# Post-Occupancy Evaluation Research in the Built Environment: A Comprehensive Bibliometric Study

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## Abstract
Post-occupancy evaluation (POE) is central to aligning building performance with occupant experience, yet the literature is fragmented across concepts, outlets, and regions. This study provides a transparent, reproducible map of POE research to clarify thematic structures, influential contributors, and collaboration patterns. Bibliographic records were retrieved from Scopus (2000–2025) using a targeted TITLE-ABS-KEY query and refined by publication stage, language, and subject areas relevant to the built environment, yielding 1,745 documents. Performance analysis and science mapping were conducted in VOSviewer (v1.6.20) with full counting; terms were extracted from titles/abstracts and from all/index keywords. Results show sustained growth in POE publications, with journal articles as the dominant vehicle of dissemination. Thematic co-occurrence consistently reveals three interlinked domains: (i) occupant satisfaction and indoor environmental quality (IEQ); (ii) energy performance, including the prediction–operation "performance gap"; and (iii) architectural/managerial applications (design decisions, facilities management, implementation barriers). Building and Environment, Building Research & Information, and Energy and Buildings emerge as the leading sources by volume and citations. Author and country networks highlight prominent contributors and strong hubs in the UK and China/Hong Kong, alongside expanding participation from emerging regions. Collectively, these findings consolidate a field-level baseline that supports evidence-informed design, rating-system refinements, and facilities-management priorities. The study also offers a reusable search protocol and parameterized mapping workflow to facilitate future updates and comparative analyses.

## Keywords
Post-Occupancy Evaluation (POE), Bibliometric Analysis, VOSviewer, Built Environment.

## 1. Introduction
Post-Occupancy Evaluation (POE) denotes a structured set of procedures for assessing how buildings perform in use, covering energy efficiency, Indoor Environmental Quality (IEQ), and occupant well-being and satisfaction, so that evidence can be fed back into design and operations (Hassanain et al., 2023; Li et al., 2018). Unlike one-off audits, POE typically involves continuing evaluations across the building life cycle, enabling systematic "buildings-in-use" audits that test design assumptions, inform management practices, and support corrective action and improvement (Elsayed et al., 2023). POE can be applied to both conventional and green buildings; while it may align with certification systems, it also functions independently as a distinctive evaluative approach (Li et al., 2018). The methodological roots of POE trace to the 1960s, even if early studies did not consistently use the POE label (W. F. E. Preiser, 2005). Examples include residence-hall appraisals and office-environment studies conducted from the occupants' perspective, which established the centrality of user experience in performance assessment (Li et al., 2018; Manning, 1965). The term POE first appeared in 1975, and subsequent contributions by leading groups in Canada, New Zealand, and the UK broadened its empirical and conceptual base (Daish et al., 1982; Davis & Ventre, 1990; Li et al., 2018; Markus, 1967). The field took shape with a widely cited textbook definition of POE as a systematic, rigorous appraisal of buildings after a period of occupancy (W. Preiser et al., 1988), followed by the codification of diverse techniques, over 120 tools and approaches, documented in later reviews (Baird & Research, 1996). With this expansion, POE came to be recognized as any inquiry aimed at understanding whether buildings meet their intended purposes and how satisfied occupants are with the environments provided (Federal Facilities Council & National Research Council, 2002). Yet despite this maturation, the literature remains dispersed across themes, outlets, and regions, with heterogeneous terminology and methods that complicate comparison and synthesis. This creates a need for an integrative, reproducible overview that connects what is being studied (concepts), where and by whom it is studied (sources, authors, countries), and how ideas travel (collaboration networks).

Despite its long-standing recognition, POE research remains fragmented across disciplines, outlets, and geographical regions, leading to gaps in cumulative knowledge and inconsistent application in practice. While numerous case studies and review articles exist, the field lacks a transparent and reproducible bibliometric synthesis that systematically maps dominant themes, influential contributors, and emerging directions. This gap limits the ability of academics to identify consolidated research frontiers and constrains practitioners and policymakers who rely on POE evidence to inform sustainable building design, rating-system refinements, and facilities management strategies. The significance of this study lies in its ability to address the fragmentation of POE research by consolidating 25 years of scholarship (2000–2025) into a structured and comprehensive overview that spans the diverse disciplines central to the built environment. In doing so, the study provides not only a comprehensive evidence base but also a transparent and replicable methodology, with a clearly specified search protocol, inclusion criteria, and bibliometric mapping workflow that future researchers can adopt or benchmark against. By clarifying these contributions, the study not only advances academic understanding but also supports industry and policy stakeholders seeking to close the persistent performance gap and embed occupant-centered metrics in sustainable building delivery.

Building on this foundation and responding to that need, this study makes three interrelated contributions. First, it provides a comprehensive, transparent, and reproducible mapping of POE scholarship from 2000 to 2025. By specifying the Scopus query, inclusion criteria, subject-area filters, and VOSviewer parameters (full counting; thresholds for terms, all-keywords, and index-keywords), the analysis yields a replicable evidence base that future reviews can update or benchmark against. Accordingly, this study seeks to answer the following interrelated research questions: (i) what are the dominant themes that have structured the POE literature over the past two decades; (ii) who are the most influential authors, sources, and countries contributing to this body of work, and how do their collaborative networks evolve; and (iii) what gaps and emerging directions can be identified to advance the integration of POE within the broader agenda of sustainable building performance. By applying bibliometric analysis using VOSviewer, this study aims to provide a transparent and reproducible mapping of the field, offering both academics and practitioners a consolidated reference point to inform future research design, policy, and practice.

## 2. Research Methodology

The research methodology adopted in this study followed a systematic bibliometric approach to examine the scholarly landscape of POE, as summarized in Figure 1. To ensure the collection of a comprehensive yet focused dataset, bibliometric data were retrieved exclusively from the Scopus database. Scopus was chosen because of its broad coverage of peer-reviewed journals and its established compatibility with bibliometric analysis tools such as VOSviewer. Compared to alternative databases such as Web of Science, Scopus provides more extensive indexing of journals in engineering, architecture, and the built environment, domains that are central to research on POE and related building performance assessments. The search strategy was carefully designed to capture studies that explicitly address POE and associated evaluation frameworks. To accommodate variations in terminology, the following Boolean string was applied to the title, abstract, and keywords fields: (“post occupancy evaluation” OR “post-occupancy evaluation” OR ‘building performance evaluation” OR “POE”) AND (“building” OR “architecture” OR “construction” OR “built environment” OR “facility management” OR “sustainability”). This initial query yielded 2,157 documents.

To refine the dataset and ensure consistency, several inclusion and exclusion criteria were applied: (i) Timeframe: Publications were limited to the period 2000–2025, reflecting the modern era of POE research and coinciding with the increasing focus on sustainability and building performance, (ii) Publication Stage: Only final publications were included, thereby excluding early access or incomplete records, (iii) Language: The dataset was restricted to English-language publications, ensuring consistency in analysis, (iv) Authorship Information: Records with undefined or missing author data were excluded to preserve the quality of authorship and co-authorship analyses. In addition, subject area filters were applied to capture the multidisciplinary nature of POE research while excluding irrelevant fields. The final inclusion set covered Engineering, Environmental Science, Energy, Architecture/Arts and Humanities, Social Sciences, Business, Management and Accounting, Decision Sciences, Psychology, and Multidisciplinary. After applying these refinements, the final dataset consisted of 1,745 documents and was exported in CSV format, containing bibliographic metadata such as authors, titles, abstracts, keywords, citations, affiliations, and references. This dataset served as the foundation for the bibliometric analysis that was conducted using VOSviewer (version 1.6.20). This software was employed for both network visualization and data analysis, as it provides robust tools to generate co-occurrence maps, co-authorship networks, and source analyses. By following this structured methodology, the study ensured that the resulting bibliometric maps offer a transparent, reproducible, and comprehensive representation of the state of knowledge in POE research.

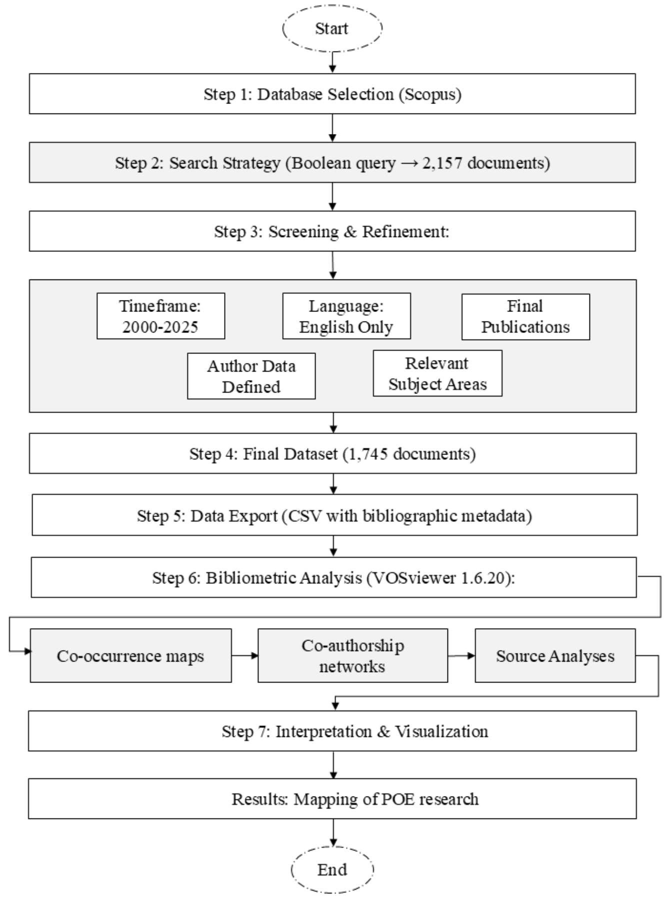


**Fig. 1.** Research methodology flow diagram outlining the systematic bibliometric approach applied in this study.

# 3. Results and Discussion

## 3. 1 Publication Trends and Document Types in POE Research

To establish a foundational understanding of the evolution of POE scholarship, the publication output was first examined in terms of annual trends and document types. These indicators provide insights into both the growth trajectory of the field and the preferred dissemination formats adopted by researchers. As shown in Figure 2, the annual distribution of POE-related publications between 2001 and 2025 reflects a steady upward trend. In the early 2000s, the field was relatively nascent, with fewer than 20 publications per year until 2006. A notable increase occurred from 2006 to 2010, coinciding with the broader adoption of sustainability and building performance assessment practices. From 2011 onwards, publication output stabilized at higher levels, with annual counts consistently exceeding 50 documents. The period from 2016 to 2022 represents a significant acceleration in research activity, culminating in a peak of 145 publications in 2022. Although a slight decline is observed in 2023 and 2024, the overall trend remains positive, with more than 100 publications per year. The partial data for 2025 (96 publications as of extraction) further confirms the sustained relevance of POE within academic and professional debates. These findings demonstrate that POE has evolved from a niche area of inquiry into a mainstream research domain, reflecting its growing importance in bridging building performance with occupant well-being and sustainability outcomes.

Complementing this, Figure 3 presents the distribution of publications by document type. Most contributions appear as journal articles (1,012 documents), highlighting the field's maturity and consolidation within peer-reviewed scholarly discourse. Furthermore, conference papers (471 documents) represent the second most common outlet, reflecting the dynamic exchange of ideas in academic and professional forums, particularly for emerging POE methods and applications. Other forms of output, such as book chapters (126), review papers (86), and books (39), contribute to the knowledge base, though at comparatively lower levels. Together, these results indicate that POE research has transitioned from a niche area into a mainstream scholarly domain, with journal articles serving as the dominant vehicle for dissemination.

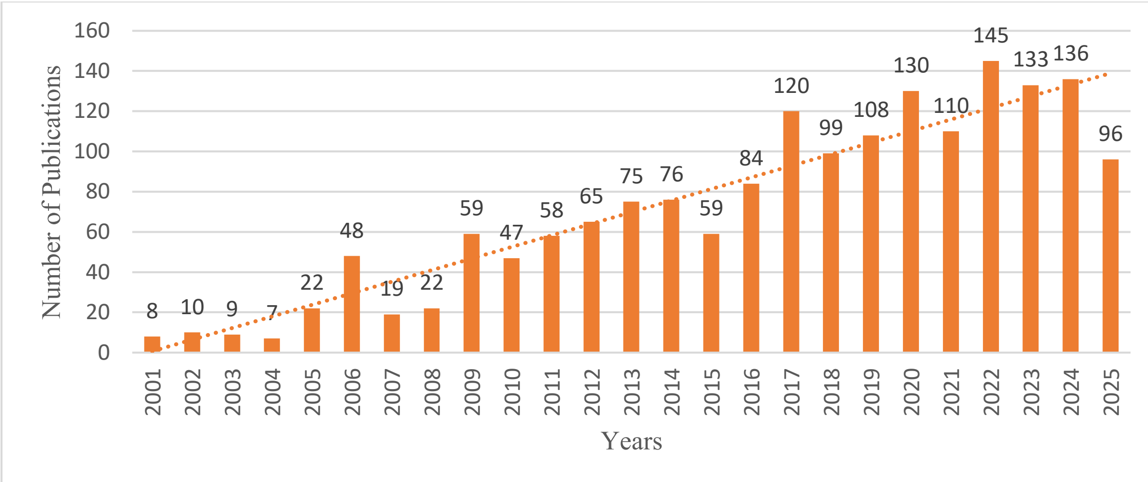

**Fig. 2.** Annual distribution of publications on POE research between 2001 and 2025.

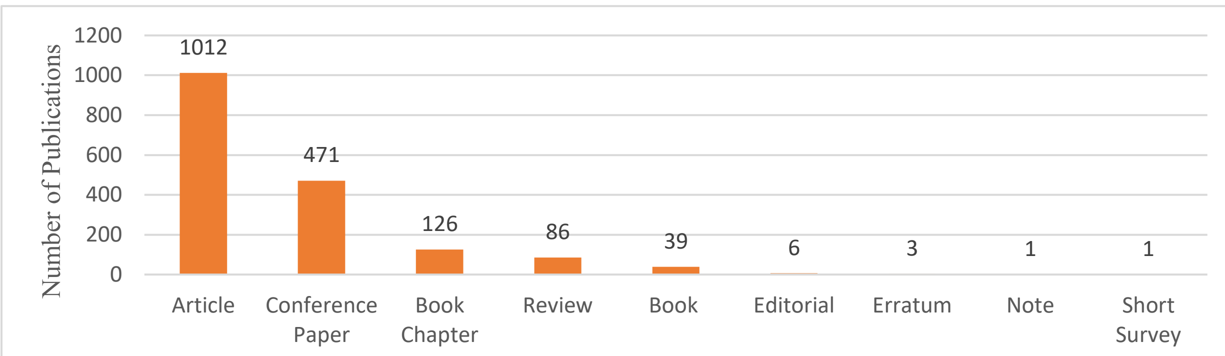

**Fig. 3.** Distribution of POE-related publications by document type.

### 3.2 Thematic Mapping of Textual Co-occurrence

To uncover the underlying thematic structures in POE research, a co-occurrence analysis of text data was conducted using full counting. Terms were extracted from the title and abstract fields, and a minimum occurrence threshold of 15 was applied. This ensured the visualization emphasized frequently recurring concepts to capture the dominant themes in the dataset, while filtering out noise and irrelevant terms. The resulting network map (Figure 4) highlights several distinct clusters, each representing a thematic dimension within POE literature.

To begin with, the green cluster is dominated by terms such as occupant, satisfaction, IEQ, thermal comfort, air quality, lighting, and privacy. This grouping illustrates the central role of human experience and IEQ in POE, reflecting the field's traditional emphasis on user satisfaction and well-being. The density of connections emphasizes how studies of IEQ and occupant comfort remain foundational to POE research. It highlights how POE has traditionally focused on measuring and improving comfort dimensions (thermal, acoustic, visual, and air quality) and linking these outcomes to user satisfaction and health. The prominence of this cluster illustrates the centrality of the human dimension in POE literature. Additionally, the blue cluster revolves around energy, energy efficiency, energy demand, energy performance gap, simulation, prediction, climate, natural ventilation, and passive house. This cluster represents the sustainability and energy efficiency dimension, capturing the field's contribution to performance gap studies, low-energy building evaluation, and the integration of POE into climate-responsive design. The cluster emphasizes that POE is employed to evaluate energy consumption, efficiency measures, and discrepancies between predicted and actual building performance. The inclusion of terms such as energy performance gap and simulation emphasizes how POE contributes to validating and refining design-stage performance models. The red cluster is organized around keywords such as occupancy evaluation, project, implementation, architecture, construction industry, cost, and stakeholder. This cluster captures the design, project management, and implementation dimensions of POE. It highlights how POE functions as a feedback mechanism within the construction industry, bridging the gap between design intentions, project delivery, and post-occupancy outcomes. The frequent co-occurrence of terms such as stakeholder, barrier, and planning suggests that this dimension is also concerned with the managerial challenges of integrating POE findings into architectural practice and industry processes.

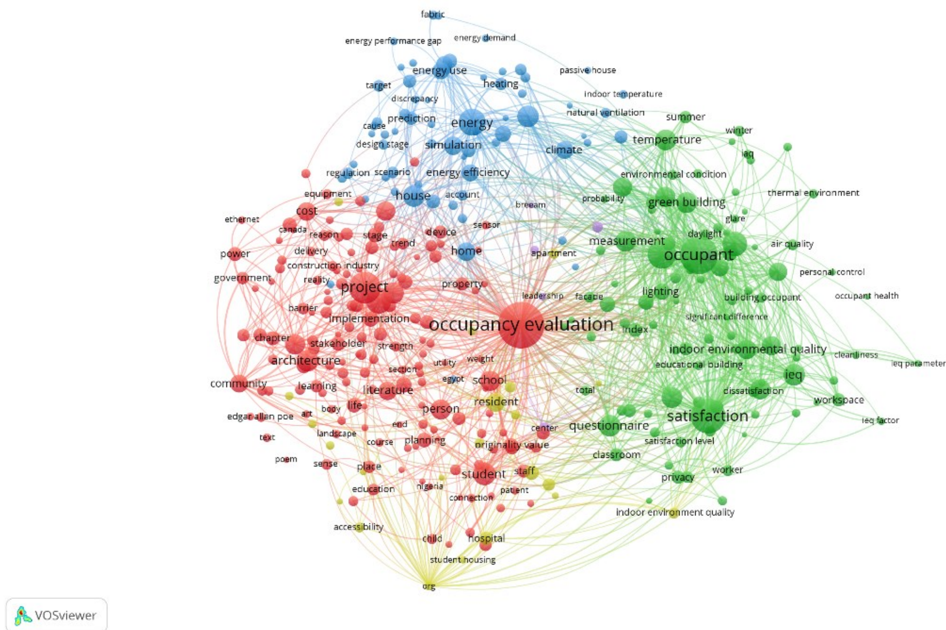


**Fig. 4.** Co-occurrence network visualization of text data from titles and abstracts of POE-related publications.

### 3.3 Mapping Thematic Structures through Keyword Co-occurrence

To deepen the understanding of the conceptual structure of POE research, a co-occurrence analysis of all keywords and index keywords was conducted. Unlike text data analysis, which extracts terms directly from titles and abstracts, this approach focuses on keywords explicitly linked to each publication. The analysis of all keywords reflects the combined set of descriptors provided by authors and indexing services, while the index keyword analysis isolates the standardized terms curated by database providers to ensure consistency and facilitate information retrieval. For both analyses, a threshold of 15 occurrences was applied, which was considered appropriate given the relatively large dataset. It was sufficiently low to capture emerging themes that may not yet dominate the literature but remain important, while also high enough to exclude idiosyncratic keywords that do not contribute to broader thematic trends. This methodological choice aligns with recommendations in bibliometric studies that emphasize balancing comprehensiveness with interpretability, thereby producing a robust yet uncluttered thematic map. The co-occurrence network of all keywords (Figure 5) reveals three dominant clusters. The green cluster emphasizes occupant satisfaction, IEQ, thermal comfort, air quality, and surveys highlighting the field's strong focus on the human-centered evaluation of built environments. These studies explore how environmental conditions influence well-being, satisfaction, and productivity. The red cluster is centered on building performance evaluation, energy utilization, retrofitting, carbon emissions, and energy performance gap. This cluster reflects the sustainability and energy performance dimension, where POE is used to assess energy efficiency strategies, environmental impacts, and performance discrepancies between design and operation. Lastly, the blue cluster includes terms such as architectural design, sustainable development, facility management, and decision-making. This group highlights the integration of POE into architectural and managerial practice, particularly in relation to sustainable design, performance benchmarking, and facilities management strategies. Together, these clusters reveal that POE research is structured around three key domains: occupant well-being, energy performance, and managerial/design applications.

The co-occurrence map of index keywords (Figure 6) reinforces the thematic domains identified in the all-keywords analysis, revealing a similar cluster structure that consistently highlights occupant satisfaction and IEQ, energy efficiency and sustainability, and design and managerial applications. The green cluster again highlights IEQ, air quality, comfort, and satisfaction, reaffirming the centrality of occupant experience and IEQ in POE research. The red cluster is dominated by energy efficiency, carbon dioxide, emission control, heating, and retrofitting. This cluster captures the technical and sustainability-driven perspective, showing how POE is deployed to address energy conservation, carbon mitigation, and climate change goals. The blue cluster is structured around sustainable development, architectural design, facilities management, construction industry, and project management. This reflects the design and managerial application of POE, where findings are used to inform sustainable decision-making, organizational processes, and performance evaluation frameworks. The analyses of all keywords and index keywords converge on three interrelated thematic areas: occupant satisfaction and IEQ, energy efficiency and sustainability, and architectural/managerial integration.

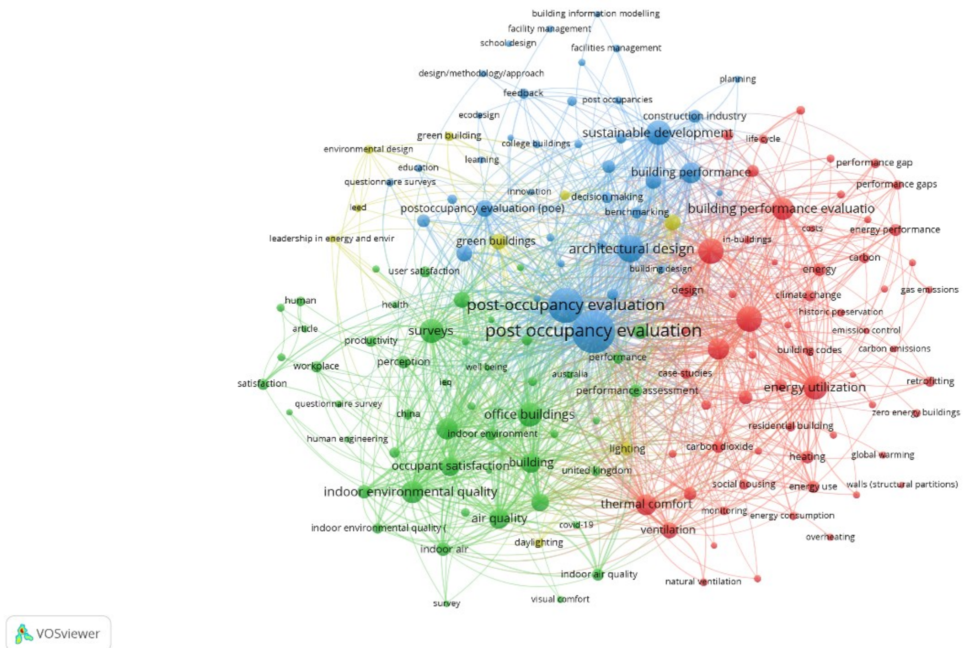


**Fig. 5.** Co-occurrence network visualization of all keywords from POE-related publications.

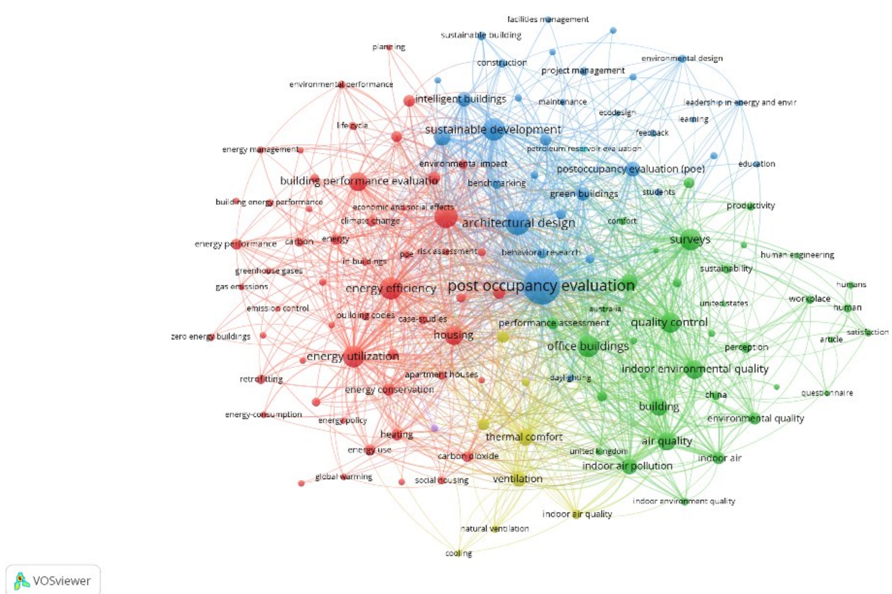


**Fig. 6.** Co-occurrence network visualization of index keywords from POE-related publications.

### 3.4 International Collaboration Patterns in POE Research

The analysis of co-authorship networks at the country level provides valuable insights into the geographical distribution and international collaboration patterns. Such analyses reveal not only which countries contribute most actively to the field, but also how global knowledge exchange and cross-border partnerships shape its development. For this study, the minimum number of documents per country was set to 5 (the VOSviewer default), ensuring that only countries with a meaningful level of scholarly output were included in the visualization. As shown in Figure 7, the network is structured around several prominent clusters that indicate both regional hubs and international collaborations. The United Kingdom (UK) emerges as the most central and influential node, reflecting its long-standing leadership in POE research. Its strong collaborative ties span across Europe (e.g., the Netherlands, Italy, Germany, Spain, and Portugal), as well as to countries outside the region such as Australia, Hong Kong, South Korea, and China. Moreover, the China–Hong Kong axis forms another important hub of activity, representing Asia's growing role in POE scholarship. This cluster is highly interconnected, extending to countries such as Singapore, Japan, Malaysia, and South Korea, thereby reflecting the increasing regional integration of research efforts in Asia. Meanwhile, emerging contributors such as the United Arab Emirates, Turkey, Saudi Arabia, and Egypt highlight the expansion of POE research into the Middle East, aligning with the region's growing focus on sustainable development and high-performance buildings. Similarly, countries in Latin America (e.g., Brazil, Chile) and Africa (e.g., Jordon, Algeria), while less central, demonstrate the field's gradual global diffusion. Overall, the map demonstrates that POE research has developed into a globally networked field, anchored by leading hubs such as the United Kingdom and China, but increasingly characterized by contributions from emerging economies and cross-regional collaboration.

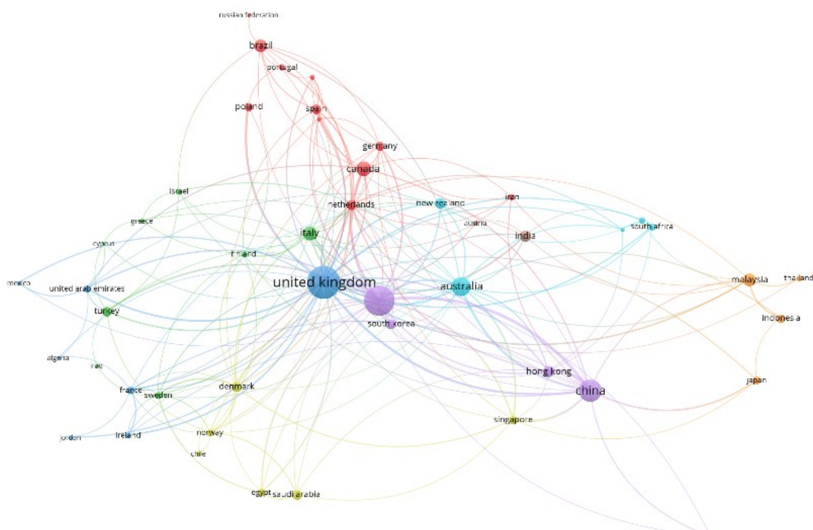


**Fig. 7.** Co-authorship network visualization of countries contributing to POE publications.

### 3.5 Authorship Patterns and Scholarly Contributions

A more nuanced picture of the research landscape in POE emerges when examining the leading authors and their collaborative linkages. Table 1 highlights the most influential contributors, considering their publication productivity, citation impact, and total link strength. The latter reflects the extent of an author's collaborative connections within the research network, serving as an indicator of their role in shaping knowledge exchange and advancing collective scholarship in POE (Jan van Eck & Waltman, 2022).

**Table 1.** Top 10 most influential authors in POE research..

| Rank | Author | Affiliation | Documents | Citations | Total Link Strength |
|---|---|---|---|---|---|
| 1 | de Dear, Richard John | University of Sydney, Australia | 13 | 1515 | 14 |
| 2 | Schiavon, Stefano | University of California, Berkeley, USA | 16 | 1467 | 20 |
| 3 | Kim, Jungsoo | University of Sydney, Australia | 8 | 1229 | 14 |
| 4 | Bordass, Bill | Usable Buildings Trust, UK | 10 | 975 | 8 |
| 5 | Leaman, Adrian | Usable Buildings Trust, UK | 8 | 853 | 9 |
| 6 | Candido, C. Maria | University of Melbourne, Melbourne, Australia | 13 | 646 | 25 |
| 7 | Wargocki, Pawel | Technical University of Denmark, Denmark | 5 | 606 | 2 |
| 8 | Hassanain, Mohammad A. | King Fahd University of Petroleum and Minerals, KSA | 24 | 600 | 15 |
| 9 | Zhu, Yingxin | Tsinghua University, China | 9 | 581 | 11 |

| | | | | | |
|---|---|---|---|---|---|
| 10 | Lin, Borong | Tsinghua University, China | 9 | 578 | 12 |

Table 1 presents the ten most influential authors in POE research, ranked by their citation count. Schiavon has made substantial contributions to POE research, particularly in IEQ and its relationship to occupant satisfaction. One of his most influential works, co-authored with Frontczak et al. (2012), has been cited 486 times. This study, published in "Indoor Air", analyzed data from over 52,000 occupants across 351 office buildings and identified the key factors influencing workspace satisfaction, with the amount of space, noise level, and visual privacy emerging as the most critical determinants (Frontczak et al., 2012). Another highly cited paper, that has received 266 citations, compared occupant satisfaction in LEED-certified and non-LEED office buildings using data from 21,477 responses (Altomonte & Schiavon, 2013). Contrary to expectations, the findings revealed negligible differences in satisfaction between the two groups, suggesting that certification status alone does not guarantee improved occupant experiences. De Dear and Kim have jointly produced highly influential research that has significantly advanced the understanding of workspace satisfaction and IEQ. Their study, published in the "Journal of Environmental Psychology", has been cited 517 times, and has examined open-plan office configurations using the Center for the Built Environment (CBE) survey data, demonstrating that while open offices enhance communication, the benefits are outweighed by substantial drawbacks such as increased noise and reduced privacy (Kim & de Dear, 2013). Their earlier study, cited 282 times, applied Kano's satisfaction model to explore how IEQ factors influence overall workspace satisfaction. The study revealed that some factors, such as temperature, noise, and visual privacy, function as "basic" requirements, exerting a disproportionately negative effect on satisfaction when underperforming (Kim & de Dear, 2012). By contrast, other factors such as air quality and lighting had more proportional, linear effects. Leaman and Bordass have been central figures in advancing POE in the UK. Their influential paper, published in "Building Research and Information" and cited 353 times, compared occupant perceptions across 177 UK buildings, distinguishing between conventional and green-certified structures (Leaman & Bordass, 2007). The study revealed that while green buildings improve some aspects, they may also repeat longstanding operational issues when they are complex to manage. Importantly, the authors observed that occupants of green buildings tend to tolerate deficiencies more readily than those in conventional buildings, raising questions about user expectations of POE studies. Their subsequent article, cited 209 times, extended these insights by synthesizing lessons from extensive fieldwork in non-domestic buildings, with broader applications to housing evaluation (Leaman et al., 2010). The paper set out guiding principles for effective building-performance evaluation, addressing feedback mechanisms, methodological rigor, and ethical considerations.

### 3.6 Analysis of Publication Sources

The analysis of publication sources highlights the journals that have played a central role in disseminating research on POE. As shown in Table 2, "Building and Environment" leads as the most prominent outlet, with 105 documents and 5653 citations, underscoring its position as a leading venue in the field. This high citation impact can be attributed in part to landmark studies, including Li et al. (2018), Kim and de Dear (2012), and Altomonte and Schiavon (2013). "Building Research and Information" follows with 73 publications and 4522 citations, further establishing its importance for theoretical contributions. Similarly, "Energy and Buildings" ranks third, with 56 articles and 3729 citations. Beyond these, "Applied Energy" though represented by only eight documents, has achieved a high citation count (2134), suggesting that its contributions, while fewer, are highly impactful. Other notable sources include "Facilities" and "Buildings", which provide a consistent stream of research with a combined total of nearly 100 publications. Overall, the distribution of documents and citations indicates that a small number of high-impact journals dominate the discourse, while emerging journals contribute to diversifying the thematic scope of the literature.

**Table 2.** Top 10 leading sources by number of publications and citations.

| Rank | Source | Documents | Citations |
|---|---|---|---|
| 1 | Building and Environment | 105 | 5653 |
| 2 | Building Research and Information | 73 | 4522 |
| 3 | Energy and Buildings | 56 | 3729 |
| 4 | Applied Energy | 8 | 2134 |
| 5 | Facilities | 45 | 1107 |
| 6 | Buildings | 54 | 598 |
| 7 | Sustainability (Switzerland) | 43 | 536 |
| 8 | Intelligent Buildings International | 23 | 449 |
| 9 | Advances in Building Energy Research | 6 | 374 |
| 10 | Journal of Facilities Management | 16 | 372 |

### 3.7 Analysis of Top Cited Papers

To complement the analysis of sources, it is important to identify the most influential individual papers shaping the field, hence, Table 3 highlights the five most highly cited publications. The most cited contribution is Yang et al. (2014), which provides a comprehensive review of thermal comfort research and its implications for building energy consumption. This work synthesizes predictive models such as the Predicted Mean Vote and adaptive approaches, underlining their energy-saving potential and the importance of integrating climate scenarios and POE feedback into long-term building performance strategies. Additionally, Menezes et al. (2012), addresses the widely recognized performance gap by comparing predicted versus actual energy use in non-domestic buildings. Drawing on POE data, the authors demonstrate how inaccurate assumptions about occupancy and facilities management undermine design-stage energy predictions and advocate for evidence-based benchmarks to refine energy modelling. Moreover, Kim and de Dear (2013), investigates the privacy-communication trade-off in open-plan offices as discussed in Section 3.5. Furthermore, Newsham et al. (2009), provides a critical reassessment of whether LEED-certified buildings deliver on their energy-saving promises. Their study reveals that while LEED buildings generally consume less energy than conventional counterparts, a significant proportion perform worse. Finally, Frontczak et al. (2012), with 486 citations, examines quantitative relationships between IEQ and overall occupant satisfaction as explained in Section 3.5. Collectively, these papers demonstrate the dual focus of the POE field: diagnosing gaps between design and performance, while simultaneously advancing knowledge of human-centered factors that influence building usability.

**Table 3.** Top-cited papers in POE research.

| Rank | Authors | Title | Citations | Source Title |
|---|---|---|---|---|
| 1 | (Yang et al., 2014) | Thermal comfort and building energy consumption implications - A review | 1197 | Applied Energy |
| 2 | (Menezes et al., 2012) | Predicted vs. actual energy performance of non-domestic buildings: Using post-occupancy evaluation data to reduce the performance gap | 642 | Applied Energy |
| 3 | (Kim & de Dear, 2013) | Workspace satisfaction: The privacy-communication trade-off in open-plan offices | 517 | Journal of Environmental Psychology |
| 4 | (Newsham et al., 2009) | Do LEED-certified buildings save energy? Yes, but... | 500 | Energy and Buildings |
| 5 | (Frontczak et al., 2012) | Quantitative relationships between occupant satisfaction and satisfaction aspects of indoor environmental quality and building design | 486 | Indoor Air |

## 4. Conclusions and Recommendations

This bibliometric study consolidates and clarifies the fragmented landscape of POE research in the built environment over 2000–2025. Using a transparent Scopus protocol and VOSviewer, the study analyzed 1,745 publications to map growth patterns, thematic structures, leading outlets, and collaboration networks. Three interlinked thematic domains consistently emerged across text and keyword co-occurrence analyses: (i) occupant satisfaction and indoor IEQ; (ii) energy performance, including the prediction–operation performance gap; and (iii) architectural/managerial applications related to design decisions, and facilities management. Leading journals, including Building and Environment, Building Research & Information, and Energy and Buildings, continue to anchor the field, while highly cited works underscore the dual focus on both technical performance and occupant well-being. Author–country mappings highlighted influential contributors and robust hubs in the UK and China/Hong Kong, alongside rising participation from emerging regions. For scholarship, the study offers a replicable workflow, from search string and inclusion criteria to VOSviewer settings, that future reviews can update or compare against.

Beyond consolidating the knowledge base, this study demonstrates the significance of POE as both a scholarly field and a practical instrument for advancing sustainable building performance. The prominence of IEQ–satisfaction constructs suggests that occupant-centered metrics should be systematically embedded in procurement, commissioning, and post-handover monitoring, while recurring managerial terms indicate the need for organizational mechanisms such as feedback loops, data governance, and standardized tools to translate POE findings into actionable outcomes. Building on these insights, several recommendations can be advanced. For researchers, there is a clear need to develop standardized frameworks and metrics that enable comparability across contexts, while also bridging the gap between occupant-centered inquiry and energy-performance evaluations. Longitudinal and cross-regional studies, particularly in emerging economies, would enrich the global evidence base and capture evolving dynamics. For practitioners, POE should be embedded as a continuous feedback process throughout design, procurement, and operation, integrating occupant satisfaction indicators with energy and environmental data to achieve both human and sustainability goals. For policymakers, stronger incentives are required to mainstream POE through its inclusion in building codes, rating systems, and sustainability benchmarks, supported by regional or national databases that facilitate benchmarking and evidence-based policymaking. Taken together, these conclusions and recommendations reaffirm the centrality of POE in closing the performance gap between design and operation, strengthening feedback loops between occupants and buildings, and supporting the global agenda for healthier, more efficient, and more sustainable built environments.

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