

Practice-based research in the Social Sciences and Humanities: A bibliometric analysis

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ABSTRACT

Practice-based research (PBR) has emerged as a promising alternative to traditional models of academia-practice collaborations, aiming to integrate scientific inquiry with practical interventions. However, the lack of a comprehensive, cross-disciplinary understanding of PBR has obstructed its recognition and led to inadequate evaluation frameworks. To address this gap, this study conducted a bibliometric analysis across the Social Sciences and Humanities disciplines to explore trends in PBR adoption and publication. Analyzing 3,417 documents from the Web of Science, it examined PBR research trends and utilized bibliometric mapping to identify thematic research clusters and historical evolution patterns. The findings revealed a growing interest in PBR, likely influenced by a focus on societal impact and educational reforms, such as the integration of vocational education into academic structures. It emphasized the need for cross-disciplinary exploration of PBR, shedding light on its diverse approaches and providing a systematic, data-driven perspective beyond theoretical frameworks.

Keywords: practice-based research; practitioner research; bibliometric analysis; word co-occurrence network analysis; Social Sciences and Humanities.

1. INTRODUCTION

THERE HAS BEEN a growing focus on bridging the research-practice gap through enhancing knowledge transfer from academic to nonacademic contexts (Chan *et al.*, 2020; Nelson *et al.*, 2024; Zang & Liu 2023). As research funders increasingly prioritize the tangible societal impacts of science, researchers have become more proactive in demonstrating how their work resonates with stakeholders outside academia (Jensen *et al.*, 2022; Pan & Pee, 2020; Zheng *et al.*, 2021). At the same time, extensive

scholarship has brought to light diverse barriers and tensions inherent in research translation and academia-practice relationships in general. A notable challenge frequently underscored in various studies is the “relevance-rigor gap,” delineating the contrasting priorities of academics, who emphasize methodological rigor, and practitioners, who prioritize the direct applicability of research findings to their professional contexts (Bartunek & Rynes, 2014; Negt & Haunschild, 2024). This dissonance has been illustrated by many scholars across health and social sciences who stress that findings

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from high-quality, rigorously conducted experimental studies (often conducted in the form of randomized controlled trials) are often difficult to seamlessly apply to everyday practice, due to their focus on internal rather than external validity (Ammerman *et al.*, 2014; Joyce & Cartwright, 2020). The current body of literature also illustrates that practitioners and academics operate from distinct logics and follow different interests and objectives—for example, practitioners often undertake research projects to solve practical problems rather than solely aiming to address a “knowledge gap” (Bartunek & Rynes, 2014). Moreover, scholars have brought attention to differences in practices between academics and practitioners, including variations in access to research findings and time constraints, impeding the effective utilization of research evidence in real-life contexts (Guerro-Hernández & Fernández-Ugalde, 2020; Negt & Haunschild, 2024; Oliver *et al.*, 2014).

These barriers and tensions are intricately connected to the dominant framework guiding academia-practice partnerships, known as the “linear knowledge pathway” model. This model, which has underpinned postwar Western scientific policies and influenced higher education and research evaluation systems (Schauz, 2014), presupposes that knowledge originates with academic researchers and is subsequently transferred for application in practical contexts. Recent scholarship has revealed that the dissemination of research into society involves more complex pathways, incorporating various models of knowledge flow based on co-creation and public engagement (Muhonen *et al.*, 2020; Ochsner & Bulaitis, 2023). Despite this complexity, the notion of linear knowledge diffusion and related concepts like “evidence-based practice” have consistently remained as standard models for the relationship between practice and academic research (Joyce & Cartwright, 2020). Simultaneously, in response to the limitations of this prevailing model, alternative research methodologies have been proposed to bridge the gap between research and practice. One such approach is “practice-based research” (PBR), which is a form of research grounded in, influenced by, and aimed at enhancing professional practice. PBR is an umbrella term encompassing various research forms conducted “by practitioners, for practitioners, and through

interaction and collaboration between practitioners” (Heikkinen *et al.*, 2016, p. 2). It involves practitioners-researchers or collaborative teams comprising both researchers and practitioners, typically operating within real-world practice settings such as clinical centers, schools, workplaces, and art studios (Kelly *et al.*, 2020). PBR integrates scientific inquiry with practical intervention, resulting in the creation of knowledge directly applicable to real-world contexts (Fox, 2003). Unlike the “evidence-based practice” approach, it emphasizes integration over translation, seeking to transcend the boundaries between academia and professional practice.

Scholars have emphasized the potential of PBR in generating knowledge and evidence that is relevant to practice settings, thereby enhancing the role of research in solving real-world issues (Chesak *et al.*, 2022; Erwin & Brownson, 2017; Heissenberger & Matischek-Jauk, 2020). However, because PBR primarily concentrates on addressing practical and context-specific issues within local settings, PBR studies often fail to meet the standard criteria of research quality commonly employed in research evaluations. Scholars have observed that PBR studies are frequently deemed of lower quality due to their smaller scale, local focus, descriptive nature, and lack of reliance on large sample sizes and advanced statistical analyses (Ammerman *et al.*, 2014; Oancea & Furlong, 2007; Wyse *et al.*, 2021). Evaluation systems tend to prioritize articles published in prestigious academic journals, which typically overlook practitioner perspectives, while outputs published in practitioner journals are generally not considered eligible. A significant challenge in addressing this issue and advocating for the improved assessment of PBR lies in the absence of a cross-disciplinary, comprehensive understanding of this research approach. Presently, knowledge of PBR tends to be constrained by disciplinary boundaries, fostering a perception that it is a specialized and peripheral endeavor restricted to a few scholarly domains. Due to the limited sharing of theoretical and conceptual advancements as well as practical lessons on PBR across disciplinary borders, funders and researchers are poorly equipped to realize the potential utility of this research strategy. To remedy this situation, there is a need for research that explores PBR from a comprehensive viewpoint,

as a research strategy applied in various disciplinary contexts and cultures.

This article aims to take the first step in laying the groundwork for achieving this goal by presenting a bibliometric analysis of PBR across various fields within the Social Sciences and Humanities (SSH). The subsequent sections of the paper are structured as follows: Section 2 outlines the methodology employed in conducting the bibliometric analysis. Section 3 presents the findings derived from the analysis utilizing bibliometric data, including exploration of overarching research trends (Section 3.1), investigation of journals publishing PBR (Section 3.2), analysis of PBR within SSH disciplines (Section 3.3), and keyword co-occurrence analysis (Section 3.4). Sections 4 and 5 delve deeper into the study results, address study limitations, and offer recommendations for future research.

2. METHODS

This study generally followed the workflow for bibliometric analysis developed by Li *et al.* (2021). To fulfill the research objectives, data collection and analysis were carried out in the following manner.

2.1. Data source and retrieval strategies

To identify PBR publications, a search query was developed based on a narrative review and using Prophy.Science, an AI-driven platform renowned for its advanced semantic and conventional analysis of article metadata. Relevant concepts included: “practice-based research” OR “practice-based evidence” OR “practice-as-research” OR “practice-oriented research” OR “practice-led research” OR “practice research” OR “practitioner research” OR “practitioner-researcher” OR “researcher-practitioner,” and included them in the search query which was used to search titles, abstracts, and author keywords (the “Topic” field) in the Web of Science (WoS) database. The structured search returned 12,757 papers, and this dataset was used to conduct primary analysis (Section 3.1). As the objective of the study was focused on the SSH, selected papers were classified into the SSH fields. The selection was made based on the WoS Citation

Topics, which is a methodology introduced by the CWTS Leiden and used to develop a classification of research fields based on citation-derived clusters (Traag *et al.*, 2019). In other words, the research fields to which publications are assigned are not chosen arbitrarily, but instead, they are based on what those publications cite and how they are cited. Papers assigned to SSH meso topics were retrieved using the three-level hierarchical classification according to the 2023 clustering.¹ The list of meso topics is available in Table 2. The final dataset containing PBR publications classified into the SSH fields (henceforth referred to as “PBR-in-SSH”) included 3,417 documents, and this dataset was used to conduct the analysis described in Sections 3.2-3.4.

2.2. Data analysis

The analysis included the following steps. First, the general trends in PBR were described, both globally and across five research fields (Section 3.1). Then, the PBR-in-SSH dataset was analyzed from the perspective of journals most highly contributing to PBR and examined the distribution of PBR papers and citations across SSH disciplines (Sections 3.2 and 3.3). Finally, scientometric mapping was performed using the VoSviewer software to identify thematic research clusters and historic evolution patterns (Section 3.4). In particular, keyword co-occurrence analysis was conducted, which is a content analysis technique that efficiently maps the association strength between items in textual data (Li *et al.*, 2021). The co-word network is constructed based on the number of two words appearing together within the same bibliometric units such as documents, abstracts, or keyword lists. VoSviewer applies the association strength normalization and VOS clustering algorithms to map and cluster these co-occurrences, providing a comprehensive view of relationships within the research domain. By measuring the strength of keyword co-occurrence links, this method enables a detailed mapping of associations between research themes, enhancing our understanding of a specific research domain. In this paper, keyword co-occurrence analysis was employed, a method that examines the occurrence of words within lists of keywords as a bibliometric unit.

¹ <https://incites.help.clarivate.com/Content/Research-Areas/citation-topics.htm>.

3. RESULTS

3.1. Trends in PBR-in-SSH publications

Figure 1 shows the trend in PBR publications in all research fields from 1980 to 2022. It reveals a continuous growth in interest in PBR over the last four decades. In the 21st century (2001–2022), there are a lot more publications

available than in the 20th century (1980–2000) (Figure 1). This is in line with the argument by Erwin and Brownson (2017), who emphasize the growing importance of the PBR due to its potential to address macro trends such as demographic transitions and climate change. In general, the increasing publication trend appears promising, suggesting future growth in the use of PBR approach.

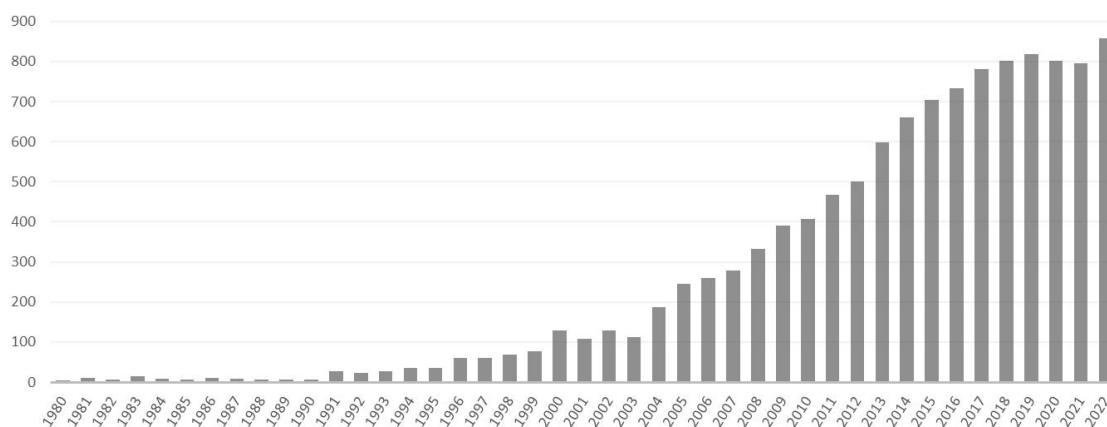


Figure 1. Distribution of PBR publications in all research fields in 1980–2022.

The analysis of the importance of PBR for five research fields over time is shown in Figure 2. Importance is defined as the percentage of PBR papers published in a particular field in all papers published in the field. As different research fields are characterized by distinctive publication patterns and productivity norms resulting in significant differences in the number of articles indexed in scientific databases (Shin & Cummings, 2010; Yair *et al.*, 2022), the relative, instead of absolute, number of papers was used to demonstrate PBR publication trends across research fields. The following fields were analyzed²: SSH, Clinical and Life Sciences (CLS), Agriculture, Environment and Ecology (AEE), Engineering and Technology (E&T), and Natural Sciences (NT). Figure 2 demonstrates that PBR has been notably most prominent in CLS and SSH. PBR has been primarily used in CLS; however, the last few years (since 2014) have been characterized by a slower increase and, ultimately, a decline in interest in PBR. In contrast, the popularity of PBR in SSH has been growing for the last

two decades and has finally exceeded the level of usage of PBR in CLS. While the sudden decline of interest in PBR in CLS (in 2020) might have been the effect of the COVID-19 pandemic on scientific publication patterns in medical research (Raynaud *et al.*, 2021), the trend lines show that the share of PBR publications in SSH grew faster than in CLS already before 2020. Furthermore, the trend lines suggest that the growth of interest in PBR is likely to continue in SSH.

3.2. PBR-in-SSH: A journal perspective

Table 1 lists the SSH journals with the most published PBR papers. Journals represent various disciplines, ranging from education and social work to psychotherapy and art. The *Educational Action Research* published the highest number of PBR papers (49), followed by *Research on Social Work Practice* (43) and *Counselling and Psychotherapy Research* (37). With regard to a journal's rank measured by the journal impact factor (JIF), it can be concluded that journals publishing PBR

² To provide a clearer framework for analysis and synthesis, we have consolidated certain macro citation topics into broader research fields. These fields have been clustered as follows: SSH (Social Sciences and Arts and Humanities), Engineering and Technology (Engineering and Materials Science; Electrical Engineering, Electronics and Computer Science), and Natural Sciences (Chemistry; Physics; Mathematics; Earth Sciences).

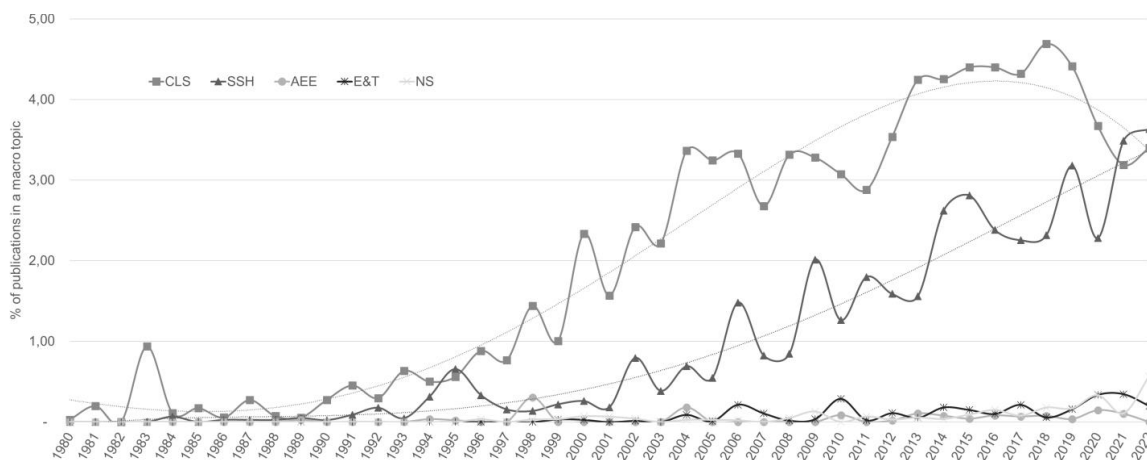


Figure 2. Trends in PBR publications across research fields.

Notes: CLS: Clinical and Life Sciences; VSSH: Social Sciences and Humanities; AEE: Agriculture, Environment and Ecology; E&T: Engineering and Technology; NT: Natural Sciences.

are not among the most cited. Among the 20 listed journals, only three were found in the first quartile (the top 25% most cited journals), seven were in Q2, seven in Q3, and three in Q4. Such a result is consistent with earlier studies showing

that journals publishing research closely tied to practice are not always perceived as top-tier (Bartunek & Rynes, 2014), and articles focusing on practical implications are not among the most frequently cited (Flickinger *et al.*, 2014).

Journal	Paper count	Percentage	JCR rank (2022) ³
<i>Educational Action Research</i>	49	1.40	Q3
<i>Research on Social Work Practice</i>	43	1.23	Q2
<i>Counselling and Psychotherapy Research</i>	37	1.06	Q3
<i>British Journal of Social Work</i>	36	1.03	Q2
<i>Choreographic Practices</i>	30	0.86	Q2
<i>Psychotherapy</i>	30	0.86	Q3
<i>Social Work in Health Care</i>	26	0.75	Q2
<i>Psychotherapy Research</i>	24	0.69	Q2
<i>New Writing: The International Journal for the Practice and Theory of Creative Writing</i>	22	0.63	Q1
<i>Qualitative Social Work</i>	21	0.60	Q3
<i>Performance Research</i>	19	0.55	Q3
<i>International Journal of Art & Design Education</i>	18	0.52	Q4
<i>Qualitative Research Journal</i>	17	0.49	Q2
<i>Social Work</i>	17	0.49	Q1
<i>Studies in Theatre and Performance</i>	16	0.46	Q2
<i>European Journal of Social Work</i>	15	0.43	Q4
<i>Language Teaching Research</i>	15	0.43	Q1
<i>International Journal of Education Through Art</i>	14	0.40	Q4
<i>Journal of Evidence-Based Social Work</i>	14	0.40	Q3
<i>Reflective Practice</i>	14	0.40	Q3

Table 1. SSH journals publishing the highest number of PBR articles.

Notes: SSH: Social Sciences and Humanities; PBR: Practice-based research; JCR: Journal Citation Reports.

³ The JCR rank was determined using either the JIF or the journal citation indicator (JCI) if the JIF was unavailable.

3.3. PBR-in-SSH: A discipline-based perspective

This section focuses on the analysis of PBR from the perspective of meso topics (disciplines). Table 2 shows the number of PBR studies published in meso topics (in 1980–2022) as well as the number of citations and citations-per-output in each discipline. The data indicate that PBR has been most prominent in Psychiatry & Psychology (840 papers), Education & Educational Research (565), Management (376), Language & Linguistics (180), Theater (167), and Social Psychology (93). In terms of citation count, Psychiatry & Psychology, Education & Educational Research, and Management are also top disciplines with the number of citations exceeding 6,900. Management has the highest number of citations-per-output (27.67). In general, SocSci disciplines have more citations-per-output (12.17 on average) than A&H (2.67 on average).

This is due to differences in citation patterns in SocSci versus A&H, which has already been widely recognized by previous research showing that, for example, A&H scholars tend to cite fewer sources and rely on various types of outputs not necessarily covered by scholarly databases (Archambault *et al.*, 2006; Leydesdorff & Salah, 2011).

Table 2 shows the absolute number of papers in each discipline and thus does not consider differences in publication behaviors across research fields. In contrast, Figure 3 shows the relative importance of PBR, calculated as the share of PBR papers in five disciplines: Psychiatry & Psychology, Education & Educational Research, Management, Language & Linguistics, and Theater. The data show a notable increase in the relative significance of practice-based theater research (especially from 2008). At the same time, the other four meso topics do not demonstrate any visible trends.

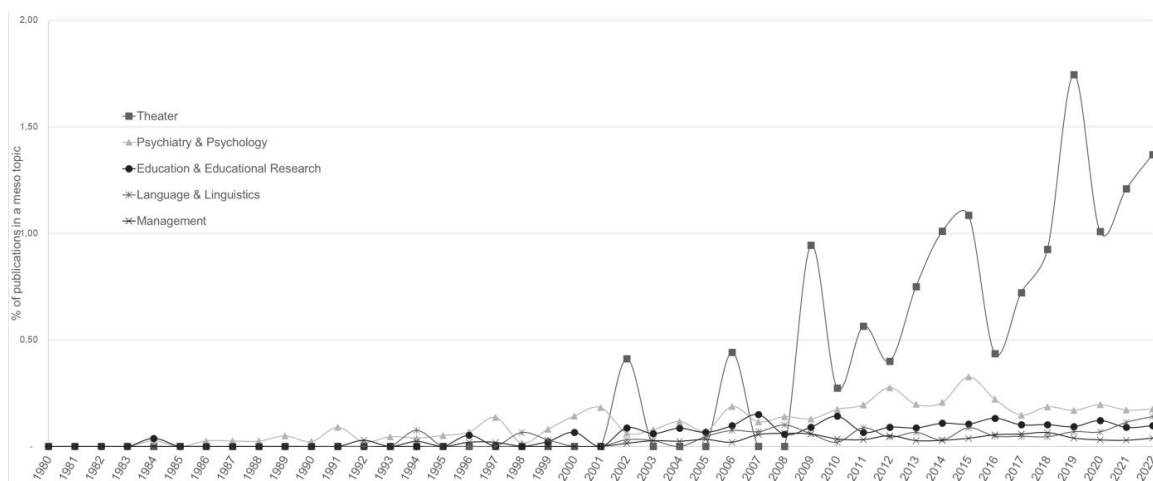


Figure 3. PBR studies in five SSH disciplines.

Notes: SSH: Social Sciences and Humanities; PBR: Practice-based research.

As can be seen from Table 2, among A&H disciplines, the Art subfield (Theater, Music, and Art) publishes the highest number of PBR studies. Naturally, PBR is much more important for artistic researchers who operate at the intersection of academic research and professional art practice (Lewandowska *et al.*, 2024) than for humanities scholars working in more theoretical and academically established fields such as modern history or philosophy. In contrast, social sciences disciplines do not

exhibit such a clear trend, with PBR constituting a smaller percentage of publications within them. However, this may be attributed to the fact that fields such as Management or Education are much larger than the field of Theater and encompass a significantly broader array of research methodologies. Meanwhile, research in the field of Theater, especially those focusing on practical exploration of reality *through* theater (as opposed to theoretical studies *about* theater), relies primarily on PBR.

SSH meso topic	Field	Number of papers	Citations	Citations-per-output
Psychiatry & Psychology	SocSci	840	13,686	16.29
Education & Educational Research	SocSci	565	6,911	12.23
Management	SocSci	376	10,405	27.67
Language & Linguistics	SocSci	180	1,864	10.36
Theater	A&H	167	677	4.05
Social Psychology	SocSci	93	1,589	17.09
Music	A&H	79	515	6.52
Art	A&H	72	396	5.5
Human Geography	SocSci	67	478	7.13
Literary Theory	A&H	66	134	2.03
Anthropology	SocSci	64	386	6.03
Law	SocSci	61	885	14.51
Gender & Sexuality Studies	SocSci	54	1,009	18.69
Hospitality, Leisure, Sport & Tourism	SocSci	51	601	11.78
Political Science	SocSci	50	1,116	22.32
Political Philosophy	SocSci	49	189	3.86
Communication	SocSci	44	338	7.68
Bibliometrics, Scientometrics & Research Integrity	SocSci	39	294	7.54
Climate Change	SocSci	38	539	14.18
Religion	SocSci	35	622	17.77
Sustainability Science	SocSci	25	520	20.8
Operations Research & Management Science	SocSci	22	161	7.32
Philosophy	A&H	20	40	2
Homelessness & Human Trafficking	SocSci	19	376	19.79
Economics	SocSci	17	401	23.59
Modern History	A&H	15	50	3.33
20th Century History	A&H	11	20	1.82
Information & Library Science	SocSci	8	24	3
Agricultural Policy	SocSci	7	302	43.14
Medieval & Early Modern History	A&H	6	15	2.5
Sociology	SocSci	6	29	4.83
Social Reform	SocSci	6	24	4
Risk Assessment	SocSci	6	11	1.83
Economic Theory	SocSci	6	13	2.17
Asian Studies	SocSci	4	9	2.25
History & Philosophy of Science	A&H	4	9	2.25
Translational Studies	A&H	3	7	2.33
Ancient Religion & Literature	A&H	3	5	1.67
Folklore & Humor	SocSci	2	12	6
Soviet, Russian & East European History	A&H	2	0	0

Table 2. PBR papers in each SSH meso topic (1980-2022).

Notes: SSH: Social Sciences and Humanities; PBR: Practice-based research;
SocSci: Social sciences; A&H: Arts and humanities.

3.4. The landscape of PBR-in-SSH: Keyword co-occurrence analysis

Keyword co-occurrence analysis was conducted to visualize and explore the landscape of PBR-in-SSH and identify research clusters. A co-occurrence network was constructed using VOSviewer 1.6.20 (Figure 4). A typical co-occurrence network consists of nodes, which represent the keywords, and edges, which represent a connection or relation between two keywords. Each node has a strength, which is based on the number of publications in which two keywords occur together in the keyword list (Van Eck & Waltman, 2019). This analysis used all keywords including the keywords provided by authors of articles (Author Keywords)

as well as keywords automatically generated from the titles of articles referenced in the PBR publications (KeyWords Plus). While this approach may result in a more complex and less easily readable visualization of the research landscape, it helps mitigate the limitations of relying solely on Author Keywords, which are often subject to authors' arbitrary choices and their varying levels of experience in selecting relevant research terms. The minimum number of occurrences for a keyword to be included in the network was set to 15. Different variants of the same keywords (e.g., child/children and mental health/mental-health) were merged, and generic keywords (e.g., research) were omitted. Out of the 10,661 keywords, 177 were enrolled in the analysis.

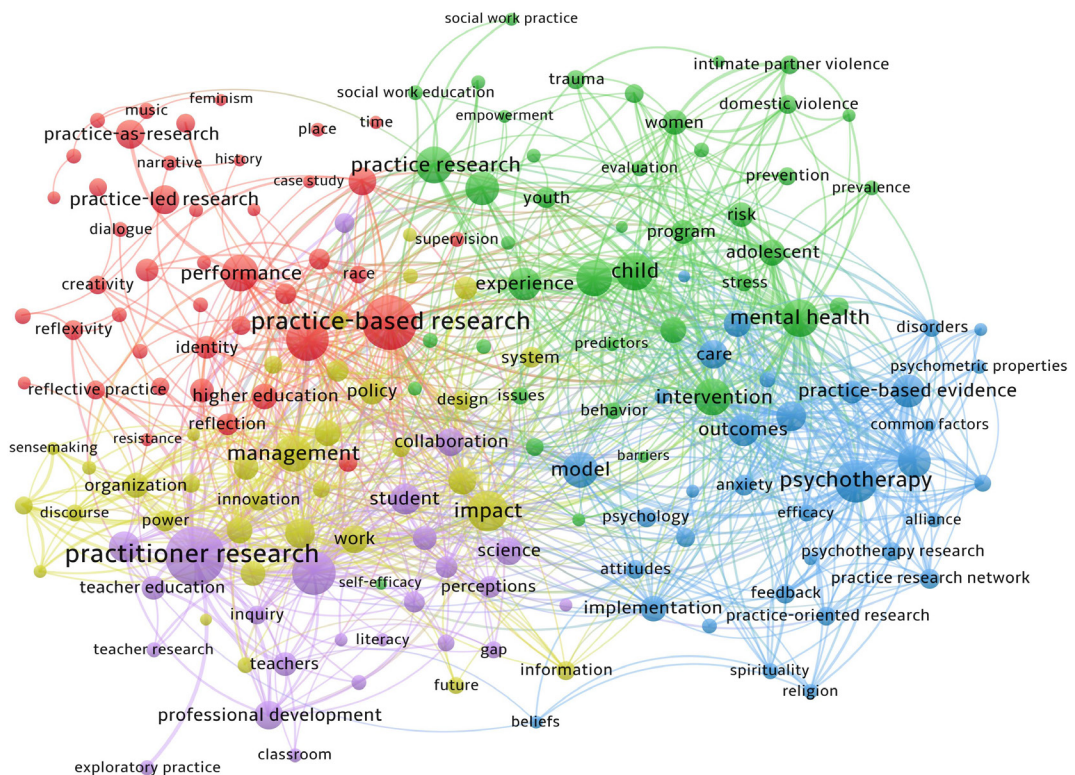


Figure 4. The keyword co-occurrence network.

Figure 4 illustrates the keyword co-occurrence network. The links between two nodes (keywords) represent their co-occurrence in the same publication: the closer two nodes are to each other, the larger the number of their co-occurrences. The size of the nodes represents their weight (importance). Five clusters were obtained as a result of the analysis.

3.4.1. Cluster 1 (red): Practice-based research

The cluster shown in red includes 43 keywords, among which the highest weight is attributed to “practice-based research.” Table 3 demonstrates the keywords included in the clusters. Compared with other clusters, Cluster 1 most closely reflects the arts and humanities (A&H)

Cluster	Cluster name	Number of keywords	Keywords
Cluster 1 (Red)	Practice-based research	43	Art, autoethnography, case study, creative practice, creativity, dance, dialogue, diversity, education, embodiment, ethics, ethnography, feminism, gender, higher education, history, identity, language, leadership, methodology, music, narrative, pedagogy, performance, place, politics, practice-as-research, PBR, practice-led research, practitioner-researcher, qualitative research, race, reflection, reflective practice, reflexivity, research methods, resistance, social justice, subjectivity, supervision, time, voice, and writing
Cluster 2 (Green)	Practice research	42	Abuse, adaptation, adolescent, barriers, behavior, child, competence, domestic violence, empowerment, evaluation, experience, families, governance, health, intervention, intimate partner violence, issues, mental health, posttraumatic-stress-disorder, practice research, predictors, prevalence, prevention, primary care, program, quality, resilience, risk, satisfaction, self, self-efficacy, service, social work, social work education, social work practice, social work research, stress, support, trauma, violence, women, and youth
Cluster 3 (Blue)	Practice-based evidence	34	Alliance, anxiety, attitudes, beliefs, care, clinician, cognitive-behavioral therapy, common factors, core-om, depression, disorders, dissemination, efficacy, emotion, evidence-based practice, feedback, implementation, integration, meta-analysis, model, outcomes, practice research networks, practice-based evidence, practice-oriented research, psychology, psychometric properties, psychotherapy, psychotherapy research, religion, spirituality, therapy, training, validation, and validity
Cluster 4 (Yellow)	Strategy-as-practice	34	Agency, as-practice, business, challenges, communication, community, context, culture, decision-making, design, discourse, field, framework, future, impact, information, innovation, learning, management, networks, organization, participation, perspective, policy, power, practice, relevance, sensemaking, strategy, strategy-as-practice, sustainability, system, technology, and work
Cluster 5 (Purple)	Practitioner research	24	Action research, classroom, collaboration, engagement, exploratory practice, gap, inquiry, knowledge, lessons, literacy, motivation, participatory action research, partnership, perceptions, practitioner, practitioner research, professional development, school, science, skills, student, teacher education, teacher research, and teachers

Table 3. Summary of the keyword clusters.

research, as it includes research areas (e.g., art, dance, music, history, and language), theories and concepts (e.g., creative practice, creativity, language, performance, writing, feminism, gender, identity, subjectivity, and embodiment), and methods (autoethnography, case study, ethnography, reflective practice, narrative, and qualitative research) frequently used in A&H. Moreover, this cluster includes two other approaches: practice-as-research and practice-led research, indicating their connection to A&H. This is consistent with previous research (Candy, 2006; Nelson, 2022) where both approaches are used as synonyms of research in the Arts.

3.4.2. Cluster 2 (green): Practice research

The green cluster includes 42 keywords and, compared with other clusters, most closely

relates to social work research. Cluster 2 includes items directly referring to social work (social work, social work education, social work practice, and social work research) as well as items that refer to significant themes in social work research and practice, including social challenges (e.g., abuse, domestic violence, intimate partner violence, mental health, posttraumatic-stress-disorder, stress, support, and trauma), target groups (e.g. adolescent, child, women, youth, and families), research methods (e.g. intervention, evaluation, and predictors), and outcomes (adaptation, competence, empowerment, experience, prevalence, prevention, resilience, satisfaction, and self-efficacy). “Practice research” also appears in this cluster, suggesting that, among PBR approaches, it has the strongest links with social work research.

3.4.3. Cluster 3 (blue): Practice-based evidence

The blue cluster (34 keywords) refers most closely to research at the intersection of SSH and CLS, representing psychology and psychiatry research. It contains items explicitly indicating this research field (psychotherapy, psychotherapy research, psychology, and psychometric properties), as well as items referring to psychology/psychiatry topics (e.g., anxiety, cognitive-behavioral therapy, depression, disorders, emotion, core-om, attitudes, and beliefs), methods (e.g., meta-analysis), and more general terms (e.g., clinician, therapy, implementation, dissemination, outcomes, efficacy, and care). Cluster 3 represents the “practice-based evidence” approach. At the same time, it includes “evidence-based practice,” indicating a connotation of those two terms. “Practice-based evidence” and “evidence-based practice” have indeed often been portrayed as either opposing or complementary methodologies, as discussed by Green (2008) or Simons *et al.* (2003).

3.4.4. Cluster 4 (yellow): Strategy-as-practice

The yellow cluster (34 keywords) contains keywords most closely linked with management research (e.g., management, decision-making, communication, organization, policy, agency, networks, power, system, information, innovation, strategy, perspective, future, business, technology, design, sustainability, and work). The cluster does not explicitly mention any of the PBR approaches included in the search query but includes related, more discipline-specific approaches (“strategy-as-practice”).

3.4.5. Cluster 5 (purple): Practitioner research

The purple cluster (24 keywords) represents educational research. Cluster 5 includes keywords explicitly related to education (e.g., student, teacher research, teachers, school, lessons, and classroom) and topics addressed by educational research (e.g., literacy, motivation, engagement, inquiry, knowledge, science, and skills). “Practitioner research” is the most prominent PBR approach (and the most frequently occurring keyword in general). In addition, the occurrence of “action research” in

the cluster implies that this approach is mostly linked with educational research. Cluster 5 also represents topics related to teachers’ professional development, aligning with extensive research that highlights the utilization of PBR in continuing teacher education (Heissenberger & Matischek-Jauk, 2020; Willemse *et al.*, 2016).

The keyword co-occurrence analysis indicates that research clusters within the domain of PBR are associated with various research fields: A&H, social work, psychology and psychiatry, management, and education. Furthermore, it suggests that different concepts of PBR appear to be more closely connected to certain fields than others. This implies that while terms related to PBR may be used interchangeably in some research domains, they are also somewhat discipline-specific. Simultaneously, it is evident that some terms are more synonymous; for instance, “practitioner research” and “practice-based research” are more closely related than “practice-based evidence.” This becomes even more apparent from a dynamic perspective—utilizing the dynamic keyword co-occurrence network, which illustrates the evolution of PBR-in-SSH over the past two decades (see Figure 5).

The dynamic analysis reveals a gradual expansion of the network and the emergence of clusters due to the increasing quantity of academic literature on PBR-in-SSH (Figure 5). It demonstrates that “practitioner research” and “practice-based research” remained in the same cluster for the majority of the time and only became separate clusters in the final phase, characterized by a high saturation of literature. Meanwhile, terms such as “practice-based evidence,” “strategy-as-practice,” or “practice research” found themselves in separate clusters much earlier, indicating their distinctiveness. Moreover, the dynamic analysis reveals that during the initial period (2003–2007), marked by a scarcity of literature, only two clusters emerged: one focused on psychotherapy and mental health topics closely associated with medical and health sciences (blue cluster), and the other encompassing various domains of PBR within the SSH (red cluster). This division can be attributed to the earlier and more robust development of PBR in CLS compared to SSH (see Figure 2 for comparison). Notably, throughout

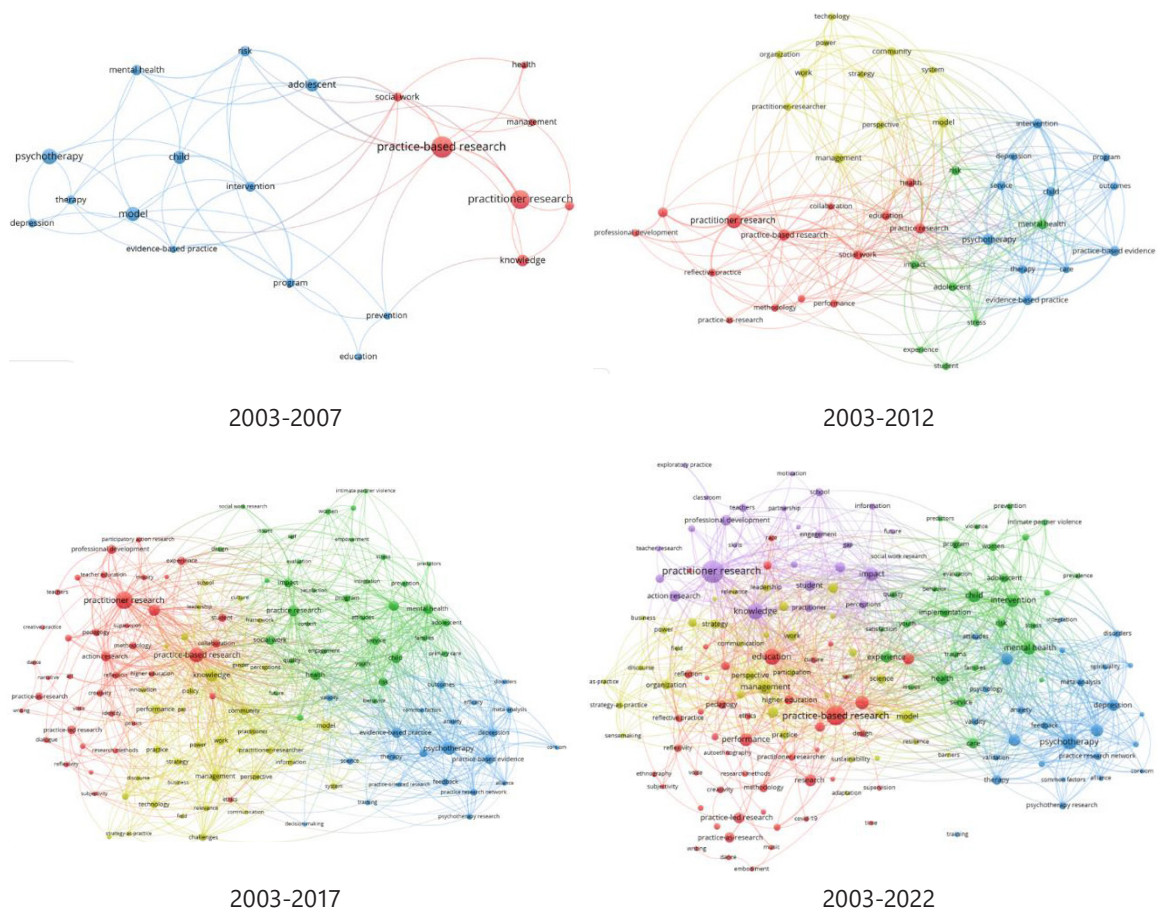


Figure 5. Dynamic keyword co-occurrence network for years 2003-2022.

the analyzed period, the blue cluster addressing health-related topics exhibits the highest density and relatively distinct boundaries, suggesting a more advanced stage of development compared to other clusters. Consequently, we can infer that PBR initially flourished in health-related domains within SSH and subsequently gained broader adaptation in other social sciences fields such as Management or Education.

The keyword co-occurrence analysis has been generally consistent with the discipline-based perspective (Section 3.3) in terms of identifying the primary research fields utilizing PBR. However, the discipline-based approach overlooked Social Work, primarily because this research domain is not classified in WoS as a distinct discipline (meso topic) but rather as a subdiscipline (micro topic) of Psychiatry & Psychology. As depicted in Figure 5, the social work cluster (green) encompasses

subjects previously clustered mainly within the psychotherapy (blue) cluster, indicating a close relationship between these clusters. This observation resonates with previous studies that have illustrated the involvement of social work scholars in mental health and psychotherapy topics, particularly since 2003 (Martínez *et al.*, 2015). Additionally, the dynamic keyword co-occurrence analysis underscores the significance of PBR within the field of Social Work, revealing that this cluster emerged relatively early, despite a period of limited literature quantification (2003-2012). Furthermore, various studies underscore the prevalence of PBR in Social Work (Dodd & Epstein, 2012; Grinnel & Unrau, 2014; Shaw & Lunt, 2018), reinforcing the credibility of the co-occurrence analysis findings. This implies that inductive methodologies may offer greater efficacy in studying PBR compared to approaches reliant on disciplinary classifications.

4. DISCUSSION AND FINAL CONSIDERATIONS

Previous studies have highlighted a growing interest in PBR and its potential to address significant societal challenges. However, the extent of its active utilization across various scientific disciplines has remained unclear. This bibliometric analysis reveals a clear upward trend in interest in PBR, with a particularly pronounced increase in the humanities and social sciences. The increased interest in PBR within SSH may be attributed to a growing emphasis on scientific research yielding positive societal outcomes. Researchers are increasingly striving to highlight the societal impact of their work, while research funders are showing a heightened interest in the societal value of their investments. However, conventional models of impact used in research evaluation systems pose challenges for SSH, as impact in these fields is often not easily quantifiable through economic returns or industrial applications. Furthermore, the traditional concept of research translation or usability, which follows a linear knowledge pathway “from evidence to best practice” does not consistently align with the dynamics of SSH, characterized by significantly more intricate processes of knowledge diffusion (Ochsner & Bulaitis, 2023). Consequently, alternative impact frameworks emphasizing research-practice interactions have gained attention in recent years (Farley-Ripple *et al.*, 2018; Muhonen *et al.*, 2020; Pan & Pee, 2020). Among these frameworks is PBR, which offers a distinctive approach to integrating knowledge production and utilization and thus is better suited for SSH research than impact models based on linear knowledge flow.

Simultaneously, the increased production of PBR articles is also likely associated with higher education reforms, such as the incorporation of vocational education into academic systems (Ek *et al.*, 2013; Georgii-Hemming *et al.*, 2020). This study has demonstrated a notable increase in PBR studies within the Theater field, which can be attributed to the reorganization of vocational art education over the past three decades in numerous countries worldwide (Lewandowska & Kulczycki, 2022). These reforms involved the incorporation of specialized art colleges, previously focused on training artists, into university research structures and the

adaptation of higher art education regulations to the standards and demands of academic research (Lewandowska *et al.*, 2023). Artists working as faculty members had to adapt to the requirement of providing research outputs, and PBR has offered them a solution to integrate artistic work with research activity (Wilson, 2016). The research findings, therefore, suggest a potential connection between the growing interest in PBR and the process of vocational higher education becoming more academically oriented. This implies that the increasing utilization of PBR might be influenced, at least in part, by “top-down” enforcement through scientific policies.

Previous research on PBR has predominantly been conducted within individual research disciplines. To the best of our knowledge, this study is the first to tackle the task of cross-disciplinary analysis of PBR. The results of this study have identified the most important SSH disciplines for PBR and outlined the evolution of PBR across different research fields. Additionally, the study highlights the varied adoption of different PBR approaches (such as “practitioner research,” “practice research,” or “practice-based evidence”) across disciplines and suggests that some approaches share closer conceptual ties than others. This contribution extends current, largely theoretical research, which has typically viewed these approaches as part of a unified “research family” while recognizing some methodological distinctions (Heikkinen *et al.*, 2016; Shaw & Lunt, 2018). Unlike those theoretical studies, this research proposes a more systematic and data-driven exploration of diverse PBR approaches.

5. LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH

Further research is warranted to delve deeper into this topic and elucidate the relationships between PBR approaches. This could entail quantitative exploration of bibliometric networks and qualitative analysis of specific instances of PBR. Further cross-disciplinary exploration of PBR is essential not only for enhancing comprehension but also for practical reasons. Inadequate understanding of PBR can result in its improper assessment within research evaluation systems. These systems

are typically designed predominantly from an academic perspective, prioritizing scholarly impact over the practical relevance of research outputs. This presents a challenge for PBR, which is inherently practical and may not align well with traditional scholarly impact indicators, such as citations. Our analysis supports this notion, revealing that journals publishing the most PBR studies tend to rank in the second or third quartile of WoS journals in terms of citations.

However, in order to create evaluation systems that would appreciate and support PBR, we must first understand PBR and establish appropriate assessment criteria. Although there are several studies aimed at better understanding the quality of PBR (Anderson & Herr, 1999; Heikkinen *et al.*, 2016; Oancea & Furlong, 2007; Oolbekkink-Marchand *et al.*, 2014), their perspective is typically monodisciplinary and, therefore, not sufficient grounds for a thorough reform of science evaluation systems. Future studies could address this gap by conducting a cross-disciplinary mixed-method analysis of PBR. One limitation of this study is that it solely relied on publications indexed in WoS. Instead, incorporating several local databases (such as Flemish ECOOM, which captures non-traditional research outputs like articles in professional journals and non-written research outputs) could offer a more comprehensive approach (Vanlee & Ysebaert, 2019).

Conflict of interests

The author has no competing interests to declare that are relevant to the content of this article.

Availability of data and material

The data utilized in this study originate from a proprietary database, which means detailed information about all the scientific publications analyzed cannot be disclosed by the author. This proprietary database was chosen for practical reasons. Specifically, it offers easy access for conducting large-scale analyses, like the one presented here. The author is not aware of any other freely available database that would enable a similar analysis in terms of both completeness and scale.

Statement of data consent

This article does not contain any studies with human participants performed by any of the authors.

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