

RESEARCH TRENDS IN STUDIO PEDAGOGY AND THEIR IMPACT ON DESIGN LEARNING OUTCOMES: A BIBLIOMETRIC STUDY

Yati Bt. Samsuddin¹, Andry Priyadharmadi Purnama²

^{1,2}Universitas Negeri Makassar, Jl. A. P. Pettarani, Makassar, Sulawesi Selatan, Indonesia

Email: yati.bt.samsuddin@unm.ac.id

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Abstract. This study aims to map research trends on studio pedagogy/Studio-Based Learning (SBL) and its linkage to design learning outcomes in the context of Visual Communication Design (VCD) using a bibliometric approach. Data were retrieved from Google Scholar via Publish or Perish (PoP) and visualized with VOSviewer to identify term co-occurrence patterns and thematic clusters. The PoP summary displayed at this stage indicates a corpus consisting of one document (publication year 2015–2025) with 7,980 citations and an h-index of 1, which is insufficient to represent longitudinal publication trends. VOSviewer visualizations (density, network, and overlay) show a dominant “sbl” node strongly associated with “sparse bayesian learning” and other technical terms, indicating acronym ambiguity that introduces cross-domain contamination into the dataset. Nonetheless, the maps also reveal a design-education cluster connecting “studio,” “design education,” “teaching,” and “course,” suggesting that part of the corpus is relevant to studio pedagogy. Overall, the findings highlight that valid bibliometric mapping of VCD studio pedagogy depends on precise query construction (using full phrases rather than acronyms) and rigorous data cleaning/term normalization. Future work should refine search queries and apply thesaurus-based filtering to capture VCD-specific themes, including digital/hybrid studios, outcome-based assessment, and feedback mechanisms.

Keywords: Studio Pedagogy, Studio-Based Learning, Visual Communication Design, Bibliometrics, Publish or Perish

Abstrak. Penelitian ini bertujuan untuk memetakan tren riset *studio pedagogy* atau *Studio-Based Learning* (SBL) serta keterkaitannya dengan hasil belajar desain dalam konteks Desain Komunikasi Visual (DKV) menggunakan pendekatan bibliometrik. Data dikumpulkan dari *Google Scholar* melalui perangkat lunak *Publish or Perish* (PoP) dengan rentang publikasi 2015–2025, kemudian dianalisis menggunakan *VOSviewer* untuk mengidentifikasi pola ko-kemunculan istilah dan kluster tematik. Proses penelitian meliputi tahap pengumpulan data, penyaringan berdasarkan relevansi, pembersihan data melalui normalisasi istilah, serta visualisasi jaringan bibliometrik dalam bentuk *density*, *network*, dan *overlay*. Hasil analisis menunjukkan bahwa dataset yang diperoleh masih terbatas, yaitu hanya satu dokumen dengan total 7.980 sitasi dan h-index 1, sehingga belum representatif untuk menggambarkan tren penelitian secara komprehensif. Visualisasi mengungkap dominasi istilah “sbl” yang lebih banyak merujuk pada “*sparse bayesian learning*”, menunjukkan adanya ambiguitas akronim yang menyebabkan kontaminasi lintas disiplin. Meskipun demikian, terdapat kluster relevan yang menghubungkan istilah “*studio*”, “*design education*”, “*teaching*”, dan “*course*”. Temuan ini menegaskan pentingnya perumusan kata kunci yang spesifik dan proses pembersihan data dalam studi bibliometrik. Penelitian ini merekomendasikan penggunaan frasa lengkap dan normalisasi istilah untuk meningkatkan validitas pemetaan tren riset studio pedagogy dalam DKV.

Kata Kunci: *Studio Pedagogy*, *Studio-Based Learning*, Desain Komunikasi Visual, Bibliometric, *Publish or Perish*

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INTRODUCTION

Design Communication Visual (DCV) learning fundamentally positions the studio as the core locus of the educational process, as design competence cannot be sufficiently developed through conceptual understanding alone but requires iterative practice, exploration, reflection, and intensive feedback. This view is supported by studies in design education which emphasize that studio environments facilitate experiential learning cycles, where students develop competencies through continuous iteration and critique processes (Rijal & Aldy, 2012; Suartika et al., 2023). Within the contemporary DCV ecosystem, the complexity of design practice continues to expand due to the demands of the creative industry and the acceleration of digital visual culture, requiring designers to integrate aesthetic sensitivity with strategic communication across multiple platforms. Empirical evidence indicates that current design curricula must adapt to these changes by incorporating collaborative workflows, digital tools, and industry-oriented competencies (Saraswati et al., 2022; Hidayah et al., 2024). Consequently, studio-based learning can no longer be interpreted merely as a production space, but rather as a pedagogical system that integrates design thinking, meaning-making processes, collaboration, and professional skill development.

Despite its central role, the discourse surrounding studio pedagogy and Studio-Based Learning (SBL) remains fragmented across disciplines and publications, particularly within the DCV context. Previous studies tend to address studio learning from partial perspectives, such as pedagogical processes (Suartika et al., 2023), instructional practices (Kamil, 2017), or post-pandemic transformations (Saraswati et al., 2022; Hidayah et al., 2024), without providing an integrated understanding of how these dimensions relate to measurable learning outcomes. This fragmentation creates a critical gap, as higher education institutions are increasingly required to demonstrate the effectiveness of studio-based learning in producing competencies such as creativity, visual communication skills, presentation ability, and professional readiness (Ashri & Wibisono, 2024; Rizki et al., 2024). Furthermore, the absence of structured knowledge mapping limits the ability of educators to design evidence-based curricula and pedagogical strategies.

In this context, mapping the research landscape of studio pedagogy becomes essential to identify dominant themes, emerging trends, and research gaps within the field. Bibliometric analysis provides a systematic approach to examine publication patterns, thematic structures, and intellectual networks, enabling a more comprehensive understanding of how studio pedagogy research evolves over time (Samsuddin, 2025). Therefore, this study aims to map research trends in studio pedagogy and Studio-Based Learning within the DCV context and to

analyze their relationship with design learning outcomes, in order to provide an evidence-based foundation for curriculum development and pedagogical innovation.

Pedagogically, SBL emphasizes structured learning by doing, wherein students engage in project-based activities, guided mentoring, and evaluation processes that simultaneously assess both process and product (Rijal & Aldy, 2012). This framework aligns closely with DCV learning, which operates through iterative cycles of problem identification, ideation, production, critique, and revision. In this context, critique sessions (crit) and presentations function as critical mechanisms for testing visual arguments and strengthening design communication literacy. Furthermore, the studio has been identified as the most resource-intensive component within design education, thereby necessitating strong pedagogical justification and adaptability to socio-cultural and technological transformations (Suartika et al., 2023). The integration of structured design methods and collaborative workflows within studio environments further supports the development of analytical thinking, productive debate, and systematic presentation skills (Kamil, 2017).

The post-pandemic transformation of learning environments has further intensified the need to reconceptualize studio pedagogy. Studio practices are no longer confined to physical spaces but increasingly operate within hybrid and digital ecosystems. The transition to online and hybrid formats challenges traditional studio interactions, particularly in maintaining the depth of feedback, discussion, and nonverbal communication (Saraswati et al., 2022). Empirical findings indicate that studio-based learning can be effectively adapted into hybrid models combining synchronous and asynchronous modalities, provided that adequate technological infrastructure supports the learning process (Hidayah et al., 2024). However, contextual constraints such as limited interaction time and flexible student schedules require adaptive instructional designs to preserve the pedagogical essence of studio learning (Hertoety et al., 2025). These developments highlight that studio quality is influenced not only by instructional design but also by contextual variables such as time, medium, and technological access.

In relation to learning outcomes, studio pedagogy serves as the primary medium for developing professional competencies in design education. Curriculum evaluation based on graduate performance underscores the necessity of aligning learning outcomes with industry demands, emphasizing not only the production of design artifacts but also the ability to articulate concepts, respond to user needs, and operate within professional constraints (Ashri & Wibisono, 2024). Additionally, presentation and visual communication skills are increasingly recognized as integral components of studio learning, as they enable students to

convey complex ideas effectively (Fazrin & Maknun, 2025). This perspective reinforces the importance of designing studio activities that systematically develop argumentation, narrative structuring, and portfolio presentation skills (Maolana et al., 2025).

At the micro level of design practice, the relationship between studio pedagogy and learning outcomes is evident in the dynamics of design communication processes. Effective communication during briefing, concept development, and revision stages significantly influences the quality of design outputs, while miscommunication can hinder both process efficiency and final results (Rizki et al., 2024). This implies that studio learning must explicitly train students in managing ambiguity, translating subjective preferences into visual decisions, and negotiating revisions through structured argumentation.

Given the diversity and dispersion of existing studies, a systematic mapping of the research landscape is required to understand the structure, evolution, and thematic connections within studio pedagogy research. Bibliometric analysis offers a strategic approach to identify publication trends, thematic clusters, author networks, and emerging research directions. Previous studies have demonstrated the effectiveness of bibliometric tools such as Publish or Perish and VOSviewer in mapping design-related research, particularly within DCV contexts (Samsuddin, 2025). Through this approach, bibliometrics functions not merely as a descriptive tool but as an analytical framework for identifying dominant discourses and research gaps.

Existing literature generally operates within three partially disconnected spectrums: (1) conceptual-pedagogical perspectives emphasizing the role of studio in design education (Suartika et al., 2023; Fazrin & Maknun, 2025), (2) operational-methodological studies focusing on SBL procedures and instructional management (Rijal & Aldy, 2012; Kamil, 2017), and (3) contextual-transformational studies addressing post-pandemic adaptations and hybrid learning environments (Saraswati et al., 2022; Hidayah et al., 2024; Hertoety et al., 2025). While emerging studies begin to address learning outcomes and professional relevance, these dimensions are often examined in isolation, resulting in a fragmented understanding of studio pedagogy within the DCV context. This study offers a novel contribution by providing an integrated bibliometric mapping that simultaneously captures conceptual, methodological, and contextual dimensions of studio pedagogy and explicitly links them to design learning outcomes within the DCV domain. Unlike previous studies that focus on single perspectives or narrative reviews, this research employs a systematic bibliometric approach to reveal thematic structures, knowledge clusters, and research trends, thereby offering a comprehensive and data-driven understanding of how studio pedagogy evolves and impacts learning outcomes.

Accordingly, this study aims to construct a bibliometric mapping of research trends in studio pedagogy and Studio-Based Learning within DCV education and to examine their relationship with design learning outcomes. Utilizing Google Scholar data processed through Publish or Perish and visualized using VOSviewer (Samsuddin, 2025), this study seeks to identify publication growth, thematic distributions, collaboration networks, and key research topics. Particular attention is given to visual communication competence as a core learning outcome, including skills related to briefing, concept development, revision, and collaborative design processes (Rizki et al., 2024). Furthermore, the study incorporates a graduate performance perspective to strengthen the linkage between pedagogical approaches and professional outcomes (Ashri & Wibisono, 2024).

Based on this framework, the research question is formulated as follows: *How do research trends, thematic structures, and collaboration patterns in studio pedagogy and Studio-Based Learning within DCV education relate to design learning outcomes?* This study is expected to contribute to the DCV academic field by providing a structured knowledge map that informs curriculum development, studio activity design, and hybrid studio transformation strategies while maintaining pedagogical integrity and learning outcome quality.

METHOD

This study employed a descriptive bibliometric approach combined with network mapping analysis to examine the development of literature on studio pedagogy and Studio-Based Learning (SBL), as well as their relationship with design learning outcomes within the context of Visual Communication Design (VCD). In this study, SBL is operationally defined as a structured learning-by-doing approach conducted within studio environments, involving project-based activities, iterative design processes, critique sessions, and guided feedback from instructors or assistants (Rijal & Aldy, 2012). Based on this definition, the selection of keywords and data filtering procedures were specifically directed toward identifying publications that address studio processes, instructional strategies, and indicators of learning outcomes.

The data source was limited to Google Scholar, considering that a substantial portion of VCD-related publications—including journal articles, conference proceedings, and theses—are not consistently indexed in commercial databases but remain relevant for conceptual and pedagogical analysis (Samsuddin, 2025). Data collection was conducted using Publish or Perish (PoP) by defining a publication range between 2015 and 2025. The search strategy employed a Boolean query that combined core studio-related terms, learning outcome

indicators, and VCD context as follows: ("studio pedagogy" OR "design studio pedagogy" OR "studio-based learning" OR "studio based learning" OR SBL) AND ("design studio" OR "design education") AND ("learning outcomes" OR assessment OR feedback OR critique OR creativity OR "problem solving") AND ("visual communication design" OR "graphic design" OR "communication design" OR "desain komunikasi visual" OR DKV). To improve specificity, exclusion terms such as -architecture, -architectural, and -urban were applied to minimize irrelevant results from other design disciplines.

Following the initial retrieval, a screening process was conducted based on predefined inclusion and exclusion criteria. The inclusion criteria comprised: (1) publications within the specified time range, (2) English or Indonesian language, (3) relevance to studio-based learning in design or visual communication education, (4) availability of essential metadata (title, author, year, and source), and (5) the presence of studio pedagogy elements and/or learning outcome indicators. The exclusion criteria included: (1) non-scholarly documents, (2) studies in which the term “studio” did not refer to design learning contexts, and (3) duplicate or incomplete metadata entries. Data cleaning procedures were performed to ensure consistency and analytical validity. These procedures included deduplication, standardization of author names and keywords, and term normalization through the construction of a VOSviewer thesaurus file. For example, variations such as “studio based learning” were unified into “studio-based learning,” while abbreviations such as “VCD” were standardized as “visual communication design.” These steps are consistent with established practices in bibliometric research to improve data reliability (Samsuddin, 2025).

The final dataset was exported from PoP in CSV or RIS format and analyzed using VOSviewer through three main techniques. First, co-occurrence analysis was conducted based on keywords and terms extracted from titles and abstracts to identify thematic clusters, such as studio critique, assessment, digital studio, and collaboration. Second, co-authorship analysis was performed to examine collaboration patterns among authors, institutions, and countries. Third, citation-based analyses—including citation analysis, co-citation, and bibliographic coupling, were used to map the intellectual structure and thematic relationships within the dataset. The analysis parameters were initially set with a minimum occurrence threshold of 5–10 for keywords and 2–3 documents for authors, and were subsequently adjusted to achieve a balanced network density. The results were visualized using three modes: network visualization, overlay visualization (based on publication year), and density visualization. In addition, descriptive statistics were provided, including publication trends over time, the most productive authors, dominant publication sources, and frequently occurring keywords. This

analytical workflow aligns with standard bibliometric procedures used to map research trends, thematic structures, and collaboration networks in design studies (Samsuddin, 2025).

RESULTS

Publication and Citation Statistics (Publish or Perish)

Based on metadata extraction using *Publish or Perish (PoP)*, the citation metrics obtained from the dataset indicate a publication range spanning 2015–2025. The dataset records a total of 7,980 citations, with an average of 798.00 citations per year and 7,980.00 citations per paper. Furthermore, the values of h-index = 1 and g-index = 1 indicate that only a single publication entry is captured within the citation evaluation output of PoP. These metrics suggest that the retrieved dataset, as displayed in the PoP interface, is highly concentrated on a single dominant publication. Consequently, while the citation value appears substantial, it does not yet reflect a distributed citation structure across multiple studies.

Table 1. Summary of PoP citation metrics

Indicator	Value
Publication years	2015–2025
Citation years	10 (2015–2025)
Citations	7,980
Cites/year	798.00
Cites/paper	7,980.00
Authors/paper	1.00
h-index	1
g-index	1

Co-occurrence Mapping

The bibliometric mapping results generated using *VOSviewer* are visualized through three primary outputs: density visualization (Figure 1), network visualization (Figure 2), and overlay visualization (Figure 3). These visualizations collectively illustrate the thematic structure, keyword relationships, and distribution patterns within the dataset. In Figure 1 (density visualization), the highest density, indicated by the brightest color is centered on the term “*sbl*.” Surrounding this focal point are closely related terms such as “*sparse bayesian learning*,” “*performance*,” and “*system*.” This indicates that the term “SBL” within the dataset is strongly associated with a technical or computational interpretation rather than exclusively referring to *Studio-Based Learning*.

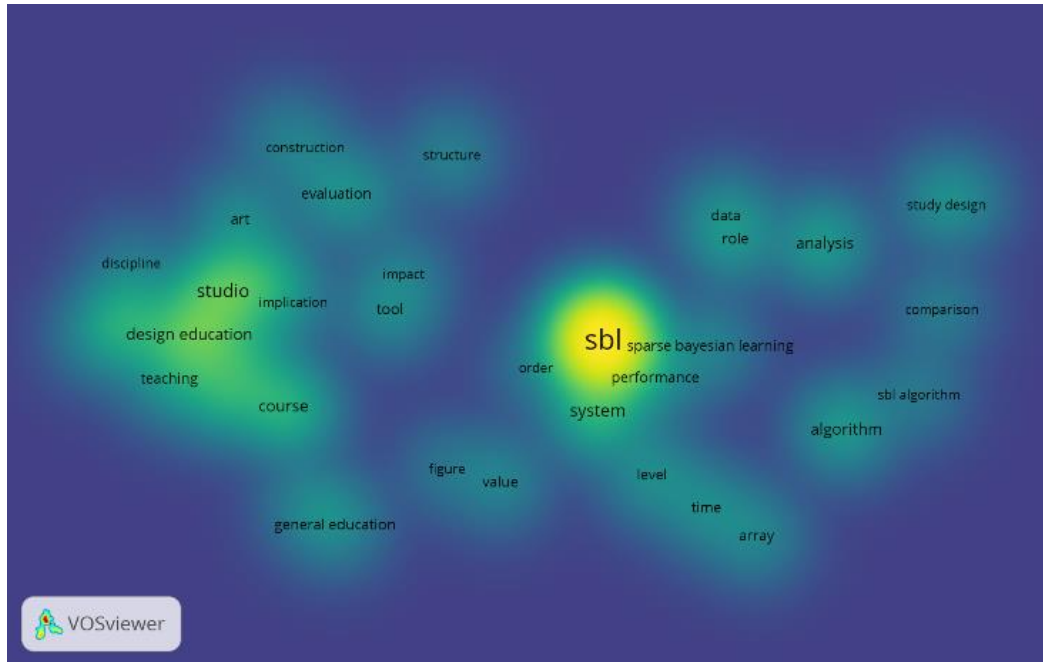


Figure 1. density visualization

In contrast, a moderate density region appears on the left side of the map, comprising terms such as “*studio*,” “*design education*,” “*teaching*,” and “*course*.” These terms more accurately reflect the pedagogical context of design education. Additionally, the upper-right region contains methodological terms such as “*analysis*,” “*data*,” “*role*,” and “*study design*,” while the lower-right region includes technical terms such as “*algorithm*” and “*sbl algorithm*.”

In Figure 2 (network visualization), the keyword network reveals several interconnected clusters, each represented by distinct colors. The largest nodes include “*sbl*” (center-right) and “*studio*” and “*design education*” (left). The left cluster demonstrates strong connections among pedagogical terms, including “*studio*,” “*design education*,” “*teaching*,” and “*course*.”

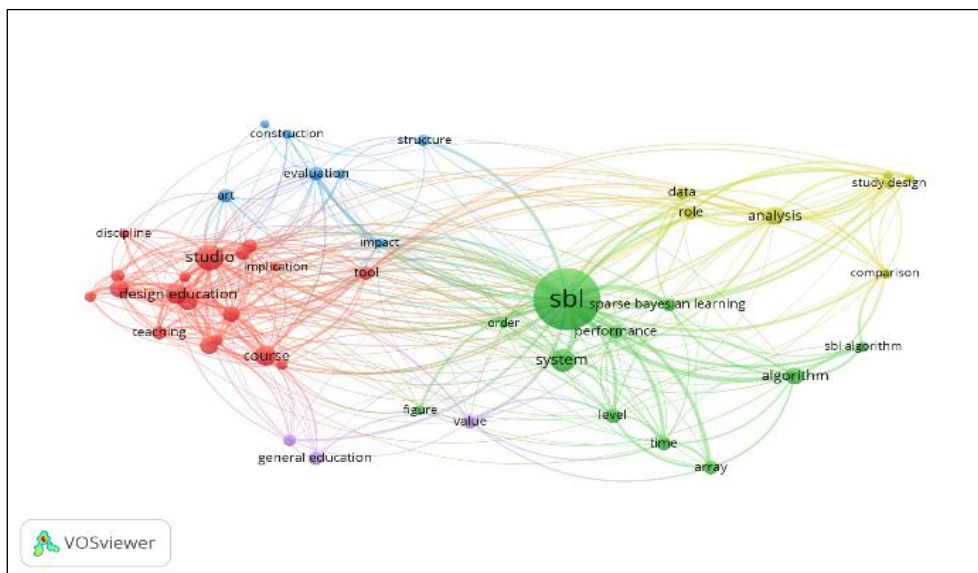


Figure 2. Network visualization

Meanwhile, the center-right cluster reflects a strong association between “*sbl*” and technical terms such as “*sparse bayesian learning*,” “*system*,” “*performance*,” and “*algorithm*.” This indicates the coexistence of two distinct semantic domains within the dataset: (1) pedagogical studio-based learning and (2) computational or machine learning-related SBL terminology. Furthermore, the upper-right cluster includes general methodological terms such as “*analysis*,” “*data*,” and “*study design*,” which are linked to comparative and evaluative research approaches.

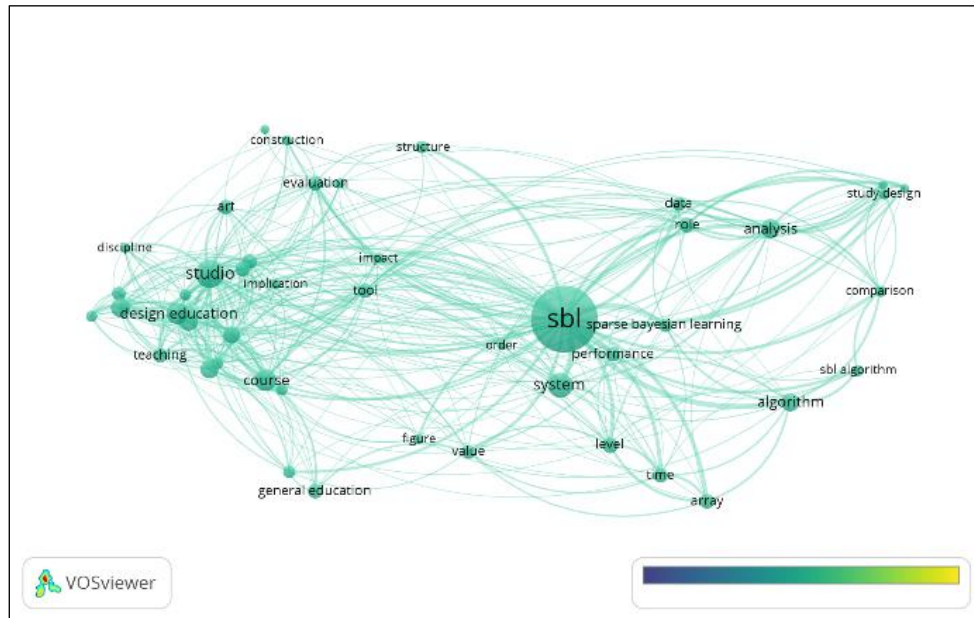


Figure 3. Overlay visualization

In Figure 3 (overlay visualization), the network structure remains consistent with the previous visualization, showing stable relationships among key nodes such as “*sbl*,” “*studio*,” and “*design education*.” This consistency suggests that the thematic structure of the dataset is relatively stable, although it is characterized by overlapping interpretations of the term “SBL.” The identified keyword clusters are summarized in Table 2.

Table 2. Summary of keyword clusters in VOSviewer (figure 2)

Cluster (Color)	Terms Identified
Red (pedagogy/design)	studio; design education; teaching; course; discipline
Green (technical SBL)	sbl; sparse bayesian learning; system; performance; algorithm; sbl algorithm; time; array; level; order
Yellow (methodology)	analysis; data; role; study design; comparison
Blue (evaluation/structure)	evaluation; construction; structure; art
Purple (general)	general education

To enhance interpretability, the key visual findings from each VOSviewer output are summarized in Table 3.

Table 3. Summary of VOSviewer visual findings

Figure	Visualization Type	Dominant Nodes/Density	Prominent Terms
1	Density	“sbl” as the highest density	sbl; sparse bayesian learning; studio; design education; teaching; analysis; study design; algorithm
2	Network (cluster)	major nodes: “sbl”, “studio”, “design education”	sbl; sparse bayesian learning; algorithm; system; performance; studio; design education; teaching; course; analysis; data; study design; evaluation
3	Overlay/network	consistent network structure	sbl; sparse bayesian learning; studio; design education; analysis; data; study design; algorithm

DISCUSSION

The bibliometric mapping results obtained through the PoP–VOSviewer approach indicate that the emerging thematic structure is highly dependent on the quality of the dataset and the precision of keyword selection. The PoP summary (Figure 4) reveals that the citation metrics are derived from a single publication entry (2015–2025) with a remarkably high citation count (7,980). Such a condition is insufficient to represent research trends, as trend analysis requires a broader distribution of publications across years and authors. Therefore, the findings at this stage should be interpreted as preliminary results, highlighting the necessity for refining data collection strategies to ensure that the mapped themes accurately represent the domain of studio pedagogy within Visual Communication Design (Samsuddin, 2025).

The VOSviewer mapping (Figures 1–3) identifies “sbl” as the most dominant node, strongly associated with the term “sparse bayesian learning” and accompanied by technical terms such as “algorithm,” “system,” and “performance.” This finding indicates a significant ambiguity in the acronym “SBL” within Google Scholar, where it is frequently interpreted as Sparse Bayesian Learning in computational disciplines. Consequently, the resulting dataset becomes interdisciplinary, and part of the network structure does not represent Studio-Based Learning in the context of design education. In bibliometric studies utilizing Google Scholar, rigorous keyword control and data normalization are essential to prevent such semantic bias (Samsuddin, 2025). Thus, the emergence of the “sbl–sparse bayesian learning” cluster should be interpreted as an indication of dataset contamination rather than a valid thematic representation of studio pedagogy.

Despite this limitation, the mapping also reveals a cluster that is highly relevant to design education, characterized by strong relationships among “studio,” “design education,” “teaching,” and “course.” This cluster aligns with the fundamental characteristics of studio-based learning in DKV, which emphasizes iterative practice, guided instruction, and progressive development of design concepts and visual execution (Saraswati et al., 2022) . From a pedagogical perspective, SBL is conceptualized as a hands-on learning approach that takes place within a studio environment and involves structured guidance from instructors (Rijal & Aldy, 2012) . Therefore, the presence of this cluster confirms that a portion of the dataset genuinely reflects studio pedagogy, although it is not yet dominant due to interference from misinterpreted SBL terminology.

The post-pandemic context further reinforces the importance of refining the dataset, as digital transformation has significantly altered studio-based learning practices. Traditional face-to-face studio environments have shifted toward digital and hybrid formats, where interaction, feedback, and presentation processes are mediated through technology (Saraswati et al., 2022) . Empirical studies also indicate that hybrid studio models—combining synchronous and asynchronous learning—require redesigned instructional strategies, adequate infrastructure, and restructured mentoring processes to maintain learning outcomes (Hidayah et al., 2024) . If the dataset were more accurately aligned with the DKV context, themes such as digital studio, hybrid learning, and post-pandemic transformation would likely emerge as dominant clusters in the overlay visualization, reflecting current developments in studio pedagogy (Saraswati et al., 2022; Hidayah et al., 2024).

The discussion of the impact on design learning outcomes must also be connected to the mechanisms that shape the quality of design outputs. Curriculum evaluation based on graduate performance emphasizes the importance of aligning pedagogical approaches with measurable competencies, rather than merely relying on methodological claims (Ashri & Wibisono, 2024). In professional design practice, stages such as briefing, concept development, and revision—along with the quality of communication—play a crucial role in determining the final output. Ineffective communication can delay processes and reduce design quality, whereas structured feedback enhances outcomes (Rizki et al., 2024) . Accordingly, learning outcomes in DKV studio education should encompass not only technical and aesthetic skills but also the ability to manage design communication, respond to feedback, and conduct revisions in a professional manner.

However, these outcome-related terms are not yet visible as dominant nodes in the current mapping, further confirming that the dataset requires refinement. Without precise keyword filtering and contextual constraints, bibliometric mapping risks failing to capture the authentic relationship between studio pedagogy and design learning outcomes in DKV.

The implications of this study are twofold. Methodologically, the findings highlight that the use of ambiguous acronyms such as “SBL” without contextual constraints can lead to cross-disciplinary contamination of the dataset. Therefore, future searches should prioritize full phrases such as “studio-based learning,” “studio pedagogy,” and “design studio pedagogy,” combined with contextual identifiers such as “visual communication design” or “graphic design,” alongside systematic term normalization using a thesaurus (Samsuddin, 2025). Practically, once a refined dataset is established, bibliometric mapping can serve as a strategic foundation for strengthening DKV studio pedagogy, including the development of hybrid studio models (Saraswati et al., 2022; Hidayah et al., 2024), outcome-based assessment frameworks (Ashri & Wibisono, 2024), and enhanced feedback and communication mechanisms to improve design learning outcomes (Rizki et al., 2024).

CONCLUSION

Based on the PoP output, the citation metrics at this stage indicate that the dataset consists of a single publication (2015–2025) with a total of 7,980 citations. This condition demonstrates that the current dataset is insufficient for drawing representative conclusions regarding research trends, as bibliometric analysis requires a broader and more distributed set of publications to ensure reliability in identifying growth patterns, productivity, and intellectual structures.

The VOSviewer mapping reveals that the dominant node is “sbl,” which is strongly associated with “sparse bayesian learning” and other technical terms such as “algorithm,” “system,” and “performance.” This finding confirms the presence of acronym ambiguity, leading to partial dataset contamination outside the DKV context. Nevertheless, relevant clusters related to design education—such as “studio,” “design education,” “teaching,” and “course”—remain identifiable, indicating that a portion of the dataset aligns with studio pedagogy in design education.

RECOMMENDATIONS

Future research is recommended to refine data collection strategies by prioritizing full phrases such as “studio-based learning,” “studio pedagogy,” and “design studio pedagogy,” and incorporating contextual keywords related to DKV, including “visual communication

design,” “graphic design,” and “desain komunikasi visual.” Additionally, the implementation of a thesaurus for term normalization is necessary to eliminate irrelevant and ambiguous terms.

Subsequent studies should also expand the dataset to capture substantive themes within DKV, particularly those related to digital and hybrid studio transformation, outcome-based learning evaluation, and communication and feedback mechanisms that directly influence design quality. With these improvements, bibliometric mapping is expected to provide a more robust contribution to the development of studio pedagogy in DKV and serve as an evidence-based foundation for curriculum design and instructional strategies.

REFERENCES

- Ashri, R. F., & Wibisono, A. (2024). Evaluasi Kurikulum Berbasis Kinerja Lulusan: Studi pada Pendidikan Desain Interior. *Jurnal Pendidikan Desain*, 15(2), 112–126.
- Hertoety, R., Wahyuningrum, T., & Yuliana, E. (2025). Transformasi Model Pembelajaran Studio bagi Mahasiswa Kelas Karyawan: Refleksi Praktik Pascapandemi. *Jurnal Arsitektur dan Pendidikan Desain*, 8(1), 45–60.
- Hidayah, U., Mulyadi, S., & Tjandra, B. (2024). Model Pembelajaran Studio Daring dan Hybrid pada Pendidikan Desain di Masa Pascapandemi. *Jurnal Pendidikan Seni dan Desain*, 10(3), 379–393.
- Rijal, M., & Aldy, F. (2012). Proses Komunikasi Visual dalam Pembelajaran Desain Komunikasi Visual. *Jurnal Desain Komunikasi Visual*, 6(1), 45–58.
- Rizki, F., Pratama, S., & Nugraha, D. (2024). Proses Komunikasi Visual dalam Produksi Konten Desain Grafis Media Sosial. *Jurnal Desain dan Komunikasi Visual*, 12(2), 186–208.
- Samsuddin, Y. B. (2025). Analisis Bibliometrik Tren Riset Desain Komunikasi Visual Berbasis Data Google Scholar Menggunakan PoP dan VOSviewer. *Jurnal Teknologi dan Pendidikan Seni*, 13(1), 1–15.
- Saraswati, D. P., Satria, D., & Santosa, R. (2022). Transformasi Digital dalam Pembelajaran Studio Desain Komunikasi Visual sebagai Refleksi Pascapandemi. *Jurnal Desain dan Inovasi Pendidikan*, 14(2), 95–108.
- Suartika, G., Santosa, A., & Utami, R. (2023). Relevansi Studio sebagai Metode Pembelajaran pada Pendidikan Arsitektur dan Desain. *Jurnal Pendidikan Desain*, 7(1), 77–89.