional procedures and economic factors in entrepreneurial behavior within university settings but also by identity construction and experiential learning resulting from entrepreneurial failures.

Entrepreneurial self-identity is shown to be the primary theme that dominates the literature under study (18 articles, 39.1%). Such an important proportion can be explained by the growing agreement among researchers regarding the pivotal role of entrepreneurial identity as an essential psychological and behavioral element that allows students to embody their roles, goals, and activities associated with entrepreneurship in academia. For example, according to L. Chen et al. (2023), Choi et al. (2024), Hayter et al. (2022), and Radu-Lefebvre et al. (2021), entrepreneurial self-identity works as a cognitive foundation influencing entrepreneurial intention, opportunity perception, role enactment, and commitment in university entrepreneurial communities. Similarly, Giunti and Duberley (2023) and Majoor-Kozlinska et al. (2024) reveal how hybrid academic-entrepreneurial identities evolve from the continuous bargaining between academic conventions and entrepreneurial considerations.

Prevalence of ESI-oriented research reflects the theoretical shift in the entrepreneurship literature towards adopting identity as a framework for explaining entrepreneurship behavior. Previous theoretical frameworks often focused on rationalism, institutions, and personalities without considering the importance of other factors. In contrast, the analyzed literature shows a trend towards understanding entrepreneurship as a social practice defined by socialization, interaction, and the importance of professional roles (N. Mmbaga et al., 2020; Obschonka et al., 2015)). Furthermore, H. Wang, Zheng, Wu, and Sui (2022) and Seo, Kim, and Mesquita (2024) suggest that identity centrality is the key factor that impacts university researchers' judgment regarding whether entrepreneurship aligns with their role as scientists. It is important to note that academic entrepreneurship faces the challenge of conflicting professional logics.

Table 4.1

Variable-Wise Distribution of Included Articles

Primary Variable Focus	Number of Articles	Percentage (%)
Entrepreneurial Self-Identity (ESI)	18	39.1%
Learning from Failure (LFF)	14	30.4%
Both ESI and LFF (Combined)	8	17.4%
ESI and/or LFF linked to AE Outcomes	6	13.1%
Total	46	100%

The second largest thematic category comprises studies examining learning from failure, representing 14 articles (30.4%) of the reviewed sample. The emphasis placed on this category is due to the increasing realization that failure in entrepreneurship acts as a developmental process rather than just a negative organizational event. Key literature in this area includes work by Cope (2021) and Yamakawa et al. (2015), who consider entrepreneurial failure as an experience that can lead to transformative changes in the way one thinks, acts, and develops strategies. Later studies have built on this understanding by emphasizing that resilience and emotional regulation significantly affect the degree of constructive learning that can be attained from the experience of failure.

The focus of LFF-related research after 2020 suggests a move by entrepreneurship researchers from considering failure as an endpoint toward studying failure as an iterative process in entrepreneurship. Learning from failure, according to Asif et al. (2025) and Lattacher et al. (2024), is multi-faceted and includes the emotional recovery of the individual, cognitive transformation, re-framing in a social context, and experimentation. In much the same vein, Ahmed et al. (2022) and Amankwah-Amoah et al. (2022) suggest that entrepreneurial learning is contextual and institutionalized, especially in emerging economies that suffer from resource constraints and institutional turbulence, thus increasing entrepreneurial uncertainty. In the context of academic entrepreneurship, K. Wang, Zhao, and Peng (2024) and Ahmad and Bashir (2023) highlight that failures in academic spin-offs and entrepreneurship ventures serve as key sources of reflective learning and capability building, among other things.

The smallest but still theoretically significant category consists of papers that examine both entrepreneurial self-identification and learning through failure and encompasses eight articles (17.4%). Despite being relatively few, it is one of the most promising categories explored by the reviewed papers, owing to the connection between the concepts of identity development and learning. As seen from the work by Zhang, Wang,

and Zhao (2022) and Zhao et al. (2024), entrepreneurial identity affects the relationship between experience of failures and entrepreneurial persistence, which implies that people with strong entrepreneurial identity will be more likely to perceive failures in a positive way. Moreover, Melo Filho et al. (2025) and da Silva and de Oliveira Lima (2023) suggest that identity formation and effectual logic go hand in hand.

The relatively small number of integrative ESI-LFF studies suggests a certain level of fragmentation in the field of current entrepreneurship research. The existing research tends to look at the issues of entrepreneurial identity and failure learning as separate phenomena despite their substantial interconnection in terms of conceptual frameworks. Identity affects the way failure is perceived, understood, and turned into learning experience, and repeated failures and recoveries in turn change the way individuals see themselves and approach entrepreneurship in general. Therefore, it becomes apparent that an integrated framework of theories is required to describe entrepreneurial identities evolving through repeated failures.

The last category consists of research that makes a direct connection between ESI/LFF and academic entrepreneurship outcomes. There are six research (13.1%) under this category. Despite being the smallest proportion in the sample analyzed, the significance of this category strategically cannot be understated due to its analysis of the direct influence of identity and learning on entrepreneurial behavior at universities. The articles by Obschonka et al. (2019) and Pattnaik et al. (2024) prove the significance of entrepreneurial passion, identity discrepancy, and entrepreneurial enthusiasm on the tendency of academics to participate in entrepreneurial projects. Similarly, Scorsatto et al. (2019) suggest that academic entrepreneurship becomes increasingly shaped by the interplay of institutional pressures, professional identity, and entrepreneurial mindsets. Overall, the topic-specific distribution reveals three important research tendencies. Firstly, identity-based approaches have become particularly prominent in entrepreneurship research, especially in universities characterized by a high degree of role uncertainty and professional multidimensionality. Secondly, entrepreneurial failure has become viewed primarily as a development-oriented process, rather than an end to entrepreneurial action. Finally, while the conceptual compatibility between entrepreneurial identity and learning through failure may be acknowledged, the practical integration of these fields has not been achieved. It is in connection with this gap in knowledge that a review such as this one becomes necessary, as there currently exists no clear theory that can explain the joint effect of both processes on academics' entrepreneurship.

The results show an important omission in academic entrepreneurship research. While previous works have provided essential knowledge regarding the role of entrepreneurial identity development and failure of experience as a learning process separately, there is still much to be known about how these factors influence each other within academic entrepreneurship journeys. The literature review bridges this omission by synthesizing scattered ideas from different literatures under a common umbrella.

4.2 Geographical Distribution of Included Articles

The geographic location of the scholarly literature reviewed gives insight into the geographic concentration, context focus, and institutional embedding of scholars in the

topics of entrepreneurial self-concept, failure-based learning, and academic entrepreneurship. It is found that despite the increasing diversification of literature geographically, the existing body of literature still exhibits uneven geographic distribution between different countries and institutional settings. Uneven geographic distribution has certain implications for theory building in entrepreneurship and its applicability to other higher education systems around the world.

The findings reveal that China is clearly the dominant empirical case study, making up five cases (10.9% of the reviewed cases). Research done in China, such as by L. Chen et al. (2023), H. Wang et al. (2022), and Scorsatto et al. (2019), focuses on themes like entrepreneurial identity centrality, entrepreneurship mission in universities, and entrepreneurial intentions by academic scientists and university students. The high presence of China can be attributed to its positive policy framework that supports innovative development, entrepreneurship by universities, and transformation of higher learning institutions. In addition, research by Xie, Luo, Zheng, and Ma (2022) and Zhang et al. (2022) highlights how Chinese entrepreneurship researchers incorporate psychological and behavioral approaches with institution and education.

The emphasis on Chinese studies makes it evident that rapidly changing innovation-based economies provide an ideal environment for the study of entrepreneurial identity formation and learning through failures. In the setting of Chinese universities, the expectation is growing that universities should function not only as centers of scientific knowledge but also as sources of technological innovation and entrepreneurial activity. Consequently, it becomes necessary for academic individuals to deal with competing academic and entrepreneurial demands, making entrepreneurial identity formation particularly relevant.

The United States constitutes the second largest empirical setting, featuring four papers (8.7%). Academic work carried out in the United States, such as Choi et al. (2024), Pattnaik et al. (2024), and N. A. Mmbaga et al. (2020), mainly focuses on role conflict, entrepreneurship, academic startups, and learning from failure experiences. The U.S. literature is distinguished by its high level of theoretical and methodological rigor, especially when dealing with identity dissonance theory, entrepreneurial passion, and organizational learning. Yamakawa et al. (2015) have also made important contributions to this line of research by highlighting the impact of cognitive perceptions of failure on venture development.

Both Germany and Pakistan have three papers each (6.5%), but there is a marked difference in the nature of the intellectual concern between the two countries. The papers from Germany, particularly those by Obschonka et al. (2015), Obschonka et al. (2019) and Obschonka, Silbereisen, and Schmitt-Rodermund (2022), highlight aspects such as entrepreneurial personality, self-identity, passion, and behavioral intention in institutionalized settings. Collectively, these papers reveal the importance of dispositional factors and identity-based cognition in entrepreneurship.

On the other hand, Pakistani research works like Asif et al. (2025), Munir et al. (2021), and Zubair & Khan (2023) highlight the aspects of contextual barriers, entrepreneurial intent, experience-based learning, and entrepreneurial failure in developing countries more explicitly. The Pakistani body of knowledge makes it clear that resource scarcity,

institutional volatility, and socio-cultural factors impact entrepreneurial thinking and learning differently than in developed nations. This becomes significant in that it is made apparent that entrepreneurial learning and identity building can only be comprehended by considering the context within which these take place.

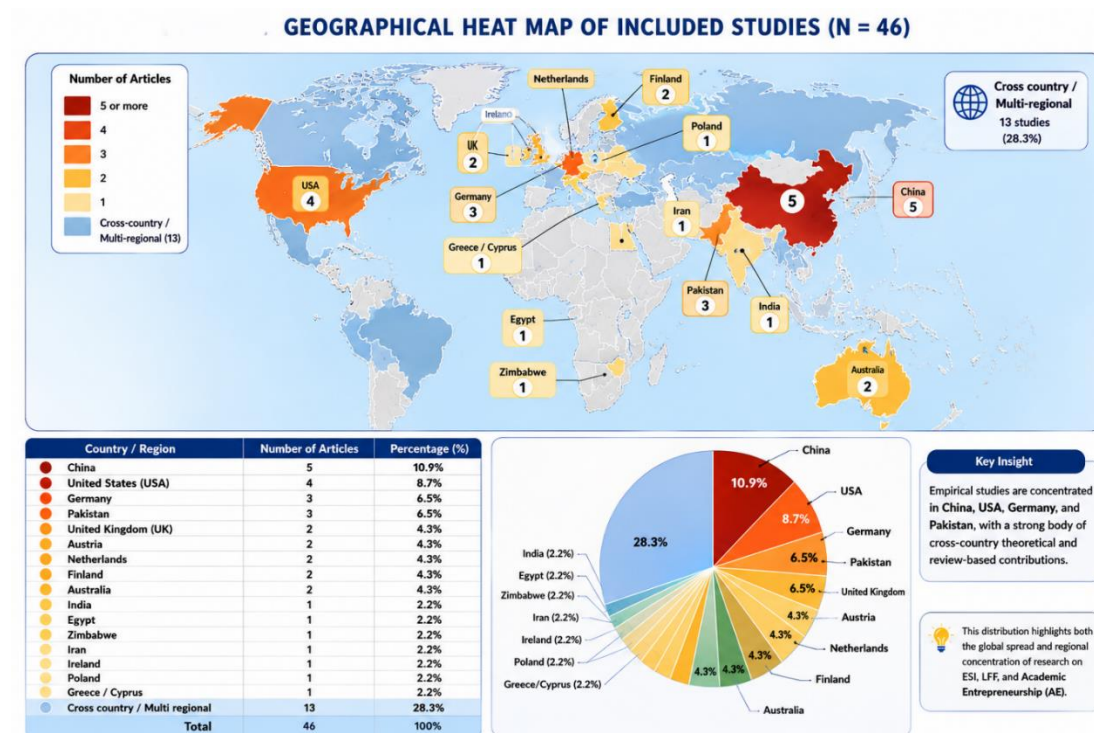


Figure 4.1
 Geographical Heat Map of Included Studies

Based on the literature reviewed, it is apparent that there is a relatively high concentration of research studies in certain parts of Europe, such as the United Kingdom, Austria, Finland, the Netherlands, Greece, Cyprus, and Poland. Studies in these regions tend to focus on issues related to identity hybridization, boundary negotiation, and the importance of institutional support systems in academic entrepreneurship environments. According to Giunti and Duberley (2023) and Mäkinen and Esko (2023), academic entrepreneurs regularly engage in identity management when dealing with conflicting institutional pressures. In addition, Majoor-Kozlinska et al. (2024) point out that hybrid identity plays an essential enabling role in facilitating entrepreneurial activity among scholars.

Cross-country and multi-regional studies form the biggest group in the overall literature with 13 studies (28.3%). This category includes works of different types including systematic literature reviews, theoretical frameworks, and comparative cross-country research conducted in several institutional and country settings. Examples include Radu-Lefebvre et al. (2021), N. Mmbaga et al. (2020), Filatotchev et al. (2019), and

(Asif et al., 2025). These are larger frameworks and comparative frameworks that can overcome shortcomings associated with single-country research. The dominance of cross-country studies indicates the realization on behalf of researchers of the fact that entrepreneurial identity development and failure learning is a global phenomenon influenced both by universal psychology and institutional settings.

In addition, geographical coverage also highlights several clear shortcomings within the current body of knowledge. First, despite the significant advances being made within the entrepreneurial landscape of these nations, these areas have been rather poorly studied. This particularly applies to Africa, Latin America, the Middle East, as well as large parts of South Asia. Although some interesting findings have been made through research carried out in Egypt, Zimbabwe, and Iran, these areas are still poorly understood. Secondly, much of the literature comes from more developed education systems and economies.

Third, the existence of cross-sectional empirical studies in certain national settings inhibits our understanding of the longitudinal development of entrepreneurial identities and processes of learning within different institutional settings. Entrepreneurship research is essentially entrenched in wider socio-economic, political, and cultural systems. Hence, the development of entrepreneurial identity within developing countries is likely to be inherently different from that found in advanced Western economies.

It is for such reasons that this geographical analysis brings into light the importance of undertaking such a systematic review. Academic studies up to now have been quite disunited and geographically scattered. Through combining research in developed countries and emerging economies, alongside cross-country research, this study has provided a broader knowledge of the dynamics between entrepreneurial self-identity and learning from failure within various academic entrepreneurship settings. The results of this study have further revealed the importance of undertaking future research which can explore this area across different institutions and cultures.

4.3 Distribution by Research Methodology

From the analysis of methodology used in the studies reviewed, some important implications can be drawn regarding epistemological foundations guiding current research efforts in the areas of entrepreneurial self-identification, learning through failure, and academic entrepreneurship. Specifically, one can notice that a vast majority of works reviewed (28 studies, which equals to 60.9%) rely on quantitative methodologies such as cross-sectional and longitudinal survey designs. Such methodology preference indicates an increasing focus on the testing of hypotheses, measures of variables, and models predicting various phenomena related to entrepreneurial cognition and identity construction.

Studies employing quantitative methodologies, such as Obschonka et al. (2015), H. Wang et al. (2022), and Scorsatto et al. (2019), use complex statistical techniques to uncover associations between measures of entrepreneurial identity centrality, entrepreneurial intentions, and participation in academic entrepreneurship. Similar approaches are followed by Zhang et al. (2022) and Zhao et al. (2024) who investigate associations between identity-related phenomena and behaviors in the context of

entrepreneurial failures. It is indicative of increasing sophistication of entrepreneurship research theories and their operationalization.

Nevertheless, reliance on survey-based methodologies brings about certain methodological challenges. Entrepreneurship and identity are extremely personal and temporal phenomena that are likely to have complex interplay with others, which would go unnoticed by merely using statistical research design. Negotiation of identity, emotional healing, and personal transformation often require a detailed analysis of social and psychological dynamics that are played out in specific timeframes.

Qualitative methodologies are used in 12 works (26.1%), thus providing a substantial alternative paradigm to positivism. The research conducted by Cope (2021), Giunti and Duberley (2023), and Rezaei and Ghaffari (2022) is based on interviewing entrepreneurs, analyzing their personal experiences using interpretative phenomenology, conducting ethnographic observations, and carrying out case studies. All these papers provide interesting insights into how entrepreneurs cope with failure and rebuild their identities.

Table 4.2:

Distribution by Research Methodology

Methodology	Number of Articles	Percentage (%)
Quantitative (cross-sectional / longitudinal surveys)	28	60.9%
Qualitative (interviews / case studies / ethnography / Q-methodology)	12	26.1%
Mixed-methods	4	8.7%
Systematic / theoretical reviews	2	4.3%
Total	46	100%

Moreover, the qualitative approach adds value to theory development by examining the role of emotions, symbols, and relationships within entrepreneurial activities often ignored in the strict use of quantitative techniques. For example, Taheri and van Geenhuizen (2021) and Williams & Shepherd (2022) demonstrate how entrepreneurial resilience and learning emerge through repetitive reflection, emotion regulation, and social interaction, instead of a straightforward cognitive process.

However, mixed-method research designs are significantly underrepresented in the current literature, amounting to only four articles (8.7%). The low percentage suggests that scholars in the field of entrepreneurship have yet to capitalize on the combined

strength of methodological triangulation. Considering the multifaceted nature of entrepreneurial identity and learning from failures, there is potential for mixed-method research to provide a competitive edge.

Moreover, only two papers (4.3%) constitute either systematic or theoretical review papers – these are Lattacher & Wdowiak (2020) and Asif et al. (2025). The scarcity of review papers underlines the fragmented character of current research and further strengthens the relevance of conducting a systematic review. The existing literature on the topic is highly disparate, covering various theoretical approaches, methodologies and even different disciplines. There is clearly an urgent need for integrating research that could create a cohesive framework of knowledge.

4.4 Distribution by Publication Year

An examination of the temporal trend of studies reviewed suggests a speedy and escalating growth in scholarship focused on entrepreneurial self-identity, learning from failure, and academic entrepreneurship between 2015 and 2025. While the number of pioneering studies on the topic was relatively small at the beginning of the review period, the frequency of publications sharply increased after 2021, indicating that there has been an escalating interest among scholars regarding the importance of identity and experiential learning in entrepreneurial ecosystems.

Between 2015 and 2020, the research trajectory involved building a theoretical framework on entrepreneurial identity, entrepreneurial cognition, and experiential learning from failure. Notable studies such as Obschonka et al. (2015), Cope (2021), and Yamakawa et al. (2015) provided significant theoretical and empirical groundwork for entrepreneurship research. At this stage, researchers primarily engaged in exploring the psychological origins of entrepreneurial behavior and the cognitive processing of negative experiences by entrepreneurs.

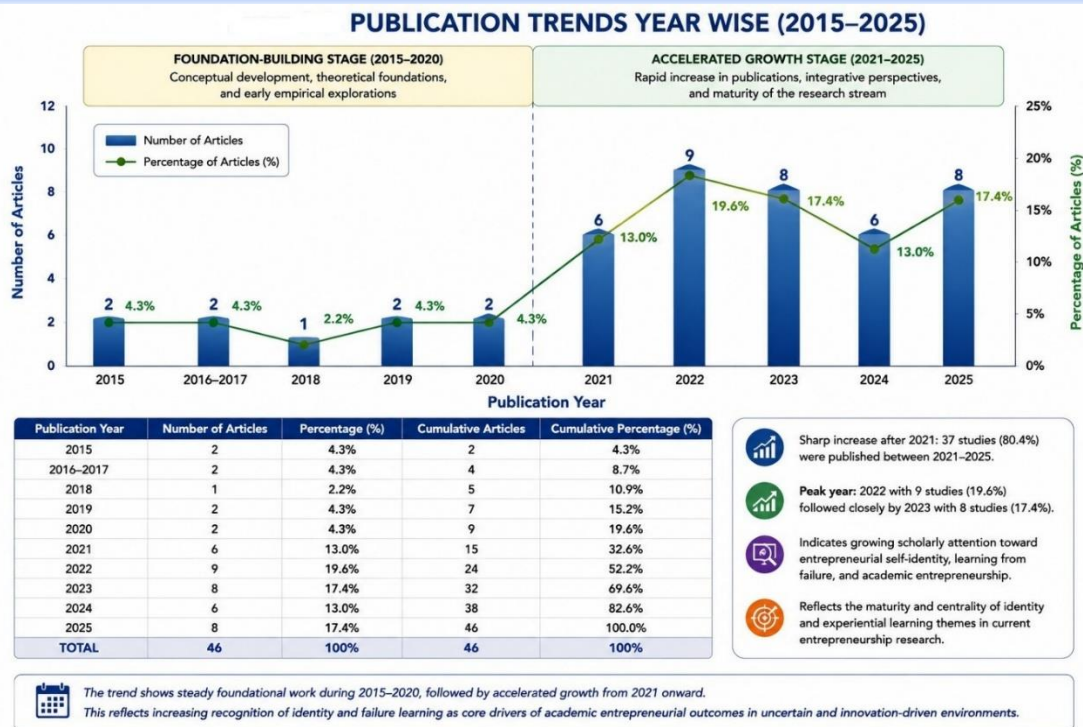


Figure 4.2:
 Publication Trend Analysis (2015–2025)

Since 2021, there has been a sharp increase in publication frequency, which means that 2022 and 2023 combined account for 17 publications (37.0%) out of the total body of literature reviewed. This sharp increase is reflective of numerous trends within the wider field of entrepreneurship around the world. The first trend relates to the increasing efforts by universities to emphasize entrepreneurial objectives with an emphasis on academic commercialization, innovation transfer, and entrepreneurial action.

The emergence of integrative literature has become increasingly evident in recent years, with scholars considering psychological, institutional, and behavioral aspects of their research. For instance, the works of Hayter et al. (2022), Pattnaik et al. (2024), and Zhao et al. (2024) show that the analysis of entrepreneurial identity and failure learning has become increasingly intertwined.

As a result, an upward trend in publication can be explained by the increasing integration of the scholarly discourse related to entrepreneurial self-identity and learning from failures. These concepts no longer represent merely marginal aspects of entrepreneurship studies but have become key determinants of entrepreneurial behavior in turbulent and innovation-oriented markets.

4.5 Distribution by Theoretical Framework

It becomes clear from the distribution of theoretical frameworks among all studies discussed above that the field of entrepreneurship has a multidisciplinary and varied

nature. It turns out that one cannot point to any dominating theoretical perspective in literature; on the contrary, various theories are combined to comprehend entrepreneurial cognition, identity formation, intention to act, and learning experiences. Theory of Planned Behavior is found to be used most often, being applied in 12 works (26.1%). Such studies as Obschonka et al. (2015), Rao and Chauhan (2021), and Ndofirepi (2022) examine the impact of entrepreneurship-related self-identity, perceived behavioral control, and subjective norms on intentions and behaviors of entrepreneurs. The popularity of TPB can be attributed to its ability to give a good explanation of intention-based actions in entrepreneurship.

Identity theory and social identity theory can be mentioned together because they cover 10 studies (21.7%). Researchers using identity theories, such as N. A. Mmbaga et al. (2020), Radu-Lefebvre et al. (2021), and Giunti and Duberley (2023), view entrepreneurship as an enactment of identity influenced by role expectation, social interactions, and professional prominence. These theories are particularly popular in academia-focused research because of their relevance to university-based researchers' experience of professional conflict of interests.

Table 4.3:

Distribution by Theoretical Framework

Theoretical Framework	Number of Articles	Percentage (%)
Theory of Planned Behavior (TPB)	12	26.1%
Identity Theory / Social Identity Theory	10	21.7%
Experiential Learning Theory	8	17.4%
Social Cognitive Theory / Social Cognitive Career Theory (SCCT)	7	15.2%
Self-Discrepancy Theory	4	8.7%
Institutional Theory	3	6.5%
Attribution Theory	2	4.3%

Experiential Learning Theory is the third most popular theory, found in eight articles (17.4%). Examples of literature that use Experiential Learning Theory include Cope (2021), Taheri and van Geenhuizen (2021), and Wdowiak et al. (2023). These articles explain how entrepreneurs can adapt behaviorally and cognitively based on their experience with failures using an experiential learning theory approach.

Social Cognitive Theory and Social Cognitive Career Theory together form the fourth most prevalent theoretical approach, featuring in seven articles (15.2%). Literature such as Zhang et al. (2022) highlights that entrepreneurial self-efficacy moderates the association between failure experience and entrepreneurial intention.

Other smaller but nonetheless theoretically important paradigms include Self-Discrepancy Theory, Institutional Theory, and Attribution Theory. According to Pattnaik et al. (2024), self-discrepancy theory is used for exploring how the discrepancies between real-life and idealized versions of entrepreneurs' identities affect their enthusiasm. The researchers use institutional theory to study academic entrepreneurship as well (Bruton et al., 2023; Scorsatto et al., 2019). Attribution-based frameworks, such as the one employed by Xie et al. (2022), explore how causal attributions affect the learning process and behavioral outcomes of entrepreneurs.

In general, the distribution of paradigms suggests that entrepreneurship research increasingly recognizes the multidimensionality of the behaviors of entrepreneurs and their simultaneous dependence on cognitive, identity-related, social, institutional, and experience-based factors. However, the fragmentation of the paradigms used demonstrates a clear need for an integrated approach to the issue at hand, one that could provide connections between the self-identity of academics, failures, learning, and consequences. Thus, this theoretical gap justifies the current systematic review.

5. Thematic Analysis

5.1 Thematic Mapping of Sub-Themes

This segment moves on from the basic concepts of ESI, LFF, and AE to explore the underlying themes that have been identified within the 46 selected studies. Instead of simply restating the obvious names of variables, this examination focuses on identifying subthemes, theoretical elaborations, context-specific variations, and process-related mechanisms that have emerged in literature. The resulting thematic framework reveals the evolution of this area from its initial focus on simplistic and static perspectives on traits to its increasing engagement with identity integration, boundary management, affect regulation, institutionalization, and failure-driven transformations.

The sub-themes below are analytic codes synthesized from the study focus, conceptual framing, and reported contribution of each paper. They are written as concise thematic phrases to support subsequent synthesis, comparison, and gap analysis.

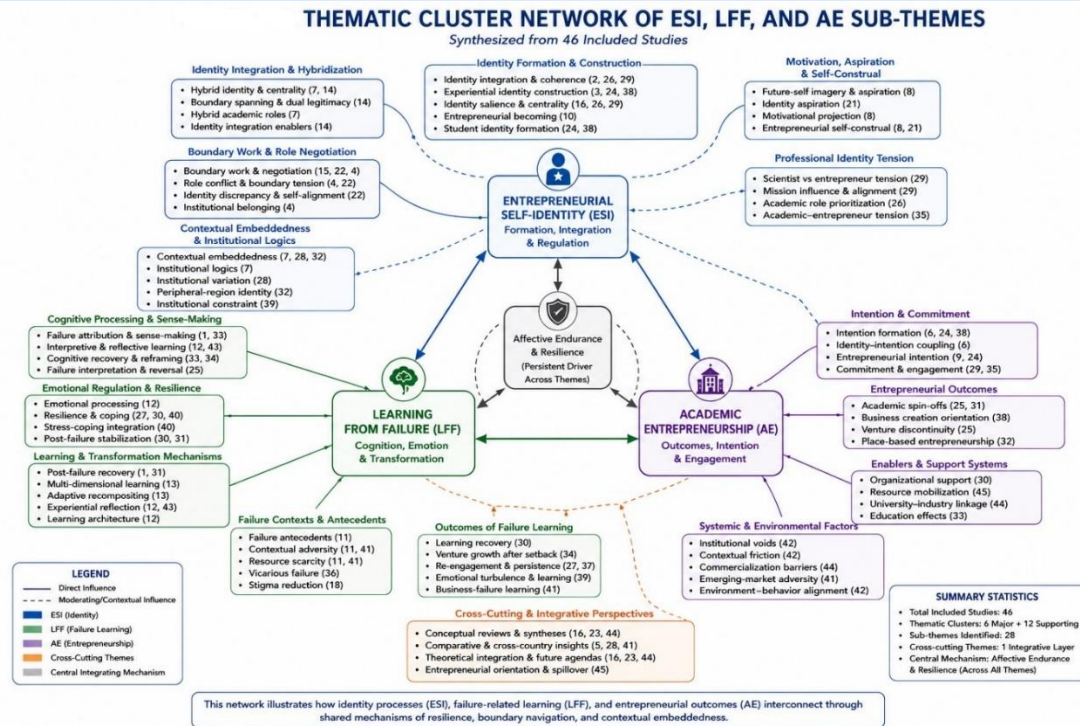


Figure 5.1.
 Thematic Cluster Network of ESI, LFF, and AE Sub-Themes

Table 5.1.
 Deep Thematic Analysis of the 46 Included Studies

No.	Short reference	Sub-themes and emergent concepts
1	Asif et al. (2025)	Failure attribution; reflective sense-making; post-failure recovery; resilience rebuilding
2	Chen et al. (2023)	Identity integration; role harmonization; dual professional selfhood; academic-entrepreneurial coherence
3	Chen et al. (2021)	Learning-by-doing; experiential identity construction; project-based self-formation; iterative identity refinement
4	Choi et al. (2024)	Role conflict; immigration-linked identity strain; boundary tension; institutional belonging
5	da Silva & de Oliveira Lima (2023)	Effectual reasoning; identity enactment; uncertainty navigation; action-based opportunity framing
6	de Melo Filho et al. (2025)	Cognitive readiness; psychological disposition; intention formation; identity-intention coupling
7	Giunti & Duberley (2023)	Work identity; contextual embeddedness; hybrid academic roles; institutional logics

8	Gregori et al. (2021)	Future-self imagery; identity aspiration; motivational projection; entrepreneurial self-construal
9	Hattab & Fahmy (2022)	Entrepreneurship education; identity socialization; pedagogical imprinting; student self-construction
10	Hayter et al. (2022)	Identity emergence; scientist-to-entrepreneur transition; entrepreneurial becoming; role adoption
11	Iqbal et al. (2024)	Failure antecedents; readiness for learning; contextual adversity; resource scarcity
12	Lattacher & Wdowiak (2020)	Failure sense-making; experiential reflection; emotional processing; learning architecture
13	Lattacher et al. (2024)	Holistic failure lens; multi-dimensional learning; adaptive recompositing; legacy extension
14	Majoor-Kozlinska et al. (2024)	Hybrid identity centrality; boundary spanning; dual-role legitimacy; integration enablers
15	Mäkinen & Esko (2023)	Boundary work; nascent role negotiation; professional domain crossing; identity experimentation
16	Mmbaga et al. (2020)	Identity salience; typological synthesis; antecedent mapping; future research agenda
17	Munir et al. (2021)	Personal capability effects; socio-demographic contingency; entrepreneurial readiness; capability differentiation
18	Murphy et al. (2024)	Failure perceptions; stigma reduction; classroom normalization; reflective openness
19	Ndofirepi (2022)	Gendered goal formation; self-belief differentiation; intention shaping; motivational asymmetry
20	Obschonka et al. (2019)	Entrepreneurial passion; personality configuration; affective energy; academic venturing drive
21	Obschonka et al. (2015)	Planned-behavior integration; identity aspiration; motivational predictability; self-regulatory intention
22	Pattnaik et al. (2024)	Identity discrepancy; enthusiasm regulation; self-alignment tension; affective commitment
23	Radu-Lefebvre et al. (2021)	Identity review; conceptual consolidation; hybrid role logic; research fragmentation
24	Rao & Chauhan (2021)	Student identity formation; intention emergence; educational imprinting; entrepreneurial orientation
25	Rezaei & Ghaffari (2022)	Academic spin-off recovery; failure interpretation; learning reversal; venture discontinuity

26	Soetanto et al. (2022)	Identity centrality; mission alignment; entrepreneurial salience; academic role prioritization
27	Taheri & van Geenhuizen (2021)	Resilience activation; emotional regulation; coping after setback; persistence restoration
28	Vamvakari & Stamelos (2022)	Comparative academic identity; institutional variation; contextual divergence; entrepreneurship compatibility
29	Wang et al. (2022)	Scientist-versus-entrepreneur tension; mission influence; identity centrality; commercialization commitment
30	Wdowiak et al. (2023)	Individual resilience; organizational support; learning recovery; post-failure stabilization
31	Williams & Shepherd (2022)	Team-level learning; longitudinal recovery; collective adaptation; spin-off endurance
32	Wurth et al. (2021)	Peripheral-region identity; regional embeddedness; local development; place-based entrepreneurship
33	Xie et al. (2022)	Causal attribution; entrepreneurial psychology; education effects; cognitive reframing
34	Yamakawa et al. (2015)	Cognitive recovery; venture growth after setback; strategic adaptation; post-failure opportunity logic
35	Zarea Fazlelahi & Obschonka (2023)	Passion valence; affective duality; role enthusiasm; academic engagement tension
36	Zhang et al. (2023)	Vicarious failure; self-efficacy spillover; aspiration adjustment; indirect learning pathways
37	Zhao et al. (2024)	Persistence under failure; identity moderation; re-engagement logic; endurance thresholds
38	Ziemianski & Golik (2020)	Education-mediated self-construction; business creation orientation; curricular influence; youth identity formation
39	Zubair & Khan (2023)	Phenomenological failure experience; institutional constraint; emotional turbulence; contextual learning
40	Ahmed et al. (2022)	Stress-coping integration; psychological resilience; entrepreneurial strain; adaptive recovery
41	Amankwah Amoah et al. (2022)	Emerging-market adversity; business-failure learning; recovery orientation; resource scarcity
42	Bruton et al. (2013)	Institutional voids; contextual friction; structural constraint; environment-behavior alignment
43	Cope (2011)	Interpretive learning; grief recovery; reflective transformation; experiential meaning-making
44	Filatotchev et al. (2019)	Commercialization barriers; university-industry linkage; system-level review; strategic agenda

45	Hughes et al. (2021)	Entrepreneurial orientation spillover; resource mobilization; family-business parallels; strategic posture
46	Obschonka et al. (2012)	Personal resource growth; trait activation; business creation pathway; developmental accumulation

5.1.1 Cross-Cutting Thematic Synthesis

Across the corpus, the most recurrent sub-themes are identity integration, boundary work, role conflict, future-self aspiration, failure attribution, emotional regulation, resilience rebuilding, organizational support, institutional voids, and commercialization commitment. Overall, these sub-themes show that the theoretical understanding of academic entrepreneurship has been moving from a static and attributional perspective towards a processual, contextual, and psychologically oriented perspective. Within the ESI stream, a focus is placed on hybrid identities, identity centrality, identity discrepancy, and negotiation of identities as a scientist and an entrepreneur. These sub-themes suggest that academic entrepreneurship involves not only the assumption of a certain role but also its integration into an institutional context through self-reflection and coping with conflicting identities. The sub-themes for the LFF stream include the meaning of failure, emotional healing, resilience mobilization, and learning amidst failure. Failure in this literature is seen as not just an outcome but as a stimulus for development, as long as reflection and learning are used to achieve coping, better judgment, and perseverance. As for research on academic entrepreneurship, the focus shifts to passion, enthusiasm, commercialization dedication, and organizational environment facilitating entrepreneurship at universities. Thus, it becomes clear that AE is now seen not as an individual behavior but rather as a process of identity maintenance and endurance driven by failures.

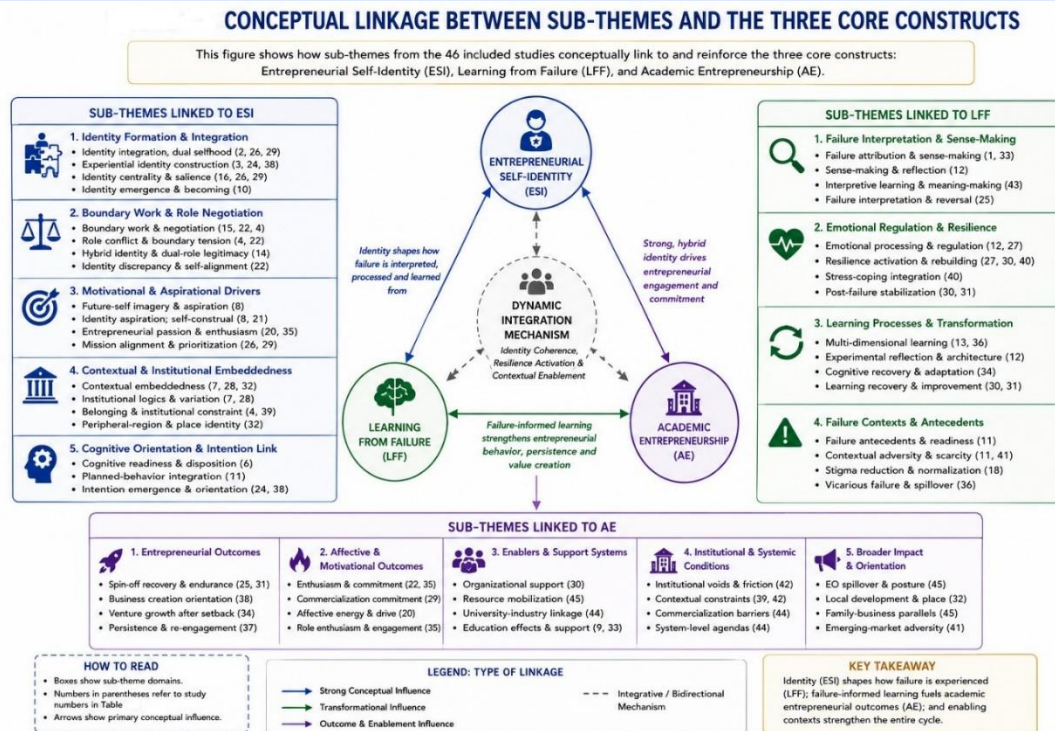


Figure 5.2. Conceptual Linkage Between Sub-Themes and the Three Core Constructs

The figure shows that entrepreneurial self-identity (ESI) and learning from failure (LFF) depend on each other. It lays out a five-stage cycle where entrepreneurial identity guides actions; those actions might result in failure. Then, you process that failure mentally and through behavior, learn from it, and use that learning to reshape your identity and get involved again. Instead of looking at ESI and LFF as separate things, the framework shows how they grow together over time. This is shaped by thoughts and feelings at the individual level, university goals and environment at the mid-level, and big-picture policies and cultures.

The figure also sets clear boundaries for ESI and LFF, distinguishing ESI from concepts like self-efficacy and passion, and LFF from resilience and emotional coping. However, there's a tricky dark side where a super strong entrepreneurial identity could push someone toward obsession, burnout, or stubbornness.

Overall, the model gives us a way to understand how identity and learning from failure work together to support entrepreneurship in academic settings, impacting both success and well-being.

6. Future Research Agenda

Systematic synthesis of forty-six peer-reviewed articles used in the present research shows that the interconnection between ESI, LFF, and AE constitutes a theoretically fragmented field, which despite being rich in terms of concepts, still lacks methodological consistency, context asymmetry, conceptual ambiguity, and theoretical

integration. While many studies make contributions to the understanding of the psychology, behavior, and institutions behind academic entrepreneurial activities, the current literature demonstrates certain limitations in terms of providing a holistic overview of interdependences between ESI, LFF, and AE (N. A. Mmbaga et al., 2020; Radu-Lefebvre et al., 2021).

Even more importantly, it should be mentioned that today, many researchers tend to focus only on one aspect of entrepreneurial identity or learning from failure but not on how these factors interact together in the context of academic entrepreneurship. Moreover, even though failure is gradually recognized as an important tool for entrepreneurship development, there is hardly any study addressing the issue of learning from failure in combination with identity centrality, emotion management, institutionality, and academic conflict when discussing long-term entrepreneurial engagement (Cope, 2021; Lattacher & Wdowiak, 2020). Thus, future studies should consider more process-based, dynamic, and context-related approaches to the phenomenon.

For the future direction of this area of study, a full-fledged research agenda needs to be established that not only tackles the issues of theory and empirical work but also helps construct an intellectual framework for integrating ESI, LFF, and AE. Based on the themes and gaps found in the forty-six selected articles, the following future research agenda is divided into four related dimensions: methodological progress, empirical considerations, theory building, and practical implications. Collectively, these four areas provide a systematic framework for developing the next wave of researchers studying academic entrepreneurship and entrepreneurial identity (Asif et al., 2025; Lattacher et al., 2024).

6.1 Methodological Advancements

From the methodological perspective, however, it becomes evident that the current literature is characterized by a strong prevalence of methods such as cross-sectional surveys, retrospectives, convenience sampling, and analyses of variance. While these methods have significantly contributed to our understanding of the concept under discussion, they simultaneously create serious restrictions for causality, time, construct validity, and context. In other words, further development in this domain requires a radical change of methods.

Firstly, in the future, scholars need to focus on processual longitudinal research designs that can capture the changing nature of both entrepreneurial identity and failure learning processes. At present, most studies conceptualize ESI and LFF as stable entities that can be assessed through a one-time cross-sectional study. Yet, it is well-known that entrepreneurial identity is highly dynamic and subject to continuous negotiation because of interaction with expectations, experiences, social acknowledgment, and failures of the scholar (Hayter et al., 2022; Mäkinen & Esko, 2023). Furthermore, learning from failures cannot be viewed as a sudden cognitive occurrence but as a complex process of development, which involves emotional recovery, reflection, and reengagement in entrepreneurial endeavors (Cope, 2021; Karimi et al., 2021). Therefore, longitudinal studies are crucial for exploring how the co-development of ESI and LFF unfold throughout different stages of an academic entrepreneur's career.

Using such longitudinal approach will help to uncover key transitions within an academic entrepreneur's career, such as identification of opportunities, venture initiation, commercialization failure, venture termination, as well as entrepreneurial recovery after failure. With the use of longitudinal research design, scholars will be able to explore reciprocal causality and understand which comes first – whether having a solid sense of entrepreneurial identity helps individuals learn from their failures, or vice versa, repeated failures create an entrepreneurial identity among researchers (Zhang et al., 2022; Zhao et al., 2024). Additionally, a temporal perspective will help to understand the process of identity reconceptualization after entrepreneurial failures. **Second**, future research needs to adopt an experimental or quasi-experimental approach for enhanced causality within the field. While the three topics have considerable practical importance, not one of the studies reviewed relied on randomized controlled trials or natural experiments. Thus, the existing literature is purely correlational. Hence, the need arises for future studies to conduct controlled interventions comparing different approaches for developing entrepreneurial skills, including identity building, resilience, emotional regulation, and failure reflection sessions (Gregori et al., 2021; Hattab & Fahmy, 2022).

Experimental studies will generate greater insights into the effectiveness of psychological and educational interventions in improving entrepreneurial self-efficacy and learning from failure. In other words, future research can compare the efficacy of entrepreneurship-identity building programs with traditional methods of educating academics about business planning in enhancing entrepreneurial persistence. Intervention studies can also test the impact of failure debriefing practices on entrepreneurial resilience, emotional recovery, and commercialization post-failure.

Third, it will be necessary for future studies in this field to move beyond the limits of using self-reports, employing a wide range of multiple methods and multiple sources. The preponderance of self-administration questionnaires creates considerable threats of common method variance, social desirability effects, retrospective distortion and overestimation of perception biases. Due to the highly contextual and socially situated nature of academic entrepreneurship, research in this area can greatly benefit from methodological plurality which would provide a means of examining both subjective experiences and objective outcomes (Ahmad & Bashir, 2023; Giunti & Duberley, 2023). This means that future research in this domain should use not only psychological self-reports but also archival data and behavior metrics, including numbers of patents, spin-off firms, licenses, industry collaborations, research outputs with potential commercial application, as well as venture survival rates from university technology transfer offices (Chen et al., 2023; Hayter et al., 2022). Researchers could further employ peer ratings, mentor evaluations, ethnography, diary studies, and interviews with narratives of practice as ways of uncovering the processes through which academic entrepreneurs enact their identities.

The fourth recommendation is that cross-cultural comparative research requires higher methodological expertise and a wider geographic scope. Even though previous studies include contributions from various countries, comparative research with the use of the same measuring tools, standardized sample designs, and cross-country analysis is far

from being plentiful. The comparative studies conducted thus far mostly concentrate on European settings, neglecting the variety of institutional and cultural characteristics in question (Bousfiha, 2020; Majoor-Kozlinska et al., 2024).

Therefore, it would be useful to conduct large-scale comparative research to explore the role of entrepreneurial identity and failure learning within collectivist and individualist societies, within high- and low-trust institutions, and within developed and developing entrepreneurship environments (Amankwah-Amoah et al., 2022; Bousfiha, 2020). To make sure about the validity of constructs in such settings, researchers need to employ measurement invariance analysis and multi-group CFA. Comparative researchers are especially well-equipped to explore the role of institutions in generating failure stigma, academic legitimization of entrepreneurial identity, and post-failure engagement in the context of academics' careers.

Fifth and lastly, qualitative methods require higher levels of theoretical refinement and analysis. Although some studies use interpretive phenomenology, ethnographic investigation, and narrative methodology, many qualitative contributions are still descriptive and not theoretical (Cope, 2021; Mäkinen & Esko, 2023). Therefore, future qualitative studies should incorporate more sophisticated forms of analysis such as grounded theory, discourse analysis, narrative process analysis, and template analysis to gain better theoretical insights into identity negotiation, emotion regulation, and entrepreneurial sense-making processes.

A vital direction for future research involves longitudinal qualitative investigations that can track the changing narratives of academic entrepreneurs over time. Techniques such as repeated interviews, shadowing, and ethnographic observation in university technology transfer environments will allow researchers to study how academic entrepreneurs construct their entrepreneurial identities, contest them, defend them, and reconstruct them by negotiating their actions within the context of institutional values, social interactions with peers, investors, and venture performance outcomes.

6.2 Empirical Priorities

In addition to improved methodology, there are several areas of substantive importance that have yet to receive sufficient attention in contemporary academic literature. The lack of coverage is both in relation to the population being investigated as well as to the environment, psychological processes, and behavioral patterns being analyzed. Thus, the research on academic entrepreneurship needs to expand its empirical scope to reflect the complex nature of the issue at hand.

Firstly, the research needs to shift away from its strong bias toward studying students and pay more attention to faculty members, post-doctorates, and academic scientists themselves. Many studies within the field of ESI focus on university students since they are convenient subjects for academic research and entrepreneurship education investigations (Omar, 2021; Ziemiński & Golik, 2020). However, the process of entrepreneurship practiced by an academic scientist differs significantly from that of students.

Any future studies should focus on sampling that will distinguish among the different subject areas in which the faculty operates, their types of institutions, and various stages in the academic careers of the individuals sampled. Studies that compare researchers

from STEM disciplines with those from social sciences/humanities would be highly valuable, since discipline culture is likely to play an important role in the legitimacy of entrepreneurship, centrality of the entrepreneurial identity, and risks associated with it. **Second**, developing countries, however, call for much more empirical evidence than is currently offered. Even though there are several studies conducted in Pakistan, India, Egypt, Iran, Zimbabwe, and China, the body of literature remains highly focused on Western and developed-economy viewpoints (Iqbal, Shakur, & Hashim, 2024). The uneven representation of developing regions poses certain theoretical challenges in that institutional features of nascent innovation hubs greatly differ from those in mature markets.

In fact, many developing countries have higher rates of institutional voids, excessive bureaucracy, lack of venture capital, poor intellectual property protection, inefficient commercialization, and stronger stigmatization associated with entrepreneurship failure among academics (Amankwah-Amoah et al., 2022; Bruton et al., 2023). All these features might significantly change the meaning behind the notion of entrepreneurial identity and its psychological impact on people's well-being. Thus, future empirical studies will have to explore such phenomena as resilience, institutional adversity management, and the development of hybrid identity in the face of opposing social pressures.

A special emphasis should be placed on comparative research in developing countries. Cross-country analysis in different parts of the world such as South Asia, Africa, the Middle East, and Latin America might help discover the impact of country-specific institutions, education, and culture on the process of identity formation and learning from failures. It would contribute much to the de-Westernization of entrepreneurship theories.

Third, Further research efforts should delve into the psychological dynamics linking ESI and LFF with entrepreneurial conduct with more analytical rigor. Current research has concentrated mostly on direct impact and rudimentary mediation analyses, whereas the psychological dynamics that transform identity and learning into consistent entrepreneurial actions have been overlooked (Obschonka et al., 2015; Zhao et al., 2024). As such, current knowledge does not yet explain satisfactorily why some scholars continue despite setbacks, whereas others become disillusioned and permanently withdraw from entrepreneurial pursuits.

Future research should therefore investigate the intermediary roles of entrepreneurial passion, frustration tolerance, emotional grit, psychological endurance, cognitive flexibility, self-compassion, and adaptive coping strategies. Multi-stage mediation and moderated mediation models would be particularly valuable for examining how entrepreneurial identity influences emotional regulation processes that subsequently shape entrepreneurial persistence. For example, scholars may examine whether strong ESI increases entrepreneurial passion, which then enhances frustration tolerance and ultimately predicts post-failure re-engagement.

Similarly, future studies should explore how emotional exhaustion, identity discrepancy, and role conflict weaken the positive effects of ESI on academic entrepreneurship. The emerging literature on hybrid identity and role conflict suggests

that academics frequently experience psychological tension when attempting to reconcile scientific norms with entrepreneurial expectations (Choi et al., 2024; Pattnaik et al., 2024). However, the emotional and cognitive consequences of such tensions remain insufficiently understood.

Fourth, the phenomenon of vicarious failure of learning represents one of the most neglected empirical frontiers within literature. Current literature is highly focused on studying the phenomenon of entrepreneurial failure directly, without examining how one learns from watching peers fail. However, in an academic context, many researchers may learn their most valuable lessons in entrepreneurship from witnessing the business ventures of others that have failed, not necessarily through their own personal experience with failure (Zhang et al., 2022).

In future research, it would be beneficial to explore how being exposed to the narratives of failure by peer's influences entrepreneurs' perceptions of their own identity aspirations, opportunities, risks, and resilience. Experimental approaches such as using vignettes, simulations, or narratives can prove helpful in uncovering the psychological impact of vicarious entrepreneurial failure. Also, future research needs to investigate whether a culture that openly discusses failure is better suited for vicarious learning and less stigmatizing of failed entrepreneurship ventures.

The fifth area for future research is related to the need for greater attention to be paid to the affective and emotional components of academic entrepreneurship. While current literature tends to highlight the importance of cognitive variables like self-efficacy, centrality of the entrepreneurial identity, and intentions to act, there is very little attention being paid to the emotions, affective commitment, and psychological well-being of the entrepreneurs (Obschonka et al., 2019; Pattnaik et al., 2024).

Entrepreneurship is an inherently emotional process that entails feelings of uncertainty, disappointment, excitement, anxiety, aspiration, and perseverance. Future studies should investigate the role played by the following constructs: entrepreneurial excitement, emotional energy, affective resilience, entrepreneurial grief, emotional exhaustion, and psychological flourishing in the context of academic entrepreneurship. Longitudinal research on emotional development will help explain how emotions develop through different phases of the entrepreneurial endeavor.

6.3 Theoretical Development

Despite the development of significant theoretical insights into the concepts of ESI, LFF, and AE in the literature over time, a coherent theoretical base for these constructs is yet to emerge. The current studies apply concepts from the theories of identity, social cognition, institutions, experiential learning, attribution, and planned behavior, among others, in a selective manner, often without synthesizing the different theories (N. A. Mmbaga et al., 2020; Radu-Lefebvre et al., 2021).

First, Scholars in the future should seek to develop an integrative model of process that captures the dynamic relationship between entrepreneurial self-identity and failure learning as part of the entrepreneurship academic trajectory. Literature in this case usually considers ESI and LFF separately instead of recognizing the interrelation and dynamism in their interaction. However, theoretical reasoning suggests that entrepreneurial identity influences one's understanding of failure experiences and, at

the same time, helps shape the development of entrepreneurial identity based on LFFs (Zhang et al., 2022; Zhao et al., 2024).

Future theoretical studies should clearly outline the timeline as well as interconnections between processes such as identity formation, entrepreneurial actions, experience of failure, recovery from emotions, learning from reflection, and re-engaging with entrepreneurship. These types of models should identify antecedents, mediators, moderators, and outcomes of such processes in different entrepreneurial contexts. Moreover, scholars should think about entrepreneurial identity not in terms of a stable trait, but a dynamic cognitive-emotional structure shaped by entrepreneurial experiences.

Second, it is critical to achieve more theoretical integration between institutional and psychological approaches. Today, most of the psychological literature tends to use the institution environment as just a contextual factor but not as an active explanatory tool of explaining entrepreneurial thoughts and actions (Bruton et al., 2023; H. Wang et al., 2022). Yet universities represent institutions whose operation is driven by norms, incentives, legitimacy processes, and professions, which heavily impact identity formation and entrepreneurial activity.

Therefore, the further development of theoretical models must consider the importance of institutions as tools for identity formation. It is important to study how different elements of universities such as mission statements, promotional mechanisms, disciplinary cultures, entrepreneurship policy, etc., can be used as institutional signals that either strengthen or weaken the importance of entrepreneurial identity.

Third, A more rigorous theorization of the process is required to explain how entrepreneurial identity changes and develops. The research literature is currently focused on variance theory, which considers the static relations between independent and dependent variables (Cope, 2021; Mäkinen & Esko, 2023). This approach provides a lot of useful information but cannot be used to understand how identities are formed, transformed, destabilized, and stabilized during the entrepreneurial process.

It is important to rely more on theories related to identity work, narrative identity, and sensemaking to treat entrepreneurial identity as a dynamic developmental process. It is necessary to analyze the crucial moments when identity transformations occur, including venture failure, interaction with others, institutional acknowledgment, mentoring, and entrepreneurial success. Process theories will prove helpful when analyzing the shift from an understanding of entrepreneurship as something externally imposed on entrepreneurship being an indispensable part of one's professional identity.

Fourth, Future researchers need to clarify the boundary conditions between entrepreneurial self-identity (ESI) and learning from failure (LFF) and other concepts. Based on the available literature, there is considerable conceptual overlap between entrepreneurial identity, passion for entrepreneurship, entrepreneurial self-efficacy, entrepreneurial orientation, resilience, and coping (Ahmed et al., 2022; Obschonka et al., 2019). Such conceptual ambiguity reduces construct validity and inhibits further theoretical development.

Therefore, future theoretical development must ensure clear boundaries between entrepreneurial identity and other concepts, including capability beliefs, emotional

investment, behavioral orientation, and coping strategies. Entrepreneurial self-identity is best conceptualized as the degree to which entrepreneurship forms an integral part of one's self-concept. Similarly, learning from failure can be distinguished from resilience, emotional recovery, and coping strategies through emphasis on its cognitive and behavioral aspects.

Finally, Future theoretical research should focus on the dysfunctional aspects of entrepreneurial identity in academic settings. Current theoretical perspectives suggest that stronger entrepreneurial identity leads to positive results such as resilience, innovativeness, and commercialization. However, too high an identity salience level may lead to obsessive passion, irrational commitment escalation, emotional exhaustion, and an extended commitment to unsuccessful ventures (Obschonka et al., 2022; Zhao et al., 2024).

Therefore, future theoretical studies should be dedicated to the dark sides of entrepreneurial identity among academics, focusing on the influence of over-identification with entrepreneurship on psychological well-being, decision-making, and academic role conflict.

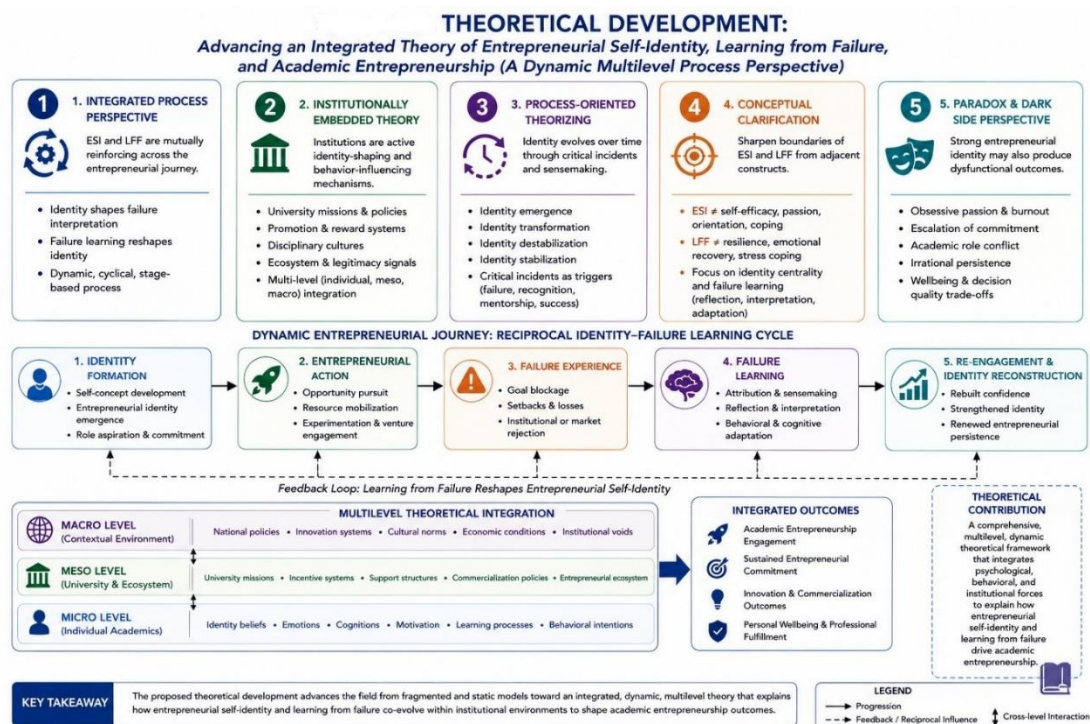


Figure 6.1.
 Theoretical Development

6.4 Practical and Translational Implications

The practical relevance of the literature review is much broader than mere theory building. It can be stated that there are significant managerial ramifications about how

universities should develop entrepreneurship ecosystems, commercialization practices, and innovation-driven academic culture. Consequently, future studies should pay increased attention to translational orientations that would help translate theoretical findings into management practice.

First, Universities must shift from the prevailing resource-oriented model of entrepreneurship support to one which consciously emphasizes entrepreneurial identity formation. University entrepreneurship support programs today primarily focus on resource-oriented interventions, such as access to capital, infrastructure development, intellectual property management, and consultancy services. While these are essential, they fail to account for the psychological aspects associated with entrepreneurship (Seo et al., 2024; H. Wang et al., 2022).

The next steps for translational research on this topic thus involve developing and accessing interventions geared towards fostering entrepreneurial identity in academics. Possible interventions could include storytelling interventions related to entrepreneurship, mentoring programs focused on identity, learning communities, identity-oriented workshops, and symbolic awards recognizing entrepreneurial excellence within academia. What is especially important about these interventions is that they would help resolve identity conflicts through supporting academics in merging their scientific and entrepreneurial identities (Khalid, Rabbani, & Anwar, 2020).

Second, Failure-based learning processes should be institutionalized through structured systems at universities and in technology transfer offices. As is evident from relevant literature, failures do not guarantee learning, because learning only occurs when there are active reflection, emotional processing, and re-evaluation of cognitive understanding of the situation (Cope, 2021; Lattacher et al., 2024). Currently, however, there is no framework that universities employ to help academics learn from their entrepreneurial failures.

Translational activities in the future should focus on creating structured debriefing systems for failed entrepreneurial activities. The system should include both the cognitive and the emotional aspect of learning to ensure that people learn from failures through identifying mistakes, challenging assumptions, emotional processing, and developing adaptive behavior. Cultures that embrace entrepreneurial failure would minimize the fear and stigma associated with commercialization failure in academia.

Third, Incorporating the psychological and identity components in entrepreneurship education programs is a major challenge that requires significant change to these educational programs. Traditional models of education often focus on developing skills, which include business planning, marketing, financial analysis, and venture management, without paying attention to building an identity, being resilient, and learning through adaptability (Hattab & Fahmy, 2022; Ziemianski & Golik, 2020).

Thus, future educational programs should involve reflective learning, resilience training, emotion regulation techniques, constructing a narrative identity, and simulated failure scenarios. Through such educational innovations, academic entrepreneurs can be trained for more than just launching an entrepreneurial venture.

Fourth, Reward structures in higher education institutions require a complete rethinking process to avoid role conflict and increase the legitimacy of academic

entrepreneurship. In most universities, the present system of promotion and tenure still focuses on journal publication, funding, and instructional performance, with only minor emphasis placed on patenting, spin-out, and business partnerships (Giunti & Duberley, 2023; Scorsatto et al., 2019). Therefore, many academics view entrepreneurship as a professional risk or threat to their identity.

Thus, further studies from a policy perspective will focus on exploring different institutional approaches that can incorporate entrepreneurship in the core academic function. This might involve the introduction of entrepreneurial professorship lines, metrics for entrepreneurial outcomes, interdisciplinary innovation positions, and reward schemes that recognize scholars' contributions to both research and entrepreneurship.

Fifth, Psychological welfare needs to be considered in future research on translational research in academia. Being an entrepreneur involves many factors that can make academics feel anxious, insecure, and distressed. Nevertheless, today's entrepreneurship programmers at universities seldom include any counselling and support measures that consider the specific problems of entrepreneurial academics (Ahmed et al., 2022).

Therefore, future research on entrepreneurship in academia should focus on the inclusion of counselling, resilience training, peer support, and other measures aimed at fostering psychological well-being in entrepreneurial academics.

Finally, in terms of future policies, the emphasis needs to be put on developing such entrepreneurial ecosystems that facilitate experimentation, allow for smart failures, and promote plurality of identities at universities. For universities to achieve the status of innovation organizations that compete on the global scale, there is a need to create an environment in which entrepreneurial experimentation is viewed not as a deviation from academics' identity but an extension of their influence on society (Rizki & Susanto, 2021; Scorsatto et al., 2019).

From this standpoint, future translational research will focus on exploring ways in which universities, together with government agencies, investors, and corporate partners, can co-create such ecosystems that encourage entrepreneurial risks while providing opportunities for reflection and building psychological resilience.

7. Summary of the Future Research Agenda

In conclusion, a new research agenda that emerges from this systematic review entails making a radical change both intellectually and methodologically in studying the topics of Entrepreneurial Self-Identity, Learning from Failure, and Academic Entrepreneurship. Current knowledge demonstrates that entrepreneurial identity and failure learning are not separate elements; rather, they are interlinked processes embedded in larger systems of institutions, culture, emotions, and behavior. However, contemporary research faces numerous obstacles related to methodological linearity, theoretical fragmentation, contextual bias, and lack of translational perspective.

Thus, four related priorities must be pursued in tandem for the advancement of the field. Methodologically, there is an obvious need for researchers to use longitudinal, experimental, mixed-methods, and process-focused approaches to capture the dynamics of entrepreneurial identity and failure learning. Empirically, future research needs to

move from focusing solely on students' experiences to exploring those of faculty entrepreneurs in multiple institutional and cultural contexts. Theoretically, there is a requirement for researchers to integrate fragmented models and develop process-based frameworks for explaining interactions between different components of entrepreneurial development. Practically, universities and policymakers should consider reshaping their entrepreneurship ecosystems by creating conditions not only conducive to successful commercialization but also supportive of academic entrepreneurs' personal growth and identity formation.

The overall direction that academic entrepreneurship literature needs to take is that of acknowledging its human developmental dimension, with entrepreneurship being a developmental process at universities influenced not only by technicalities but also by issues of identity, sense-making, and emotionality. Thus, future research can advance theory and create a foundation for developing more resilient, entrepreneurial, and innovative universities around the world.

8. Conclusion

This systematic literature review looks at how Entrepreneurial Self-Identity (ESI), Learning from Failure (LFF), and Academic Entrepreneurship (AE) connect. Using forty-six peer-reviewed studies, it aims to understand the psychological and developmental processes behind entrepreneurial involvement in universities better. Rather than looking at pieces of academic entrepreneurship, this review focuses on how identity and learning from failures shape entrepreneurial actions, perseverance, and results. So, it shows that these two aspects are key in driving entrepreneurial efforts in an academic setting.

Addressing the **first research question**, the review shows there's a lot of different theories out there but not much in the way of them fitting together nicely. Identity Theory is used the most for looking at how academics balance their scholarly selves with being entrepreneurs. Alongside this, Social Cognitive Theory, the Theory of Planned Behavior, Experiential Learning Theory, Attribution Theory, and Institutional Theory all add valuable pieces to the puzzle, motivation, sticking with things, learning, and context. Yet, these ideas aren't really connected to form one big picture. Because of this, we don't fully get how identity changes, dealing with failure, and getting engaged in entrepreneurship fit together. There's still this need for new models that can explain how cognition, behavior, emotions, and institutions all interact through an academic's entrepreneurial path. So, to sum up, researchers ought to develop these integrative views to really capture the whole story.

In relation to the **second research question**, the review outlines a research approach mainly using cross-sectional surveys, self-reports, and convenient samples. While these give useful correlational data, they only partially explain how entrepreneurial identities form, grow, and react to setbacks over time. There's less use of longitudinal, experimental, and mixed methods, which limits our understanding of how entrepreneurship evolves and impacts results. Also, focusing too much on students and new professionals makes it harder to apply findings to older entrepreneurs dealing with complex work environments. So, future studies should use process-focused and multi-

source methods that capture how entrepreneurial identity changes and adapts over different contexts and experiences.

The **third research question** looked at how Entrepreneurial Self-Identity (ESI) and Learning from Failure (LFF) impact academic entrepreneurial outcomes. Studies show that ESI is a strong psychological base that influences how people recognize opportunities, intend to start businesses, get involved in ventures, keep going through tough times, and engage in commercial activities. When folks see being an entrepreneur as a big part of who they are, they're more willing to deal with institutional hurdles and stick to their entrepreneurial plans despite the risk and failures. At the same time, Learning from Failure is a key skill that lets individuals turn bad experiences into useful knowledge, smart strategies, and a boost in motivation. Crucially, the review found that ESI and LFF don't just operate on their own. They feed each other: your view of yourself as an entrepreneur shape how you perceive and learn from failures. Plus, what you learn from those failures can reshape and reinforce your identity as an entrepreneur. This cycle seems super important for understanding what keeps entrepreneurs going long-term and helps them succeed in academic settings.

The **fourth research question** lays out some major gaps that hold back theory development in this field. One big issue is the lack of process-based models that show how entrepreneurs' identities evolve, get tested, rebuilt, and maintained over time. Another key problem is the scarcity of studies on the links between how entrepreneurs see themselves and large failures – you know, stuff like emotions, thoughts, and actions involved in those journeys. Things like resilience, passion, self-control, identity tweaking, mood bouncing back, and reconsidering past decisions are barely looked at, even though they seem super relevant. Also, there's way too much focus on Western contexts. We need way more insight into developing countries, since they have totally different challenges and systems. Furthermore, hardly anyone talks about the downsides of having an entrepreneurial identity, like getting burned out from constant stress, conflicts in roles, feeling stretched too thin, or just not knowing when to quit after hitting bumps in the road.

The findings suggest that we look at academic entrepreneurship as a dynamic developmental process, not just a fixed result. For professors to handle research, commercializing knowledge, and institutional demands, building a coherent entrepreneurial identity and effectively learning from failures seem important. Thus, instead of focusing on just static or variance-based reasons, future studies should use long-term, multi-level, and process-oriented views that show how identity, learning, and entrepreneurial actions grow together. By looking at all these parts in one big picture, researchers can better understand how academics get involved in entrepreneurship and help universities create strong, innovative communities. This kind of research won't just build solid theory; it'll give real-world advice to colleges aiming to boost their role in innovation and knowledge transfer in today's super competitive global economy.

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