

Review

Academic Inbreeding in Higher Education Systems: A Systematic Literature Review and Theoretical Synthesis

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Abstract: The purpose of this study is to outline academic inbreeding across higher education systems. Academic inbreeding, the practice of higher education institutions hiring their own doctoral graduate, remains a controversial phenomenon. While more traditional literature often portrays it as a barrier, recent shifts in global academic dynamics, exacerbated by the post-pandemic era, necessitate a fresh systematic evaluation of how this topic is studied. Adhering to PRISMA (Preferred Reporting Items for Systematic Reviews and Meta Analyses) 2020 guidelines, this study examined 29 articles ($n = 29$) published in SSCI ($n = 16$) and ESCI ($n = 13$) indexed higher education journals between 2005 and 2026. Specifically, it addresses two research questions; methodological approaches and focal themes related to academic inbreeding. In line with the purpose of the study, Web of Science and Springer databases were searched with the keywords determined. The findings indicate that the literature on academic inbreeding primarily emphasizes three thematic areas: contextual and institutional determinants, the correlation with research productivity and knowledge production, and concerns regarding academic mobility. Methodologically, there is a pronounced prevalence of quantitative designs, succeeded by qualitative studies, with a minimal application of mixed-method approaches. Based on the findings, it seems important to emphasize that academic inbreeding must be recognized as a multifaceted issue influenced by institutional, cultural, and systemic dynamics within higher education systems. The study moves beyond descriptive summaries by proposing an integrative conceptual framework that reconciles contradictory findings on inbreeding's systemic impacts, offering actionable implications for administrators and policy makers.

Keywords: Academic Inbreeding; Institutional Inbreeding; Higher Education

1. Introduction

Academic inbreeding (also known as institutional inbreeding) refers to a practice by which one concludes a PhD at a given university, then is hired as an academic by the same university [1]. Rather than requiring academics to remain at their doctoral institution throughout their entire careers, academic inbreeding primarily concerns the institutional continuity between doctoral training and subsequent academic employment. Horta [1] deepens this explanation by providing a taxonomy for the academic careers within inbreeding and states that faculty members are categorized into five distinct career trajectories based on their institutional mobility relative to their doctorate-granting university: pure inbreds who are entirely immobile; mobile inbreds, inbreds with external pre-doctoral or postdoctoral experience; silver-corded, the academics who worked elsewhere before returning to their school; adherents academics who moved once to a new institution and remained there, and non-inbreds who are highly

mobile academics employed outside their doctoral institution with experience across multiple universities. This taxonomy illustrates that academic inbreeding should not necessarily be understood as a lifelong employment relationship with the doctorate-granting institution; rather, it encompasses different trajectories characterized by varying degrees of institutional mobility. Understanding the different conceptualizations of academic inbreeding is important not only for defining the phenomenon but also because differences in its operationalisation may lead to different analytical results concerning research productivity, collaboration, and networking behaviours. Understanding the different definitions of academic inbreeding is important, not only to define the phenomenon but also because different operationalisations of the definitions can lead to different analytical results on its effects on research productivity, collaborations, and networking behaviours [2].

Although academic inbreeding policies and practices seem universal and functional, there are still unaddressed issues on the contested character of the institutional and research culture it produces [3]. While some systems, such as those in North America, have historically discouraged the practice to foster diversity, others in Europe and Asia have relied on it to maintain institutional stability [4]. The impact of hiring practices on scientific output has come under increased attention as the race for research excellence heats up globally. Thus, academic inbreeding has been a significant topic in higher education systems.

Academic inbreeding is globally widespread, present in both large, small, developing, and developed higher education systems, and it is so because it is a key part of the evolution of any higher education and academic research systems [5]. According to Tavares et al. [6], inbreeding can be seen as being traditionally linked with the bureaucratic dimension of universities. Academic inbreeding ranges from pure inbreds, where faculty only ever study and work at one university, to non-inbreds, or faculty like trans-scholars who work at several universities but studied at none of them [1]. Despite the growth in research on academic work and outcomes, academic inbreeding (also known as institutional inbreeding), continues to be an understudied dimension [1]. Whether inbreeding is a good or a bad practice is an important question. The answer to this question is important because inbreeding is one of the elements of recruitment that a university can manage directly. However, there is no definitive answer to this question. Academic inbreeding has frequently been associated with lower scientific productivity and publication performance, other studies have found no observable differences between inbred and non-inbred faculty, indicating that its effects on research productivity remain inconclusive [7]. Numerous empirical studies examine the effects of inbreeding on an individual (or group) level and explore the link between inbreeding and publication productivity—the most easily measured academic scientific output. However, the results are controversial [8]. Academic inbreeding continues to be a challenge for many universities in both developed and developing higher education systems, and it is not easy to mitigate or eradicate. The practice has been studied from several standpoints, using a variety of methodologies, but efforts to conceptualize academic inbreeding have been limited [2].

Early studies positioned inbreeding as innately negative, while more recent studies have contributed to a more complex appreciation of the phenomenon, finding that inbreeding can be associated with both positive and negative outcomes and that it should be understood as a far more nuanced, contextualized practice [9]. Albeit extensive literature has pointed out negative effects of inbreeding on many aspects of higher education [6]. To illustrate, a problem affecting faculty socialization, is the institutional faculty hiring trend in Mexican higher education institutions, known as “academic inbreeding,” in which undergraduate or graduate students from a specific institution tend to be hired, once they finish their studies, as faculty members for that same institution. This trend can be associated with the following. International studies about the academic profession. Altbach [10] has found that professional or disciplinary loyalty is stronger than campus loyalty in academia [11]. Hence, academic inbreeding has been a contested issue in scholarly literature. Although academic inbreeding policies and practices seem universal and functional, there are still unaddressed issues on the contested character of the institutional and research culture it produces [3].

According to Sarrico and Alves [12], inbreeding is prevalent and, encouraged by accreditation requirements, there is a danger that academics will obtain their doctorates where they work for convenience, rather than because their research is significantly contributing to the body of knowledge in the area. For institutions aiming to hire and promote on the basis of scientific merit, awareness of the systemic bias of internal career progression could help identify mechanisms which are more inclusive: for example, providing language courses for international postdocs, communicating performance criteria more transparently to aspiring academics, and introducing norms or rules that limit academic inbreeding and incentives to stimulate mobility [13].

Positive effects of inbreeding have been considered more explicitly in recent studies, including in maturing educational systems [14]. Horta and Yudkevich [5] argue that inbreeding may have positive effects on the early development of higher education systems and that its negative consequences only show up in later stages of maturity. In this view, it may have benefits in terms of knowing a candidate's previous education abilities, experiences and social fit within a group. Apart from that, the university's short-term recruitment process of its graduates shortens the process of seeking candidates, reduces various costs, and removes the risk of election of a candidate who may be a less well-known and false choice from the outside [15].

The purpose of this systematic review is to critically synthesize recent scholarly contributions to the discourse on academic inbreeding within high-impact (SSCI/ESCI) journals from 2005 to 2026. By systematically mapping the methodological designs and focal thematic points, this study seeks to provide a contemporary baseline for understanding how inbreeding is evaluated in the academic environment. Within this aim, this study addressed the following research questions:

1. What methodological approaches and research designs are used in SSCI and ESCI-indexed studies on academic inbreeding?
2. What focal themes and research domains are associated with academic inbreeding in SSCI and ESCI-indexed higher education research?

Purpose of the Study

Despite the growing volume of scholarly work on academic recruitment and higher education governance, the literature on academic inbreeding remains fragmented and methodologically disconnected. While existing reviews have predominantly offered descriptive or region-specific overviews of inbreeding practices, they often lack a rigorous, systematic synthesis of recent empirical developments—particularly within the post-2020 landscape, where global faculty mobility and institutional accountability mechanisms have undergone substantial shifts. Furthermore, previous studies frequently treat academic inbreeding through a binary perspective (evaluating it strictly as either a detrimental barrier to scientific excellence or a functional tool for institutional stability), without offering an integrative theoretical framework that accounts for how these outcomes vary across institutional contexts, system maturity levels, and research methodologies. The current study analyses the nature of the academic inbreeding as a concept in higher education systems. The findings of this study may contribute to develop an understanding of academic inbreeding. Although academic inbreeding has been widely discussed across higher education systems, the literature remains fragmented in terms of conceptualization, operationalization, and reported outcomes. Studies on academic inbreeding have accelerated for two decades however, the literature is short in terms of evidence that focused on the key themes and research patterns of academic inbreeding. This systematic review synthesizes how academic inbreeding has been defined and studied internationally. Thus, this study promises to guide further studies on the topic.

To bridge these critical gaps, this systematic literature review yields three distinct contributions to the higher education literature. First, regarding methodological transparency and mapping, it systematically delineates the empirical landscape across SSCI- and ESCI-indexed higher education journals from 2005 to 2026 by adhering to PRISMA 2020 reporting standards and MMAT (Mixed Methods Appraisal Tool) quality appraisal procedures, thereby establishing a transparent, rigorous, and reproducible baseline of how academic inbreeding is operationalized and investigated globally. Second, moving beyond mere descriptive listings of individual study outcomes, it provides a theoretical synthesis that reconciles contradictory empirical findings—such as the enduring tension between research productivity deficits and institutional social cohesion. Third, it constructs an integrative conceptual framework that systematically links the structural antecedents of academic inbreeding (e.g., institutional age and national recruitment governance) with its underlying mediating processes and ultimate systemic outcomes, thereby offering actionable insights and policy recommendations for university administrators, higher education leaders, and educational researchers.

2. Methods

This systematic review was conducted and reported in compliance with PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta Analyses) statement [16]. By adhering to this updated reporting guidance,

the study provides a transparent, complete and accurate account of the rationale, methodology (including the selection of the studies), and findings of the research. The identification, screening, eligibility, and inclusion of primary studies were systematically conducted in full compliance with the PRISMA 2020 statement [16]. The comprehensive literature search across Web of Science (SSCI and ESCI) and SpringerLink platforms initially yielded a total of 70 records. After removing 18 duplicate entries, the remaining 52 records underwent title and abstract screening against the pre-established inclusion criteria. During this phase, 15 records were excluded due to a lack of direct focus on academic inbreeding or because they fell outside the higher education discipline.

The full texts of the remaining 37 reports were retrieved and rigorously evaluated for eligibility. A total of 8 articles were excluded during the full-text assessment phase for specific, documented reasons: (1) published in non-SSCI or non-ESCI indexed journals ($n = 5$), and (2) peripheral or superficial engagement with academic inbreeding without empirical or conceptual synthesis ($n = 3$). Ultimately, 29 studies ($n = 29$) met all eligibility criteria and were included in the systematic review. The complete selection flow, along with detailed records at each stage, is illustrated in the PRISMA 2020 Flow Diagram (Figure 1).

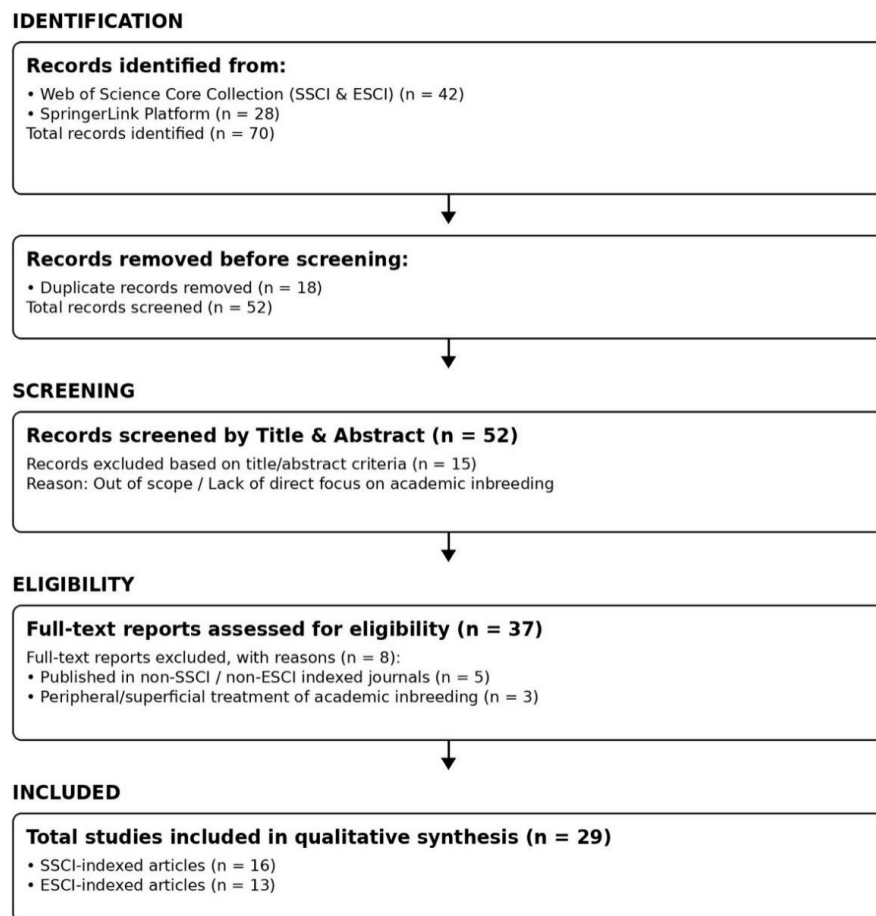


Figure 1. PRISMA 2020 Flow Diagram for the Systematic Literature Review Process.

Note: Adapted from Page et al. (2021) [16]. SSCI = Social Sciences Citation Index; ESCI = Emerging Sources Citation Index.

As stated before the study examines academic inbreeding in higher education systems through a systematic review within qualitative research method. A systematic review aims to bring evidence together to answer a pre-defined research question. This involves the identification of all primary research relevant to the defined review question, the critical appraisal of this research, and the synthesis of the findings [17]. The systematic review, also known as the “research synthesis,” aims to provide a comprehensive, unbiased synthesis of many relevant studies in a single document [18]. Systematic reviews provide educational researchers with fruitful guidance for future research [19]. What is more systematic review is simply a way of accessing research knowledge; in this sense it is

a piece of research in its own right. Systematic reviews synthesise the results of primary research, use explicit and transparent methods, and are accountable, replicable and updateable [20]. A systematic review is the synthesis of findings from research studies included in the review, conducted by comprehensively searching all published studies in a given field in order to answer a clinical question or provide a solution to a problem. This process involves using various inclusion and exclusion criteria, evaluating the quality of the studies, and determining which studies should be included in the review [21–24].

To ensure high methodological rigor and reproducibility, explicit inclusion and exclusion criteria were established. The dataset for the current systematic review was created by choosing articles for analysis from respected journals in the field of higher education. Two distinct standards were set out to identify the journals into the study. The journals must, first and foremost, have a high indexing position in the Social Sciences Citation Index (SSCI) and in the Emerging Social Sciences Index (ESCI). The journals were also chosen according to their publishing year. Therefore, the current study focused on the studies conducted on academic inbreeding from 2005–2026. Particular inclusion and exclusion standards were set for this systematic review. Inclusion and exclusion criteria are listed as below:

1. This study included the studies that specifically focused on academic inbreeding. Therefore, we excluded the studies conducted in other research areas.
2. As the studies on academic inbreeding has accelerated for two decades, this study included the studies conducted in the period from 2005–2026.
3. This study investigated the key themes and methodological approaches within academic inbreeding studies. Hence, the other elements of the studies were not included.
4. This study was conducted on the SSCI and ESCI-indexed studies.
5. This study was conducted within the journals of higher education.

The review was restricted to empirical and conceptual articles published in journals indexed within the Social Sciences Citation Index (SSCI) and the Emerging Sources Citation Index (ESCI) between 2005 and 2026. SSCI and ESCI coverage was selected specifically to guarantee that all included studies underwent rigorous, double-blind peer review within high-impact higher education outlets. Non-indexed journals, conference proceedings, book chapters, editorials, and early access articles were excluded to maintain structural consistency and avoid duplicate reporting of preliminary data. Furthermore, the search was limited to English-language publications to ensure standardized synthesis across international contexts; non-English studies were excluded due to potential inconsistencies in translation and peer-review normalization across different national indexing platforms.

In accordance with these eligibility criteria, the search was conducted within a predefined set of journals directly relevant to the field of higher education. The SSCI-indexed journals included *Higher Education*, *Higher Education Policy*, *Higher Education Research & Development*, *The Journal of Higher Education*, *Research in Higher Education*, and *Studies in Higher Education*. The ESCI-indexed journals included *Higher Education Quarterly* and *European Journal of Higher Education*. The selection of these journals was based on their explicit focus on higher education institutions, policies, academic work, organizational structures, and related scholarly practices, thereby ensuring substantive alignment between the journal scope and the objectives of the present systematic review.

To evaluate the methodological quality and reliability of the primary studies the Mixed Method Appraisal Tool [25] was systematically applied. MMAT was chosen due to its validated capacity to evaluate diverse study designs—including quantitative, qualitative, and mixed-methods research—using a unified appraisal protocol. Two independent reviewers evaluated each study against the specific screening criteria corresponding to its methodological design (e.g., clarity of research questions, appropriateness of data collection, and integration of qualitative/quantitative components). Methodological quality scores were calculated, and studies were categorized based on their adherence to MMAT standards.

To sum up, 16 publications from 6 higher education journals in SSCI-index and 13 publications in 2 higher education journals in ESCI-index were examined in this study; **Table 1** shows the distribution of these articles according to their indexing and publication years.

Data synthesis was conducted following a systematic, multi-stage thematic synthesis protocol designed for qualitative and systematic literature reviews. To ensure methodological transparency and analytical rigor, the coding process integrated both inductive and theory-driven (deductive) approaches. In the initial phase, an inductive

line-by-line coding of the primary findings and results sections of the included studies was performed to extract initial descriptive codes without forcing predefined conceptual constraints. In the second phase, these descriptive codes were deductively organized into broader analytical themes aligned with established theoretical constructs in higher education literature. To maximize inter-researcher reliability and eliminate individual coding bias, the analysis was executed independently by two researchers. Discrepancies regarding code definitions and theme boundaries were thoroughly discussed during consensus meetings until 100% inter-coder agreement was achieved. The refined coding scheme was subsequently applied to the remaining dataset to establish the final three overarching thematic domains.

Table 1. The number of articles on academic inbreeding in SSCI and ESCI indexes.

Publication Year of the Journal	SSCI Journals	ESCI Journals
2008	1	-
2013	1	-
2015	2	-
2016	1	-
2017	1	-
2018	-	-
2019	-	1
2020	-	7
2021	-	2
2022	2	1
2023	4	-
2024	1	1
2025	2	1
2026	1	-

Note: SSCI Publications in Total: 16; ESCI Publications in Total: 13.

3. Findings

The present study examined the focal themes and the research designs in the studies of the concept of academic inbreeding in higher education journals through a systematic review. The findings of the current study were categorized into two main areas: the first one is the focal points of academic inbreeding studies in higher education journals and the methodological designs of academic inbreeding studies in higher education journals.

As we mentioned before, one of the parameters followed in the current review of 29 articles was their methodology. By analyzing the methodology parts of the chosen articles, they were classified according to their methodological designs in **Table 2** below.

Table 2. Methodological Designs of Academic Inbreeding Studies in Higher Education Journals.

Methodological Designs	SSCI Journals	ESCI Journals
Qualitative	4	6
Quantitative	11	7
Mixed-Method	1	-
Total	16	13

Table 2 indicates that the field is predominantly dominated by the studies which were conducted within quantitative research designs with a total of 18 studies. Moreover, 10 studies utilized qualitative research method. **Table 3** also shows us that just 1 of the studies were conducted with a mixed-method research technique.

Table 3. Focal Themes in Academic Inbreeding Studies.

Overarching Theme	Themes	Representative Studies	Frequency
Institutional Determinants	Institutional age, system maturity, national academic cultures, insularity, and organizational habitus.	Padilla [11]; Tavares et al. [6,7]; Seeber and Mampaey [26]; Gokturk and Yildirim-Tasti [3]; Grochocki and Cabello [14]; Dalgliesh [27]	n = 7
Research Productivity	Scientific output, publication performance, citation impact, research originality, peer review quality, and boundary-making.	Horta [1]; Arimoto [28]; Lovakov et al. [8]; Shibayama [29]; Karadag and Ciftci [30]; Lai et al. [31]; González-Sauri and Rossello [32]; Horta and Santos [33]; Civera et al. [34]; Panova and Slepkykh [35]	n = 10

Table 3. *Cont.*

Overarching Theme	Themes	Representative Studies	Frequency
Academic Mobility & System Integration	Internationalization, career progression across institutions, cross-border mobility, and national certification standards.	Sarrico and Alves [12], Tavares et al. [36]; Seeber et al. [13]	n = 3
Ethics, Power & Governance	Academic prestige stratification, guild power, accountability, ethical dilemmas, and organizational social class.	Macfarlane and Jefferson [37]; Tyurikov et al. [38]; Caballero et al. [39]; Chiang [40]; Gokturk and Horta [2]	n = 5
Recruitment Policies & Institutional Logics	Faculty hiring mechanisms, labor market dynamics, talent management, closed employment practices, and institutional rules.	Henningsson and Geschwind [41]; Horta et al. [42]; Horta et al. [43]; Jones and Jefferson [44]	n = 4
Total		n = 29	

While the literature is predominantly dominated by quantitative research designs ($n = 18$), followed by qualitative inquiries ($n = 10$) and sparse mixed-methods applications ($n = 1$) a granular cross-analysis reveals significant temporal, geographical, and journal-specific differentiations. Examining methodological choices across three distinct temporal phases (Phase I: 2005–2014; Phase II: 2015–2019; Phase III: 2020–2026) demonstrates a clear shift in how academic inbreeding has been operationalized. As detailed in **Table 2**, early research (2005–2014) relied almost exclusively on descriptive qualitative case studies to conceptualize institutional hiring practices. Between 2015 and 2019, quantitative designs surged, driven by the expanding availability of national faculty bibliometric databases. In the most recent era (2020–2026), quantitative research remains dominant ($n = 10$), reflecting an intensified focus on measuring research productivity under global accountability standards, while qualitative studies have pivoted toward examining faculty socialization and ethical governance amidst post-pandemic institutional shifts.

Rather than viewing individual studies in isolation, the primary objective of a systematic review is to synthesize primary literature into a higher-level conceptual framework. Reevaluating the reviewed dataset ($n = 29$) through an analytical lens reveals that the scholarship on academic inbreeding revolves around five core, interconnected thematic domains: (1) Institutional and Contextual Determinants, (2) Research Productivity and Knowledge Production, (3) Academic Mobility and System Integration, (4) Ethics, Power, and Governance, and (5) Recruitment Policies and Institutional Logics. As presented in **Table 3**, this thematic categorization illustrates the shifting research focus from simple descriptive counts to structural and behavioral dynamics within higher education systems.

Table 3 illustrates the focal themes of academic inbreeding within higher education publications. The literature that was examined demonstrates that the research on academic inbreeding has progressed from straightforward descriptions of academic institutions to more in-depth analyses of academic ecosystems. A synthesis of the fundamental themes that were discovered in the papers that were examined may be broken down into three primary dimensions. The first one is the factors that are related to institutions and the nation.

Synthesizing these five thematic domains reveals crucial systemic interactions within higher education systems. Studies focused on Research Productivity ($n = 10$) constitute the largest proportion of the literature, reflecting the global administrative emphasis on bibliometric performance. However, when cross-referenced with Recruitment Policies ($n = 4$) and Institutional Determinants ($n = 7$), a systemic pattern emerges closed recruitment practices and institutional age act as structural antecedents that directly mediate faculty productivity and network enclosure. Furthermore, emerging scholarship under Ethics and Governance ($n = 5$) demonstrates that accountability measures and prestige stratification increasingly intersect with inbreeding practices, forcing universities to balance local social cohesion against internationalization standards.

A considerable body of study has been conducted on the contextual elements that contribute to the phenomenon of inbreeding. According to Tavares et al. [6], there is a distinction between colleges that have been there for a long time and those that have just recently been created. This suggests that the age of the institution plays a factor in the hiring trends. It has been demonstrated through geographically specific research, such as those conducted by Padilla [11] in Mexico and Dalglish [27] in Japan, that inbreeding is frequently deeply ingrained in the local teacher recruitment processes and the national academic cultures of the respective governments. What is more, the influence on the production and dissemination of knowledge is another dimension.

There is a significant amount of concern over the functional effects that inbreeding has on academic endeavors. Horta [1], Arimoto [28], Lovakov, Yudkevich and Alipova [8], Karadag and Ciftci [30], Lai, Shi and Lam [31], González-Sauir and Roasello [32], and Civera et al. [34] all investigate the relationship between inbreeding and academic production in their respective studies. These studies especially investigate how employment practices influence the dissemination of research knowledge and the overall volume of scientific production. They frequently question if inbreeding restricts the intellectual diversity that is required for high-level research. Finally, the mobility and integration of systems are also another focal point in the studies reviewed. Recently, there has been a shift in the focus of academic research toward the systemic consequences of inbreeding within the standards of higher education around the world. Sarrico and Alves [12] establish a connection between inbreeding practices and formal certification procedures, bringing to light the possibility that internal recruiting may be in conflict with quality assurance norms. Furthermore, the work of Seeber et al. [13] presents the essential counter-perspective of mobility, presenting it as an essential mechanism to combat the potential stagnation that is brought about by academic institutions that are inbred.

There are also studies that focus on the possible reasons and drawbacks of academic inbreeding. Chiang [40] mentioned in the conclusion of his study that strong aversion to academic inbreeding was evident, with concerns about negative impacts on both individual career development and institutional competitiveness highlighted. Tyurikov et al. [38] on the other hand presents a 'talented' inbreeding method as a result of their study to highlight the potential effects of academic inbreeding.

4. Results

The present systematic review examined how academic inbreeding has been conceptualized and investigated in higher education research, with particular attention to the focal themes and methodological approaches represented in the selected studies. The findings indicate that the literature is concentrated around three interconnected dimensions: first, institutional and contextual determinants of academic inbreeding, second, its relationship with research productivity, knowledge production, and academic performance, and the final one, academic mobility, career progression, and system integration. The methodological analysis further demonstrates a strong predominance of quantitative designs, whereas qualitative approaches are more frequently used to investigate recruitment processes, institutional cultures, and contextual mechanisms. The limited use of mixed-method designs is particularly noteworthy because the phenomenon itself involves measurable outcomes as well as institutional, cultural, and individual processes. Taken together, these findings suggest that academic inbreeding should not be treated as a single recruitment practice with uniform consequences, but rather as a context-dependent phenomenon embedded in the organizational and structural characteristics of higher education systems. Methodologically, the literature exhibits a clear divide based on the designs of the studies. Research examining the effects of inbreeding on academic production and knowledge exchange [1,28] primarily employs quantitative methodologies to identify statistical relationships. In contrast, studies focused on the fundamental mechanisms of recruitment and institutional culture [11,27] prefer qualitative case studies to elucidate the subtleties of national academic institutions. Recent academic endeavors [12] have commenced utilizing mixed method approaches to reconcile institutional metrics with qualitative quality assurance criteria.

The first major finding of the review is that academic inbreeding is strongly associated with institutional characteristics, national academic traditions, recruitment structures, and the developmental stage of higher education systems. This finding is consistent with previous research demonstrating that academic inbreeding varies considerably across national and institutional contexts. For example, Tavares et al. [6] showed that the prevalence of academic inbreeding differs according to the characteristics and historical development of universities, while Padilla [11] demonstrated how internal recruitment can become embedded in national academic cultures. More recent evidence from Brazil similarly indicates that academic inbreeding is not distributed uniformly across institutions, fields, regions, or institutional prestige levels; rather, it is particularly concentrated in established and prestigious research institutions [14]. These findings support the present review's conclusion that institutional age, prestige, academic traditions, and labor-market structures should be considered when interpreting the prevalence and consequences of inbreeding.

Importantly, however, the reviewed literature also challenges the assumption that institutional inbreeding is inherently dysfunctional. Horta and Yudkevich [5] argue that academic inbreeding may perform a developmental

function in emerging higher education systems, particularly where universities need to retain qualified academic personnel and maintain institutional continuity. In such contexts, recruiting graduates who are already familiar with the institution may reduce recruitment costs, preserve organizational knowledge, and facilitate institutional stability. Thus, the apparent contradiction between studies presenting inbreeding as harmful and studies identifying potential benefits may partly reflect differences in the maturity, structure, and capacity of higher education systems. Academic inbreeding may therefore have different meanings at different stages of institutional development. What may function as a mechanism for institutional consolidation in an emerging system may become a source of intellectual closure when the system becomes more mature and internationally competitive. This interpretation is important theoretically because it suggests that academic inbreeding should be understood not simply as an individual-level employment characteristic but as an organizational and system-level phenomenon. In other words, the consequences of hiring one's own graduates depend partly on whether the institution has sufficient mechanisms for introducing external knowledge, alternative perspectives, and academic networks. Consequently, the critical issue may not be the mere presence of inbred academics, but the extent to which internal recruitment is accompanied by mechanisms that preserve intellectual openness.

The second major theme identified in the review concerns the relationship between academic inbreeding and research productivity, knowledge production, originality, and collaboration. The literature provides particularly inconsistent findings in this area. Some studies report negative relationships between inbreeding and scholarly productivity, whereas others identify weak, conditional, or even positive relationships. This inconsistency is not merely a disagreement among researchers; rather, it appears to reflect differences in definitions of inbreeding, productivity measures, academic roles, institutional contexts, and research environments. For example, Lovakov, Yudkevich, and Alipova [8] found no difference between inbred and non-inbred academics in current publication productivity among Russian academics, but identified lower cumulative productivity among inbreds over the course of their careers. This distinction is important because it demonstrates that the relationship between inbreeding and productivity may change depending on whether productivity is examined at a particular point in time or longitudinally. Similarly, Karadag and Ciftci [30], using a large dataset from Turkish higher education, reported negative associations between academic inbreeding and individual and institutional research productivity, including publications, citations, and project activity. These findings are broadly consistent with the dominant interpretation identified in the present review that prolonged institutional closure may constrain academic performance.

However, the negative interpretation is not universal. Research from Brazil provides an important counterpoint. Grochocki and Cabello [14] found substantial variation in the prevalence of inbreeding across institutional types, disciplines, regions, and ranking levels, suggesting that the consequences of inbreeding cannot be separated from the environment in which it occurs. More recent research further complicates the relationship between inbreeding and productivity. Panova and Slepykh [35] for example, show that the relationship differs according to whether academics are primarily research-oriented or teaching-oriented. Among research-focused academics, inbreeding may facilitate access to institutional resources, whereas among teaching-focused academics it may be associated with lower publication activity in top-tier journals. Similarly, Panova and Slepykh [35] found that the relationship between inbreeding and productivity varies according to institutional and regional environments: in prestigious institutions or contexts with limited alternative employers, the negative relationship may be weak or absent, whereas stronger negative associations emerge in other environments.

These apparently contradictory findings suggest that academic inbreeding should not be conceptualized as a direct and uniform cause of lower productivity. Instead, its effects may be moderated by institutional resources, academic role, disciplinary environment, labor-market structure, and opportunities for external interaction. This interpretation also helps explain why the studies reviewed in the present research do not produce a single consistent conclusion. Rather than asking whether academic inbreeding "increases" or "decreases" productivity in general, future research should ask under what institutional and individual conditions academic inbreeding is associated with particular forms of academic performance.

The same argument applies to knowledge exchange and research collaboration. Tavares et al. [36] found that inbred academics in Portuguese higher education had smaller research networks and a greater concentration of co-authorship within their own institutions. This finding supports the concern that closed recruitment can reinforce local academic networks. Nevertheless, the existence of strong internal collaboration should not automatically be interpreted as evidence of poor research performance. Internal networks can provide access to institutional re-

sources, mentoring, and established research infrastructures. The potential problem arises when internal networks become substitutes for external intellectual engagement rather than complements to it. Thus, the central theoretical issue is not simply the density of internal collaboration but the balance between institutional embeddedness and external connectedness.

The third major theme identified in the review concerns academic mobility. The reviewed literature increasingly positions mobility as a potential mechanism through which the negative consequences of institutional closure can be reduced. This finding is consistent with Horta and Yudkevich [5] who emphasize internationalization and mobility as possible strategies for mitigating the risks associated with academic inbreeding. Similarly, Seeber and Mampaey [26] demonstrate that institutional career rules and language requirements can unintentionally reinforce inbreeding by creating barriers for external and international candidates.

The findings of Seeber et al. [13] provide further evidence that mobility is not merely an individual career choice but is embedded in institutional career structures. Their analysis of the Flemish university system showed that internationally mobile and foreign researchers had lower probabilities of internal promotion in systems without strong mechanisms limiting inbreeding. This finding introduces an important paradox: universities may simultaneously promote internationalization rhetorically while maintaining career structures that advantage locally trained academics. Therefore, academic mobility policies alone may not be sufficient. Mobility needs to be accompanied by recruitment and promotion systems that recognize and reward external academic experience.

From this perspective, academic mobility can be understood as a form of boundary-crossing that introduces alternative knowledge, networks, research practices, and professional norms into an institution. Conversely, excessive reliance on internal recruitment may strengthen institutional homogeneity by reproducing the same academic networks and expectations over successive generations. The significance of mobility, therefore, extends beyond geographical movement; it concerns the circulation of intellectual capital across institutional boundaries. Nevertheless, the reviewed literature also suggests that mobility should not be treated as an unconditional solution. If mobile academics face disadvantages in promotion, language barriers, limited access to institutional resources, or weaker local networks, mobility itself may become a career penalty rather than a mechanism for academic diversification. The challenge for higher education policy is therefore to create institutional environments in which external experience is genuinely valued rather than formally encouraged but informally disadvantaged.

The methodological findings of the review reinforce these substantive conclusions. Eighteen of the 29 studies employed quantitative designs, whereas 10 used qualitative approaches and only one employed a mixed-method design. The dominance of quantitative research is understandable because publication counts, citations, collaboration patterns, mobility histories, and institutional characteristics can be operationalized relatively easily. Quantitative approaches are particularly valuable for identifying patterns across large academic populations and for testing relationships between inbreeding and measurable outcomes. However, the predominance of quantitative designs may also contribute to the fragmented understanding of the phenomenon. Quantitative indicators can demonstrate that inbred and non-inbred academics differ in productivity, mobility, or collaboration, but they are less capable of explaining why institutions continue to recruit internally, how academics experience internal career pathways, or how institutional cultures shape perceptions of merit and belonging. The qualitative studies included in the review address some of these questions by examining recruitment practices, institutional logics, and national academic cultures. Yet the very limited use of mixed methods indicates that the field has not sufficiently integrated these two levels of explanation. A stronger methodological direction would therefore combine longitudinal quantitative evidence with qualitative accounts of academic careers and institutional decision-making. Such designs could clarify whether observed productivity differences emerge because inbreeding itself affects scholarly behaviour or because particular types of institutions and individuals are more likely both to practice inbreeding and to produce specific research outcomes. In this respect, future studies should pay greater attention to selection effects, institutional heterogeneity, disciplinary differences, and career-stage effects rather than interpreting associations as direct causal relationships.

The findings contribute to the theoretical understanding of academic inbreeding in three ways. First, they support a shift from a deficit-oriented perspective toward a contextualized institutional perspective. Academic inbreeding should not be regarded as intrinsically positive or negative. Its consequences appear to depend on the interaction between institutional maturity, labour-market conditions, research resources, mobility opportunities, and academic roles. Second, the findings suggest that academic inbreeding can be conceptualized through the ten-

sion between institutional embeddedness and intellectual openness. Internal recruitment can strengthen organizational memory, social integration, and institutional commitment, but excessive embeddedness may limit exposure to alternative ideas, methods, and networks. The theoretical problem is therefore not internal recruitment per se, but the point at which institutional embeddedness becomes institutional closure.

Third, the findings indicate that academic inbreeding is simultaneously an individual, organizational, and system-level phenomenon. At the individual level, it may influence career trajectories, productivity, and access to networks. At the organizational level, it shapes recruitment, socialization, and institutional culture. At the system level, it interacts with academic labour markets, mobility policies, quality assurance mechanisms, and national traditions. Future theoretical models should therefore integrate these levels rather than treating academic inbreeding exclusively as an individual characteristic.

The findings also have several implications for higher education policy and institutional management. First, universities should avoid blanket policies that simply prohibit the hiring of their own graduates. Such an approach may be particularly problematic in developing or geographically constrained higher education systems where the external academic labour pool is limited. Instead, institutions should establish transparent and competitive recruitment procedures that allow internal candidates to compete with external applicants under comparable criteria. Second, universities should develop mechanisms that preserve the benefits of institutional continuity while reducing intellectual closure. Examples include requiring external evaluation in recruitment and promotion, encouraging postdoctoral or visiting experiences at other institutions, supporting international research collaboration, and incorporating evidence of external academic engagement into career evaluation. Third, mobility should be supported not only at the early-career stage but also throughout academic careers. The evidence reviewed indicates that external and international mobility can interact with internal promotion systems in complex ways. Therefore, universities should ensure that mobile academics are not systematically disadvantaged by informal institutional expectations, language requirements, or locally embedded career rules.

Finally, research assessment systems should avoid relying exclusively on publication counts when evaluating the effects of academic inbreeding. Because productivity may vary according to academic role, institutional resources, career stage, and disciplinary context, evaluation frameworks should incorporate broader indicators such as research collaboration, international engagement, originality, knowledge exchange, and contribution to institutional research capacity.

Overall, the findings of this systematic review indicate that the central question is not whether academic inbreeding is inherently beneficial or harmful. Rather, the more analytically productive question is under what conditions, through which mechanisms, and with what consequences does academic inbreeding operate? The literature increasingly suggests that its effects are contingent upon institutional maturity, research environments, academic roles, mobility opportunities, and recruitment structures. Accordingly, future scholarship should move beyond the binary distinction between “inbred” and “non-inbred” academics and examine the broader institutional configurations within which academic careers develop. Such a shift would provide a more comprehensive explanation of why similar recruitment practices may produce different outcomes across higher education systems.

To the best of our knowledge, this evaluation would give future research on academic inbreeding direction and guidance, particularly regarding methodological considerations and the focal themes related to academic inbreeding. Like most of the review studies, this study has some limitations that should be taken into consideration when interpreting the findings. First, except for publications that are not SSCI or ESCI-indexed, this study offered particular perspectives on the publications about academic inbreeding within higher education under SSCI and ESCI indexed studies. Hence, future research may be conducted by a more extended picture of academic inbreeding.

5. Conclusion

Recommendations and Limitations

Based on the structural and methodological trends identified in the current systematic review, further recommendations can be given for future researchers. First, there is a distinct shortage of longitudinal and empirical studies tracking the long-term career trajectories and citation impacts of inbred versus non-inbred faculty, particularly during the post-pandemic shift (2020–2025) which altered traditional academic mobility.

Future authors can move beyond purely descriptive or quantitative metrics and adopt robust mixed meth-

ods designs. Specifically, there is a profound need for localized narrative inquiries that capture the lived, subjective experiences of early-career academics navigating institutional insularity. Such a qualitative depth is essential for understanding how academic inbreeding subtly reshapes the institutional social capital, network formation, and systemic equity. Finally, future researchers should standardize the definitions and cross-institutional metrics across different higher education systems to allow for more accurate cross-cultural and international comparative analyses.

Although this systematic review provides a rigorous mapping and theoretical synthesis of the academic inbreeding literature, several boundary conditions must be acknowledged. First, the scope of this study was strictly confined to peer-reviewed empirical and conceptual articles published in SSCI- and ESCI-indexed higher education journals between 2005 and 2026. Consequently, high-quality regional studies, book chapters, conference proceedings, and publications in non-English or non-indexed journals were excluded. While this restriction ensured high methodological rigor, it may have overrepresented research traditions from major index-bound higher education systems, thereby limiting the generalizability of the findings to emerging or less-documented national contexts.

Second, the study relied on qualitative thematic synthesis and PRISMA-guided mapping due to the high conceptual and methodological heterogeneity among the included studies. The absence of a meta-analytical approach—driven by the scarcity of standardized metrics across different quantitative operationalizations of inbreeding—precluded the quantitative estimation of effect sizes regarding research productivity or mobility outcomes.

To build upon these boundaries, future research should pursue several interconnected avenues. First, scholars ought to adopt longitudinal tracking designs to critically assess how post-2020 shifts—such as expanded virtual research collaborations, remote working norms, and altered global faculty mobility—have reshaped the long-term career trajectories and citation impacts of inbred versus non-inbred faculty over time. Furthermore, given the overwhelming dominance of cross-sectional quantitative research designs in the current literature ($n = 18$), future inquiries should leverage robust mixed methods approaches and localized narrative inquiry frameworks. Capturing the lived, subjective experiences of early-career academics navigating institutional social capital and recruitment insularity is particularly essential for unraveling how academic inbreeding subtly reshapes institutional habitus and systemic equity. Finally, there is a pressing need for cross-national and discipline-specific comparative studies. Investigating how inbreeding operates across distinct fields (such as STEM versus humanities) and contrasting higher education governance models (such as centralized state-run systems versus market-driven institutions) will allow researchers and policy makers to design more nuanced, context-aware administrative interventions.

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