

## A Bibliometric Analysis Of The Fragmented Nexus Between Pedagogical Competence, Mindfulness, And Teacher Burnout (2015–2025)

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### ABSTRACT

*Teacher burnout has escalated from an occupational hazard to a systemic crisis globally, threatening educational sustainability in the post-pandemic era. While pedagogical competence and mindfulness are widely recognized as vital protective factors, (Gap) existing literature remains fragmented, often treating technical teaching skills and psychological well-being as isolated domains rather than synergistic mechanisms. This study aims to map the intellectual structure and thematic evolution of global research connecting teachers' pedagogical competence, mindfulness, and burnout prevention. Employing a bibliometric approach, metadata from Scopus-indexed articles published between 2015 and 2025 were analyzed using VOSviewer to visualize publication trends, co-authorship networks, and keyword co-occurrences. The results reveal a "symptom-centric" landscape dominated by Western institutions, yet characterized by weak cross-national collaboration. Crucially, the keyword analysis exposes a conceptual dichotomy: while "burnout" dominates as the central node, "mindfulness" (psychological) and "pedagogical competence" (technical) exist in disconnected clusters, indicating a lack of integrative research. These findings suggest an urgent need for "Integrated Professionalism" frameworks. Educational policy must move beyond segregated interventions by embedding mindfulness practices directly within pedagogical development programs to foster holistic teacher resilience against future disruptions.*

### Introduction

Teacher burnout has evolved into a pervasive systemic issue across global educational contexts, extending far beyond individual stress responses (Prasojo et al., 2020). It is no longer merely conceptualized as an occupational health concern, but has been empirically identified as a major catalyst of teacher attrition and declining retention rates worldwide (Madigan & Kim, 2021). The destructive consequences of burnout are multidimensional; the psychological instability experienced by teachers significantly undermines instructional quality and obstructs students' socio-emotional development (Salmela-Aro et al., 2019). This situation has been exacerbated in the post-pandemic educational landscape, which demands heightened adaptability. Emotional exhaustion and

depersonalization have intensified due to abrupt technological transitions and emergency remote teaching (Ramos et al., 2023). The accumulation of cognitive overload and insufficient psychological preparedness has given rise to a novel form of strain commonly referred to as *technostress*, the severity of which surpasses pre-pandemic benchmarks documented in the literature (Kotowski et al., 2022).

In response to this escalating crisis, existing studies have largely polarized into two disconnected intervention paradigms: the enhancement of technical pedagogical competence and the stabilization of teachers' psychological well-being. Educational discourse has been dominated by technically oriented frameworks, particularly the Technological Pedagogical Content Knowledge (TPACK) model, which is frequently positioned as the gold standard for teacher competence in the digital era (Yuliyanto et al., 2023). However, this strong emphasis on technical proficiency often neglects teachers' internal psychological resources. Conversely, research within the psychological domain demonstrates that mindfulness functions as a critical personal resource for strengthening emotional resilience Nurshadrina et al. (2025) Unfortunately, most mindfulness studies conceptualize mental well-being as an isolated variable, detached from daily instructional practices. As a result, scholarly understanding of the dynamic interaction between pedagogical competence and mindfulness remains limited. Although workload does not inevitably lead to burnout when moderated by self-efficacy Ntumi, (2025) and Dung et al. (2024), existing literature has yet to systematically map how pedagogical competence and emotional regulation synergistically operate as a holistic protective mechanism (Xie et al., 2022). This lack of integration constitutes a conceptual "black box" in comprehensive burnout prevention strategies.

Despite the rapid growth of teacher well-being research over the past decade, thematic fragmentation persists across disciplinary boundaries. For instance, bibliometric mappings by Agyapong et al. (2022) and Karakose et al. (2021) successfully visualized burnout trends during the COVID-19 pandemic, yet their analyses were predominantly grounded in clinical pathology and crisis management perspectives. In contrast Zarate et al. (2019) mapped mindfulness interventions in educational settings but largely detached them from teachers' technical pedagogical competencies. Similarly, bibliometric and critical analyses of teachers' digital and pedagogical competence rarely engage deeply with emotional regulation dimensions Trust dan Whalen (2020), Consequently, a significant research gap persists regarding how the global intellectual structure integrates pedagogical competence (external professional skills) and mindfulness (internal psychological resources) as interconnected protective factors. The absence of a holistic map hinders comprehensive understanding of the multidimensional synergy required for sustainable burnout prevention (Burić & Moè, 2020; Chen et al., 2024).

To address this conceptual fragmentation, the present study employs a bibliometric approach to deconstruct the global intellectual architecture of teacher burnout research. Unlike conventional systematic reviews, bibliometric analysis enables the identification of macro-level patterns, thematic evolution, and hidden collaboration structures that link pedagogical competence and mindfulness. By mapping Scopus-indexed publications from 2015 to 2025, this study aims not merely to quantify academic productivity, but to visualize how and to what extent technical pedagogical paradigms and psychological resilience frameworks converge within the global scientific network. Ultimately, this study seeks to provide an empirical, data-driven foundation for policymakers to design holistic teacher professional development programs that transcend prevailing dichotomous approaches.

## Method

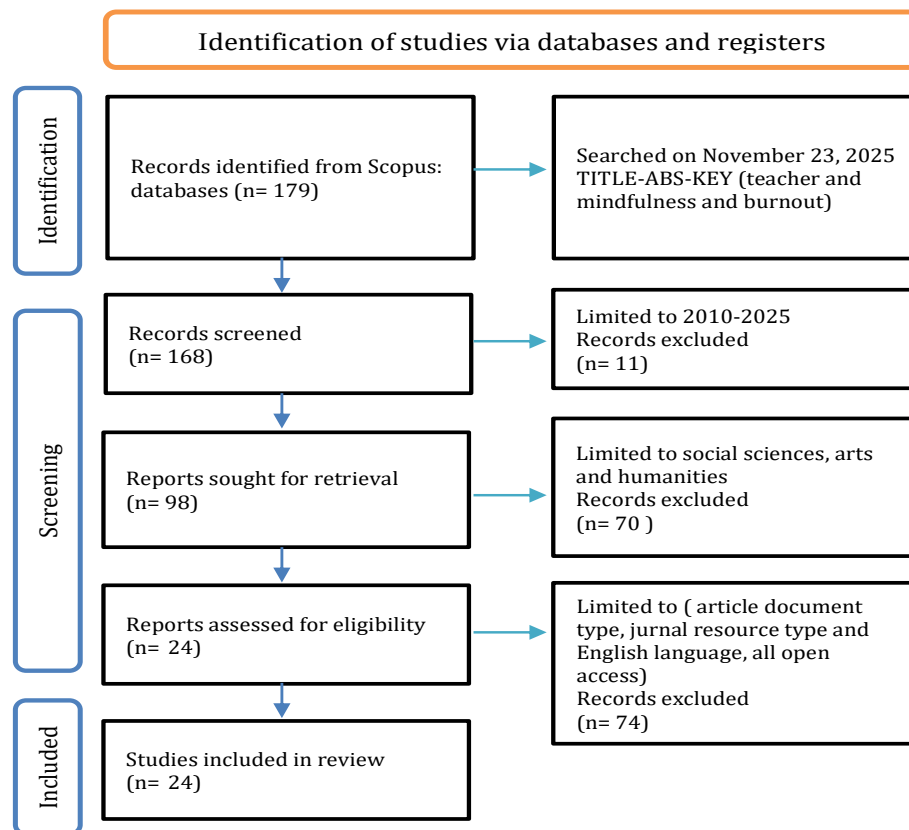
This bibliometric study adopted the method by using statistical techniques to map the publication features provided by a database (Donthu et al., 2021). Data searching is conducted by typing relevant keywords into a selected database. As a result, the database application will retrieve a set of articles related to the subject of the research. In this process, the published articles go through some filtering steps to remove redundant or duplicating items. Only eligible publications are then assessed based on preset criteria, including their relevance to the topic being researched, the quality of the study, and also the type of publication. The collected articles form the data basis of the later bibliometric analysis, which provides a noteworthy amount of data to be examined at a later stage (Chapman et al., 2019).

The data collection commenced on December 20, 2025, with a thorough process of investigation in the Scopus database adopting the method proposed by Ninkov et al. (Ninkov et al., 2022). The search began with inserting keywords of TITLE-ABS-KEY (Teacher, mindfulness and Burnout). The adjective "Burnout" was intentionally chosen instead of "mental health" for its more expansive sense. In the first phase, 179 articles were found. The search was restricted to include publications from 2015 to 2025, gaining a total of 168 titles within these ten years. Those 168 publication types were articles. From the tracked documents, this paper focused on the research articles.

A further restriction was made to specifically include works in the fields of social sciences, arts and humanities. It yielded 98 eligible publications. Further screening was then applied based on the following criteria: document type (research articles), source type (journal publications), and language (English). After applying these criteria, 74 records were excluded, leaving 24 eligible articles for the final analysis. The restriction to open access publications was applied to ensure full accessibility of the complete texts during the content validation process. Open access articles enable transparent verification of research contexts, methods, and theoretical contributions, which is essential in bibliometric studies that integrate quantitative mapping with qualitative interpretation. Although this criterion reduced the total dataset, it ensured that all selected publications could be systematically examined for thematic relevance and methodological rigor. The bibliographic information of these 24 publications was also retrieved and saved in csv extension and then inputted into the VOS Viewer tool for analysis that includes co-authorship and cooccurrence patterns of the articles' bibliometric information (van Eck & Waltman, 2010). The rigorous process fully warranted the credibility and significance of the data in this research as depicted in the following PRISMA visualization (Page, McKenzie, et al., 2021).

The article selection process followed the PRISMA 2020 guidelines to ensure transparency and reproducibility. Records were initially identified through a Scopus database search using predefined keywords (Page, McKenzie, et al., 2021). After removing duplicate records, titles and abstracts were screened to exclude studies not related to teachers, burnout, mindfulness, or pedagogical competence. Further filtering was applied based on subject areas, document type, language, and access status. Full-text eligibility assessment was then conducted to ensure thematic relevance. Detailed inclusion and exclusion criteria, as well as explicit reasons for article elimination at each stage, are presented in Tables X and Y. This rigorous screening process resulted in a final dataset of 24 eligible articles for bibliometric analysis.

**Figure 1. Prisma flow diagram of research data from scopus.com**



After acquiring the data, it was used to form the relation of co-authorship countries, institutions, authors, and keywords using the VOS viewer. VOS Viewer is a particular software package that can be used in the construction and visualization of bibliometric networks. In this paper, the analysis is conducted through the examination of the bibliometric data of the selected publications, the visualization of collaboration between the authors, and the corresponding occurrence of defined terms. After that, a network is built where each node is denoted as an entity, in this case, a country, institution, author, or keyword (Review, 2022). The lines that tie them indicate the coauthorship or co-occurrence associations but not the strength of the association, which is displayed in this network (Arina Isti'annah and Hirmawan Wijanarka, 2023). Mere depiction of the primary contributors (e.g., leading authors, institutions, and countries) and subjects (e.g., notable articles and keywords) within a discipline needs to be revised for bibliometric study. Instead, bibliometric research should identify gaps by examining conflicting findings and underexplored regions through content or interpretive analysis of papers linked to each bibliographic or keyword cluster (Arina Isti'annah and Hirmawan Wijanarka, 2023). By doing such an inquiry, it enables a thorough and easily understandable comprehension of the bibliometric landscape.

## Result and Discussion

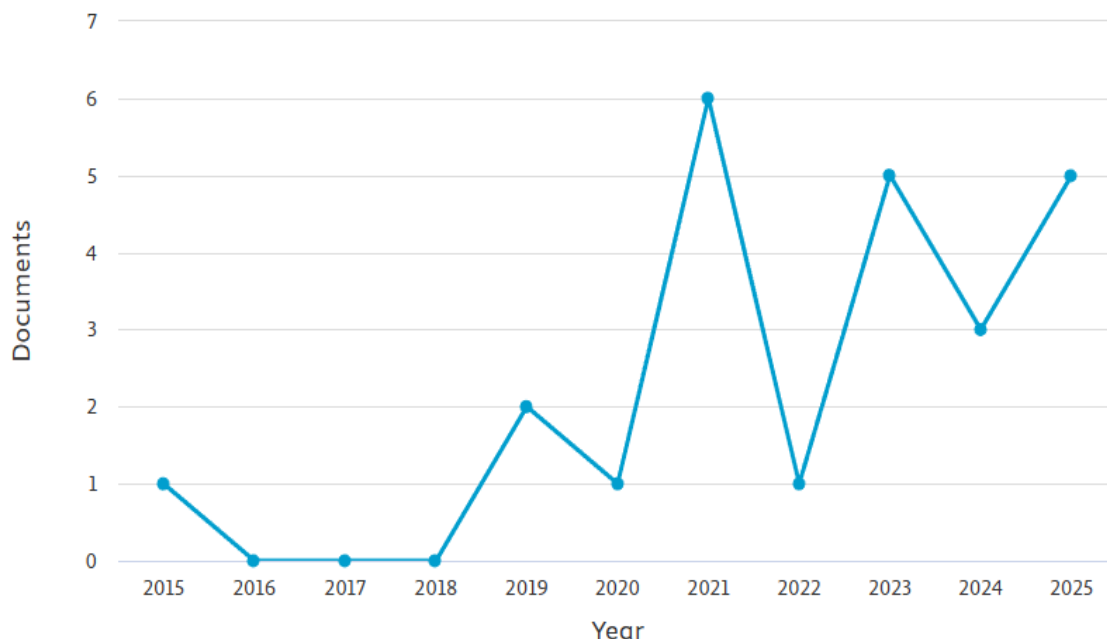
The results and discussion of this article are divided into five sub-chapters that include publication trends, publication distribution of countries, institution affiliations, authors and citations, and keywords co-occurrences.

### 1. Publication Trends

The publishing trend of documents about teacher burnout in literary studies during the previous decade, as documented in Scopus, is illustrated in the following graph.

**Figure 2. Documents Published by Year in the Scopus Database**

Documents by year



Bibliometric data from Scopus (2015–2025) reveal a fluctuating yet progressive evolution in research addressing pedagogical competence, mindfulness, and teacher burnout. As illustrated in Figure 2, publication output remained scarce during the early period (2015–2019), averaging fewer than two documents per year. This scarcity suggests that the integration of mindfulness and pedagogical competence remained a niche topic, distinct from the more established burnout literature (Madigan & Kim, 2021).

A significant surge occurred in 2021, with publications peaking at six documents. This increase strongly correlates with the global COVID-19 pandemic, which exposed urgent challenges related to teacher well-being. Consistent with Sokal et al. (2020) and da Silva & Mello (2023), this period marked a turning point where in emergency remote teaching intensified both technical and psychological demands on teachers. This increase confirms that the pandemic acted as a catalyst, accelerating the convergence between mental health issues and teaching practices.

Despite a technical decline in 2022, the trend strengthened again in 2023 and the 2025 projection (5 documents). The consistency of interest in recent years indicates a shift in research focus from a mere "crisis response" to a "sustainability" strategy. This moderate growth pattern simultaneously validates the argument (S. Li, 2023), although the literature on teacher resilience is abundant, studies specifically examining the mechanisms of dual intervention (pedagogy and mindfulness) in an integrative manner are still relatively new and fragmented.

The relative scarcity in this publication trend has important implications for the development of science. First, this highlights a serious knowledge gap regarding how professional competence can interact with emotional stability. Second, the upward trend post-2021 suggests that this topic is an emerging field. This emerging field presents substantial opportunities for future longitudinal and experimental research, particularly in evaluating integrated TPACK–mindfulness teacher training programs (Pressley, 2021).

## **2. Publication Distribution of Countries**

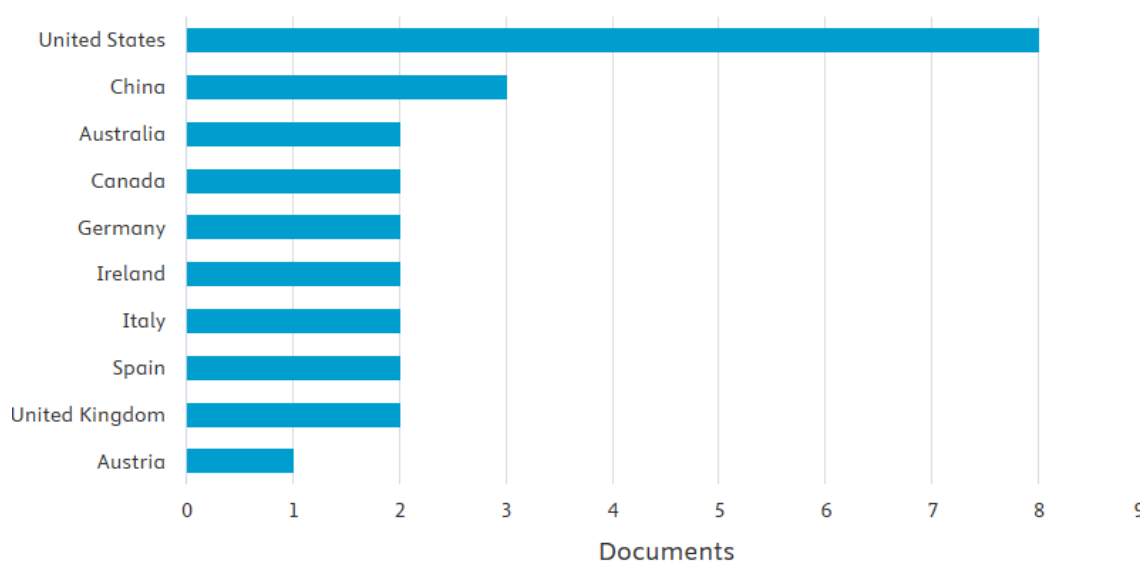
Data retrieved from Scopus indicates that from 2015 to 2025, 10 nations produced scholarly articles focusing on the intersection of teacher mindfulness within literary criticism. United States stands out as the most productive country, with six publications spanning from 2015 to 2025. It indicates a relatively long-standing interest in these themes on the part of American scholars. China comes very near to this figure with the publication of three articles between 2015 and 2025, confirming a growing awareness of the issue in a China context. It is interesting to note that, albeit more recently, the Russian Federation has also emerged on the scene in this field by contributing three articles in the last four years. A number of other countries have made smaller contributions in one or two essays, but this should nevertheless underline the global reach and relevance of these themes.

The identified search results are based on determining the threshold setting to meet the criterion of being co-authors. With the threshold setting at three countries, only three nations will qualify. However, when the threshold was reduced to two, a total of eleven countries were realized. The reason the study found it wise to pick the lower threshold setting is to widely capture the number of countries contributing to the current body of research about teacher mindfulness and burnout. It is quite important to realize better results in understanding the global research landscape and the patterns of collaboration and dissemination of information across boundaries by researchers in different countries. It shows the collaboration of the academic community in understanding between teacher pedagogical competence and teacher burnout in the new study field.

**Figure 3. Countries Producing the Documents in the Scopus Database**

### Documents by country or territory

Compare the document counts for up to 15 countries/territories.



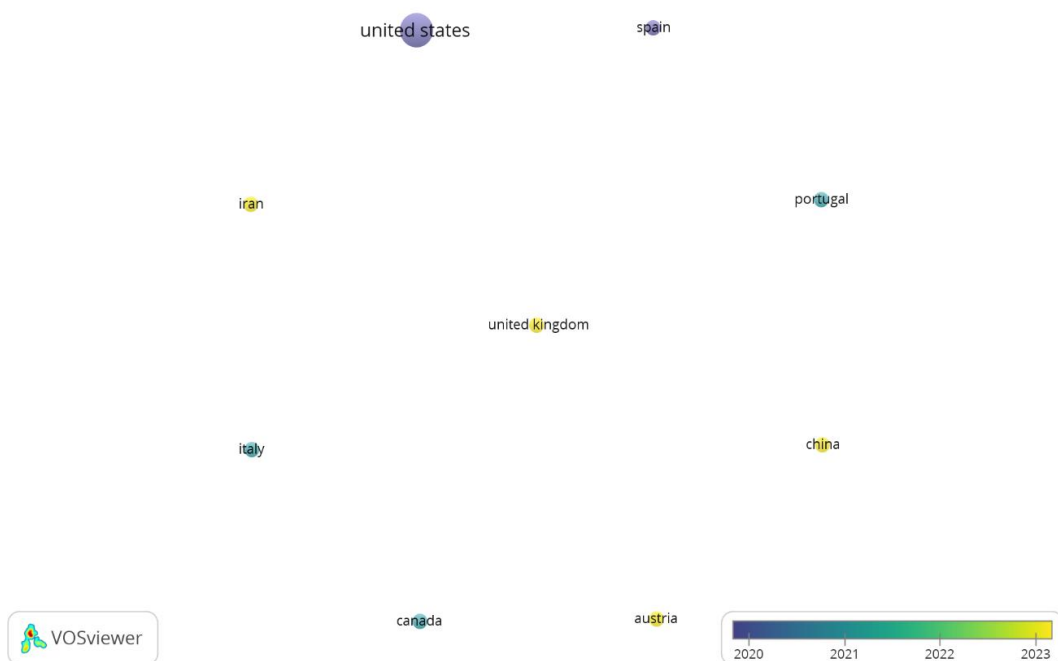
**The Western Hegemony and Asian Emergence** The analysis of geographical distribution (Figure 3) reveals a pronounced imbalance in global knowledge production. The United States occupies the leading position as the most productive contributor, with a total of six publications (25% of the dataset). This dominance indicates that theoretical constructions surrounding teacher burnout and mindfulness remain heavily shaped by Western educational psychology paradigms. This finding is consistent with the observations of Herman et al. (2020), who noted that most teacher well-being interventions have been developed within North American socio-cultural contexts. However, the academic landscape shows early signs of a shifting axis with the emergence of China as the second-largest contributor, producing three publications. The increasing participation of Chinese scholars reinforces global trends reported by Tsang et al. (2021), and Cheng et al. (2023), highlighting how educational reforms in East Asia have begun to prioritize teachers' mental health in response to high-pressure work cultures. Notably, the Russian Federation has also emerged as a new contributor over the past four years, signaling a diversification of research contexts toward Eastern Europe.

**The Case of Japan** is An intriguing anomaly emerges when the analysis shifts from publication volume to citation impact. Although Japan does not rank among the three most productive countries, the data indicate that publications originating from this context exhibit the highest citation impact, with a single key article receiving 30 citations—surpassing the combined citation counts of several more productive countries. This pattern underscores the principle of *quality over quantity* in scholarly influence. Studies situated within the Japanese context, such as those examined by McEown et al. (2024), frequently attain seminal status because they offer distinctive insights into teacher workload and collectivist cultural orientations that diverge from dominant Western models. This finding implies that academic influence in this field is not determined by publication frequency alone, but rather by the cross-cultural validity and methodological depth of the research (Avola et al., 2025).

**Fragments and Silos** The analysis of international co-authorship networks using VOSviewer (Figure 4) reveals a concerning reality of a highly fragmented global research

landscape. With a threshold set at two documents, the visualization exposes only small, isolated clusters or single nodes lacking strong international linkages. Most countries, including the United States and China, tend to conduct predominantly domestic (intra-country) research rather than engaging in cross-border collaboration. The absence of a dense global collaborative network corroborates the findings of Lu et al. (2023) who argue that teacher education research is frequently confined within “national silos.” Such limited international collaboration poses a substantial risk to the generalizability of research findings; mindfulness interventions proven effective in the United States may not be directly applicable to teachers in Indonesia or India without culturally informed adaptation and validation through collaborative research (Duff 2022; W. Lee et al. 2024). These findings carry important strategic implications for knowledge development. The dominance of U.S.-based scholarship and the isolation of collaborative networks underscore the urgent need for cross-cultural validation, particularly by researchers from the Global South, including Indonesia, to critically re-examine Western-centric models. Moreover, higher education institutions must actively facilitate international joint research grants to dismantle existing isolation. Without robust global collaboration, scholarly understanding of teacher burnout will remain culturally biased and inherently incomplete (Holland & Fitzgerald, 2023).

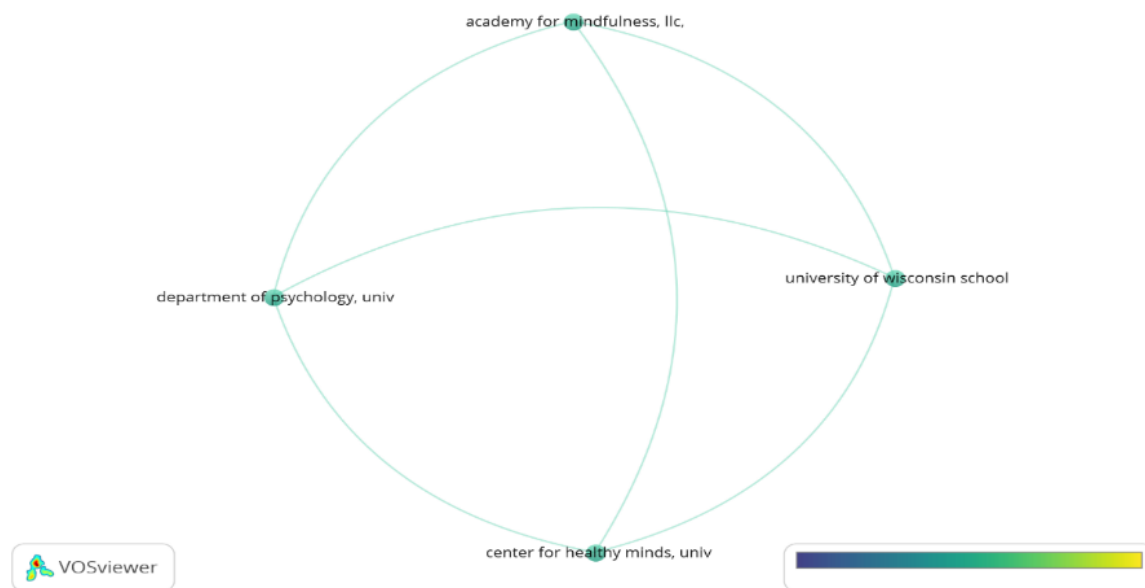
**Figure 4. Publication distributions of Countries in the vosviewer Database**



### 3. Institution Affiliations

In the collection of 24 articles compiled in Scopus, there are 48 institutions linked with the authors of these publications. This vast array of institutions illustrates the global and interdisciplinary interest in the study of between teacher pedagogical competence and teacher burnout. in innovative studies. However, it is remarkable that no single institution has produced more than one document, demonstrating a broad distribution of research among these universities. Based on the distribution of research output, the exploration of these themes extends beyond a few prominent universities. It is instead a widespread academic pursuit, with numerous institutions contributing to the discourse.

**Figure 5. Institutions affiliation in the vosviewer Database**



The visualization of institutional affiliation networks (Figure 5) reveals a highly imbalanced collaborative architecture. Of the 48 institutions identified in the dataset, VOSviewer analysis detected only a single active collaborative cluster consisting of four entities: *Academy for Mindfulness, LLC*, *University of Wisconsin School*, *Center for Healthy Minds*, and the *Department of Psychology*. Rather than reflecting a robust global network, this pattern indicates an extreme concentration of expertise within a specific geographical and epistemological axis. The dominance of this cluster exemplifies the “hub-and-spoke” phenomenon frequently observed in mindfulness scholarship, wherein theoretical innovation is largely monopolized by elite research centers in North America before being disseminated outward, as documented in global bibliometric analyses (Ferreira & Demarzo, 2023).

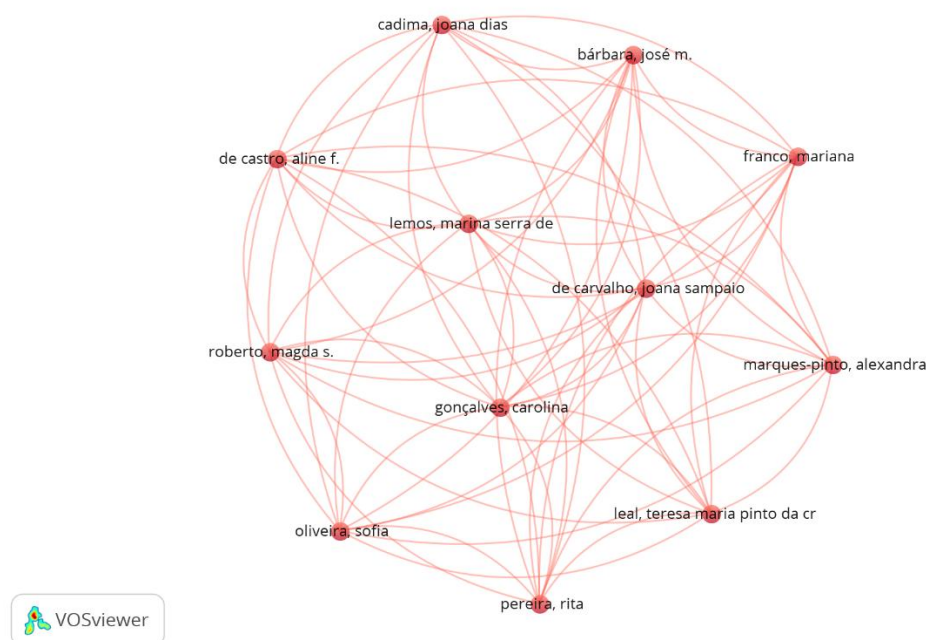
The close integration of the *Academy for Mindfulness, LLC* (a professional entity) with the *University of Wisconsin* (an academic institution) within this core cluster signals a strategic synergy between foundational research and practical application. This configuration corroborates the findings of Siemens et al. (2023) who argue that the most impactful teacher intervention research often emerges from university–industry partnerships that enable rapid translation of psychological theory into commercially scalable training modules. However, the exclusivity of this network effectively excluding the remaining 44 institutions raises serious concerns regarding epistemic homogeneity. Li et al. (2021) caution that when knowledge production on teacher well-being circulates within a closed institutional circle, the risks of cultural and methodological bias increase substantially, often marginalizing educational contexts in developing countries. Beyond this “elite circle,” the vast majority of institutions (92%) appear as isolated nodes with no inter-institutional collaborative ties. This severe fragmentation aligns with findings by Kolleck et al. (2021), and García-Martínez et al. (2022) in teacher education research, which demonstrate that pedagogical scholars frequently operate within institutional silos and rarely engage in cross-affiliation collaboration with clinical psychology departments. This pattern is further supported by Yao & Abdullah (2025), whose bibliometric mapping of burnout literature identifies the absence of multi-university research consortia as a major obstacle to producing valid large-scale longitudinal studies.

These structural inequalities are also reflected in citation patterns. Institutions within the core cluster enjoy disproportionately high visibility, whereas peripheral institutions exhibit minimal or zero citation impact. This manifestation of the “Matthew Effect” in science where well-cited institutions continue to accumulate citations at an accelerated rate is reinforced by (2025) and H.-Y. Lee et al (2022), who demonstrate that institutions lacking strategic collaborative networks face significant barriers to entering global academic discourse, regardless of the intrinsic quality of their research. This institutional map sends an urgent signal to the academic community. The exclusive collaboration model centered around Wisconsin must be deconstructed in favor of a more inclusive and distributed framework. Higher education institutions in Asia and Europe should actively establish transnational research consortia that integrate departments of pedagogy with mental health research centers, emulating the Wisconsin integration model while embedding more diverse cultural contexts. Without such decentralization, global understanding of teacher burnout prevention will remain anchored in Western paradigms that may not be fully applicable to the heterogeneous realities of global education systems.

#### 4. Intellectual Social Structure: Co-Authorship Network Analysis

The analysis of co-authorship does not simply map who writes with whom, but serves as a primary proxy for measuring "academic social capital" and transfer Knowledge implicit in a field of study (Horta et al., 2022). The visualization of VOSviewer in this dataset reveals the social structure of the scientific community that examines the integration of pedagogic competence and mindfulness.

**Figure 6. VOSviewer Visualization of Keywords Co-Authorship Based on the Scopus Database**



The network pattern that is formed shows the characteristics of communities that are still in the "embryonic" or nascent stage. As seen in the visualization, the overall network density is at a moderate-to-low level. The most striking finding was the presence of a core cluster of 12 authors that were closely interconnected, with Gonçalves and De Carvalho

acting as the central nodes. In social network theory, their position can be interpreted as "gatekeepers" or intellectual bridges that control the flow of information within the group. The existence of this small elite cluster is in line with the phenomenon described by Bozkurt et al. (2020) In crisis education research, where intensive collaboration often occurs only in small groups with similar geographical or institutional proximity, creating so-called "islands of knowledge".

However, a sharp contrast is seen beyond the core cluster. The majority of authors appear as isolated nodes or simply form dyadik pairs (two people) disconnected from the main network. This structural fragmentation indicates that research on teacher burnout and mindfulness is still dominated by "Solo Fighters" or micro teams. According to Marmoah et al. (2022), such fragmentation patterns are harmful to the advancement of disciplines because they hinder the systematic accumulation of knowledge and cross-context validation. Without a broad network of collaboration, research findings risk being locally biased and difficult to generalize to the global teacher population.

This structural inequality also has direct implications for scientific visibility. Authors who were in connected clusters tended to have higher citation metrics than isolated authors. This confirms the "collaborative advantage hypothesis" validated by Fang et al. (2022), which found that articles with multi-author collaboration (especially across countries) had a 30-50% higher chance of citation in the Scopus database. In the context of this study, the isolation of researchers in peripheral areas explains why many documents fail to gain significant academic attention; They do not have an adequate knowledge distribution network to disseminate their findings (Moutinho et al., 2023).

This fragmented network structure sends warning signals to academic stakeholders. In order for this field of study to mature from a mere sporadic trend to an established discipline, structural interventions are needed to break the "silos" of research. Universities need to encourage consortium research grant schemes that require inter-university or inter-country collaboration, as suggested by Fu et al. (2022). In addition, senior researchers in core clusters (such as Gonçalves' group) have an academic moral responsibility to expand their networks by embracing researchers from underrepresented regions, in order to create a more inclusive and robust knowledge ecosystem (Moral-Muñoz et al., 2020).

The total link strength generated by VOSviewer represents the cumulative strength of connections between authors within the network. Authors with higher total link strength demonstrate stronger collaborative relationships and greater integration within the research community. These authors typically act as key contributors who help shape the development of the research field.

In constructing the network visualization, a minimum keyword occurrence threshold was applied to ensure that only relevant and frequently appearing terms were included in the analysis. This threshold helps filter out less significant terms and highlights the dominant research themes within the dataset.

Overall, the visualization reveals emerging collaboration patterns and thematic concentrations within the field, while also suggesting that the research landscape remains dispersed across several independent research groups. This finding indicates opportunities for stronger international collaboration and interdisciplinary integration in future studies.

## 5. Authors and Citations

In the ecosystem of scientific publications, the productivity of authors is often used as the main indicator to measure the vitality of a field of study. However, an analysis of the 53 authors in this dataset revealed a worrying distribution pattern. The data show that this research landscape is dominated by "transient contributors" of authors who publish only one article and then leave the topic. There is only a small sub-group of four authors who have recorded two publications in the past decade. Critically, this low threshold of highest productivity indicates that the discourse on the integration of pedagogical competence and mindfulness does not yet have a "thought leader" or core research group that consistently develops these theories on an ongoing basis.

Furthermore, there is a sharp disconnect between production volume and epistemic impact. Although the four authors were classified as the most productive in this dataset, their citation accumulation was minimal, with only one author managing to obtain one citation, while the other three had not received any academic recognition in the form of citations. This phenomenon highlights the paradox of "Quantity without Impact". This implies that even if the articles are successfully published, the findings may not be significant enough or have not yet had sufficient visibility to influence the direction of further research. The absence of highly cited authors confirms that this field is still very fluid, immature, and in dire need of seminal studies that can become the main reference for the global scientific community. It discover underlines the complicated dynamics of academic recognition, where quantity does not necessarily correspond to impact, as indicated in the table below.

**Table 1. Top Five Productive Authors Publishing Documents in the Scopus Database**

No	Authors	Documents	Citations
1	Braun summer s	1	128
2	Burn, Andrew	1	128
3	Roeser Robert W	1	128
4	Skinner, Ellen A	1	128
5	zarate, punishments	1	90

An analysis of the author's impact reveals a sharp bibliometric paradox in the literature on teacher mindfulness and burnout. As shown in the table above, the list of "top" writers is dominated by writers with a single productivity. The fact that Braun, Burn, Roeser, and Skinner each are recorded as having only one document but collected an identical and massive number of citations (128 citations), indicates that the impact of citations in this area is highly concentrated on a small number of collaborative articles of a seminal nature. This phenomenon confirms that academic legitimacy in this topic is not built through the accumulation of the frequency of publications, but rather through the weight of the theoretical contributions of certain key studies.

This pattern challenges Lotka's Law in classical bibliometrics, which usually assumes a positive correlation between productivity and visibility. In this context, what happens is precisely the dominance of "Transient Authors" of researchers who enter this field for one large study and then do not continue publication on the same topic in this Scopus dataset. This finding is supported by Supriyanto et al. (2020) dan Liu et al. (2021), noting that in emerging fields, impact metrics are often driven by comprehensive review articles or large-scale randomized controlled trials (RCTs) conducted once by a cross-disciplinary team of

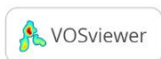
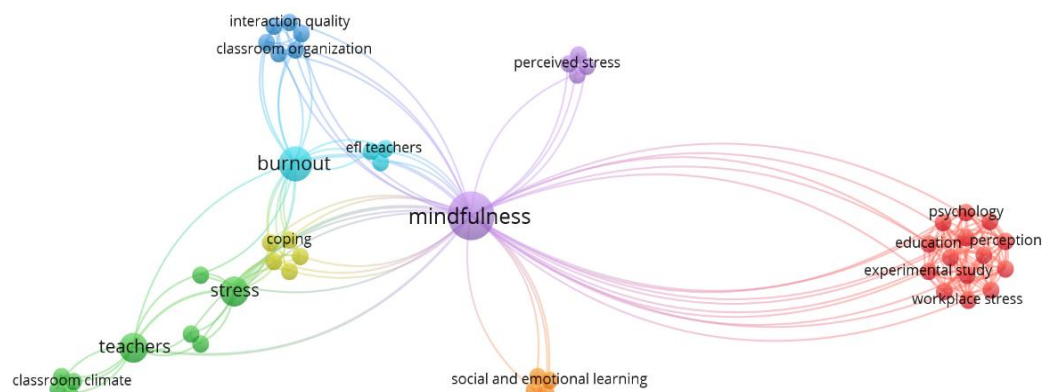
experts.

In contrast, productivity fragmentation is evident in the "long tail" of author distribution. The majority of other authors (92%) only contributed one article with minimal or zero citation impact. This extreme inequality in which a handful of elite writers enjoy hundreds of citations while the majority do not appear to reflect the "Matthew Effect" in science (the rich get richer), as explained by Nielsen and Andersen (2021). This implies that the literature on teacher burnout still lacks a core research community that consistently dedicates their careers to developing the topic sustainably over time.

From the perspective of social networks, although there are small collaborative clusters led by Gonçalves and De Carvalho, the structural isolation of high-impact authors (such as the Braun/Roeser group) shows the weak transfer of knowledge between generations. Seminal writers (Table 1) do not seem to be closely connected to new, more prolific but less cited writers. This disconnection is dangerous for the accumulation of knowledge, because the fundamental findings of such seminal studies may not be adequately developed or retested by new researchers, but are merely ceremonial citations.

## 6. Keywords Co-Occurrences

**Figure 7. VOSviewer Visualization of Keywords Co-Occurrences Based on the Scopus Database**



The analysis of keyword co-occurrence (Figure 6) not only maps the frequency of terminology, but also exposes the collective epistemological or "subconscious" structures of researchers in this field. The VOSviewer visualization map reveals a topography that is fragmented and highly biased towards pathological approaches.

A reactive research paradigm blue cluster centered on burnout dominates the network as the node with the highest centrality betweenness. The strong link between burnout and stress, emotional exhaustion, and mental health indicates that academic discourse today is still

reactive and pathological. Researchers tend to dissect "what's wrong" (clinical symptoms and fatigue) rather than exploring "what makes teachers strong." The dominance of this deficit perspective is in line with the criticisms of Madigan and Kim (2021), which notes that the educational literature is often mired in a cycle of stress prevalence reporting without offering adequate structural solutions.

The individualization of structural problems purple clusters (Mindfulness) emerges as a separate entity, surrounded by psychological terminologies such as self-regulation and coping. The separation of this cluster from the pedagogical (teaching) aspect implies a sharp critique: mindfulness in schools today is often reduced to a mere individual "self-help" tool. As warned by Ramachandran et al. (2023), when mindfulness is studied separately from the professional context, it risks becoming a "wound plaster" an attempt to improve the teacher's psyche to make it resilient to a broken system, rather than improving the system or the teacher's own competence.

The most worrying and at the same time the most critical finding is the position of the red cluster (Pedagogical/Education) which is peripheral (periphery) and has a weak link strength to burnout. This is a serious theoretical anomaly. Coping-Competence-Context Theory (Herman et al., 2020) It expressly states that technical competence (good teaching ability) is the main buffer of stress. Competent teachers (e.g., mastering TPACK) should experience burnout less often because they have better control of the classroom (X. Li et al., 2023). However, your visualization shows that global researchers fail to link competence to mental health. They see the "Stressed Teacher" and the "Teacher Who Teach" as two different entities. This gap validates Skaalvik and Skaalvik's arguments (2020) that teacher self-efficacy research often runs on a separate path from clinical mental health research.

This "broken" map demands a reorientation of future research direction. The implication is clear: we no longer need studies that only measure burnout rates (Blue Cluster) or studies on the effectiveness of meditation alone (Purple Cluster). We need "Integrated Professionalism Models" research that proves that improving pedagogic competence (e.g. through classroom management training or technology) is the most effective form of mental health intervention. Researchers must begin to restitch the broken relationship between how teachers feel (psychology) and how teachers teach (pedagogy) (Bardach et al., 2022).

## Conclusion

This bibliometric study concludes that although academic attention to teacher burnout interventions has increased significantly post-pandemic, the global intellectual landscape for the period 2015–2025 is still trapped in epistemological fragmentation and pronounced geopolitical inequality. Structurally, these findings reveal the existence of a sharp dichotomy in which pedagogic competence (TPACK) and mindfulness are treated as separate entities, with the dominance of burnout clusters indicating that the current research paradigm is still reactive-pathological focusing on symptom diagnosis rather than preventive-integrative. In addition, the centralization of knowledge production at institutions in the Global North and the lack of cross-country collaboration networks confirm that the solutions offered by the current literature are at risk of cultural bias (Western-centric) and are not necessarily relevant to the complex educational context in developing countries. Therefore, this study recommends a policy reorientation towards an "Integrated Professionalism" framework, in which teaching skills training and emotion regulation are no longer separated, but rather integrated in a hybrid teacher development curriculum. Given the status of this topic as an emerging field, the academic community is encouraged to move from descriptive studies to longitudinal experimental

research to test the synergistic causality between technical competence and psychological resilience in reducing the rate of teacher attrition in a sustainable manner.

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