Mapping Global Research Trends in Fashion Illustration: A Bibliometric Analysis of Scopus-Indexed

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Abstract

Fashion illustration constitutes a significant component of both fashion scholarship and professional practice; however, the global structure and development of research in this field have not yet been systematically mapped. This study aims to analyze publication growth patterns, thematic structures, and evolving research directions in fashion illustration based on Scopus-indexed journal articles published between 2015 and 2025. Adopting a bibliometric research design, the study employs publication performance analysis and keyword co-occurrence mapping using VOSviewer. The findings reveal a steady increase in publication output over the past decade, indicating a growing academic recognition of fashion illustration as a distinct research domain. The keyword co-occurrence network highlights strong thematic associations with visual studies, historical inquiry, and cultural analysis, while linkages to fashion industry practices, sustainability, design technology, and design education remain comparatively underdeveloped. These results suggest that fashion illustration is still predominantly conceptualized as a medium of visual representation, while also revealing significant potential for its transformation into a more integrative and interdisciplinary field that can meaningfully contribute to design education and contemporary creative industries.

Keywords: fashion illustration, fashion design, bibliometric analysis, Scopus, VOSviewer

INTRODUCTION

Fashion illustration is a fundamental element within the fashion industry, functioning not only as a medium of artistic expression but also as a form of visual communication that translates creative concepts into tangible design outcomes. As a classical mode of visual representation, fashion illustration enables designers to communicate design ideas comprehensively while simultaneously constructing imaginative narratives and strong stylistic identities.[1] Through this function, fashion illustration plays a critical role in bridging abstract creative concepts with visual realizations that embody aesthetic depth and cultural meaning.

However, the role of fashion illustration has undergone significant transformation in response to the increasingly dynamic nature of the fashion industry, which demands greater efficiency, accelerated production cycles, and adaptability to rapidly changing market conditions. Over the past decade, advances in digital technology have substantially reshaped fashion illustration practices. The adoption of digital illustration software, three-dimensional fashion design tools, and interactive visual media has altered the ways designers develop, visualize, and communicate design ideas.[2,3] These technological shifts have not only influenced professional practice but have also transformed pedagogical approaches within fashion design education.

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[1] Zou, Xingxing, and Waikeung Wong. "StylishGAN: toward fashion illustration generation." *AATCC Journal of Research* 11, no. 1_suppl (2024): 97-109.

[2] McRobbie, Angela. *British fashion design: Rag trade or image industry?*. Routledge, 2003.

[3] Yezhova, Olga, Simiao Wu, Kalina Pashkevych, Maryna Kolosnichenko, Nataliia Ostapenko, and Tetiana Struminska. "Exploring design and technological aspects of digital fashion: a systematic review of recent innovations." *International Journal of Fashion Design, Technology and Education* 18, no. 3 (2025): 283-297.

In educational contexts, digital illustration tools have been increasingly integrated into learning environments to enhance students' visual competencies and creative skills. For example, the use of digital illustration software such as Ibis Paint X has been demonstrated to support the development of fashion illustration learning media and to improve students' visual communication abilities.[4] This digital transformation has consequently encouraged the emergence of multidisciplinary research that intersects fashion design, visual communication, digital technology, and education.

Alongside these developments, academic attention to fashion illustration has grown substantially. Contemporary research is no longer limited to aesthetic exploration and traditional illustration techniques but has expanded to address broader issues, including digital innovation, sustainability, visual culture, and the role of fashion illustration in professional competency development and design education.[5,6] Despite this expanding scope, the rapidly growing body of literature—distributed across multiple disciplines—has made it increasingly difficult to obtain a comprehensive understanding of the global research landscape, thematic orientations, and structural evolution of fashion illustration studies.

Although publications related to fashion illustration continue to increase, studies that systematically map the global development of research in this field remain relatively limited.[7] Existing studies predominantly adopt thematic, historical, or case-based approaches, highlighting the need for a more comprehensive and data-driven knowledge mapping to capture research trends and intellectual structures at a global scale.[8] Without such mapping, the overall trajectory of fashion illustration research and its emerging research directions remain fragmented.

To address this gap, a bibliometric approach offers an objective and systematic analytical framework. Bibliometric analysis enables the quantitative examination of large-scale bibliographic data to identify publication trends, key contributors, collaboration networks, and dominant as well as emerging research themes within a particular field.[9,10] The use of the Scopus database further enhances the robustness of bibliometric analysis due to its extensive coverage and high-quality indexing, allowing for a more reliable representation of the global scholarly landscape.[11]

Based on this background, the present study conducts a bibliometric analysis of global scholarly publications on fashion illustration indexed in the Scopus database between 2015 and 2025. This study aims to examine publication growth patterns, thematic structures, and evolving research directions in fashion illustration, thereby assessing its sustained relevance within contemporary academic discourse. By mapping the intellectual structure of fashion illustration research, this study is expected to contribute to a deeper conceptual understanding of the field's development and to provide a reference for future research and professional practice aligned with advances in digital technology and the creative industries.

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[4] Sholikhah, Roudlotus, Widowati Widowati, and Sita Nurmasitah. "Development of digital fashion illustration media using Ibis Paint X software to improve the competence of UNNES fashion students." *International Journal of Active Learning* 8, no. 2 (2023): 130-140.

[5] Niinimäki, Kirsi, Greg Peters, Helena Dahlbo, Patsy Perry, Timo Rissanen, and Alison Gwilt. "The environmental price of fast fashion." *Nature reviews earth & environment* 1, no. 4 (2020): 189-200.

[6] Wei, R. "New trends in fashion design: Digital fashion leads the change." *International Journal of Education and Humanities* 17, no. 2 (2024): 232-235.

[7] Oliveira, Rimena Canuto, Irenilza de Alencar Näas, and Solimar Garcia. "Fashion Industry 4.0: a bibliometric review in the fashion industry." *Research, Society and Development* 11, no. 12 (2022): e490111234203-e490111234203.

[8] Zhang, Xue, and Yu Zhang. "Mapping the Research Agenda for Sustainable Fashion Design: Constructing Knowledge Maps Through Bibliometric Analysis and LDA Machine Learning." *SAGE Open* 15, no. 3 (2025): 21582440251366779.

[9] Aria, Massimo, and Corrado Cuccurullo. "bibliometrix: An R-tool for comprehensive science mapping analysis." *Journal of informetrics* 11, no. 4 (2017): 959-975.

[10] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.

[11] Baas, Jeroen, Michiel Schotten, Andrew Plume, Grégoire Côté, and Reza Karimi. "Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science studies." *Quantitative science studies* 1, no. 1 (2020): 377-386.

Literature Review

Fashion illustration is a classical form of visual communication within the fashion domain that conveys designers' ideas, imagination, and individual vision through aesthetic visual narratives. This practice requires advanced drawing skills and sustained training, positioning fashion illustration as a complex and professional activity within the fashion design process.[12] As a visual representation of fashion design, fashion illustration functions as a medium through which themes, garment details, and aesthetic concepts are articulated in a tangible manner, whether through traditional manual techniques or digital approaches. Consequently, fashion illustration is widely employed across multiple stages of design, including concept development, design refinement, and evaluative communication.[13,14] In addition, fashion illustration incorporates graphic visual strategies—such as the manipulation of form, proportion, scale, and structure—that facilitate two-dimensional design exploration prior to its translation into three-dimensional garments.[15]

Beyond its technical and functional roles, fashion illustration can also be understood as a visual symbol that represents atmosphere, culture, social identity, and the spirit of a particular era through distinctive artistic expressions and stylistic conventions. In this broader cultural context, fashion illustration plays a significant role in fashion publications as a medium for visual communication, promotion, and the construction of brand and cultural identity across print, digital media, and social media platforms. The increasing prominence of social media, particularly Instagram, has further expanded the role of fashion illustration, as fashion influencers and designers use illustrative imagery to construct visual narratives and convey cultural meanings to global audiences.[16,17]

Historically, the evolution of fashion illustration reflects broader transformations in visual culture. From traditional print arts such as ukiyo-e to modern illustration practices and manga-inspired styles, fashion illustration has continuously adapted to prevailing artistic movements, technologies, and cultural contexts. This historical trajectory reinforces its function not only as a tool of aesthetic representation but also as a medium through which cultural values and visual ideologies are negotiated within contemporary fashion discourse.[18,19]

Taken together, existing literature conceptualizes fashion illustration as a multifaceted visual practice that operates simultaneously at technical, aesthetic, cultural, and communicative levels. Table 1 summarizes key definitions of fashion illustration drawn from prior studies, highlighting its roles as a visual language, an artistic medium, and a strategic tool within fashion design, education, and media contexts.

Table 1. Conceptualizations of fashion illustration in previous studies.

No.	Definition of Fashion Illustration	Reference
1	Fashion illustration is a classical form of visual communication that conveys designers' ideas and imagination through aesthetic narratives and requires a high level of drawing proficiency.	Zou & Wong (2024)[20]

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[12] Zou, Xingxing, and Waikeung Wong. "StylishGAN: toward fashion illustration generation." *AATCC Journal of Research* 11, no. 1_suppl (2024): 97-109.

[13] Freeman, Charles, Jihyeong Son, and Lisa Barona McRoberts. "Comparison of novice and expert evaluations of apparel design illustrations using the consensual assessment technique." *International Journal of Fashion Design, Technology and Education* 8, no. 2 (2015): 122-130.

[14] Liu, Kaixuan, Xianyi Zeng, Xuyuan Tao, and Pascal Bruniaux. "Associate design of fashion sketch and pattern." *IEEE access* 7 (2019): 48830-48837.

[15] Xuhui, H. A. N. "Fashion design based on occlusion visual illusion." *Wool Textile Journal* 48, no. 10 (2020).

[16] Marcella-Hood, Madeleine. "Exploring contemporary illustrations of Scottish identity through a study of Scottish fashion influencers on Instagram." *Scottish Affairs* 28, no. 4 (2019): 367-394.

[17] Simončič, Katarina Nina. "Maša Janković's Contribution to the Development of Fashion Illustration in Croatia in the Early 20th Century." *Život umjetnosti: časopis o modernoj i suvremenoj umjetnosti i arhitekturi* 112, no. 1 (2023): 24-47.

[18] Gutiérrez, Camila, and Kendra McDuffie. "Fashion Illustration History: Repairing the Links from Ukiyo-e to Shōjo Manga." *Fashion Theory* 28, no. 7 (2024): 927-969.

[19] Hall, Suzanna. "Chimeras in Couture: Hybridity and animality in Leonor Fini's fashion illustrations for Elsa Schiaparelli." *Dress* 51, no. 1 (2025): 85-106.

[20] Zou, Xingxing, and Waikeung Wong. "StylishGAN: toward fashion illustration generation." *AATCC Journal of Research* 11, no. 1_suppl (2024): 97-109.

No.	Definition of Fashion Illustration	Reference
2	Fashion illustration functions as a visual symbol that represents culture, atmosphere, and fashion identity, thereby reinforcing stylistic character and fashion imagery.	Zhang & Jin (2024)[21]
3	Fashion sketches constitute a primary element of fashion design for expressing ideas and garment details through both manual and digital methods.	Liu et al. (2019)[22]
4	Fashion illustration is used in fashion publications as a medium of visual communication to disseminate trends and construct cultural identity.	Simončič (2023)[23]
5	Digital fashion illustration is utilized on social media to represent stylistic expression and cultural identity in contemporary fashion.	Marcella-Hood (2019)[24]
6	Fashion illustration has evolved as a visual representation of fashion that historically reflects visual culture and aesthetic expression.	Gutiérrez & McDuffie (2024)[25]
7	Fashion illustration serves as a visual medium for communicating and evaluating design ideas in fashion education and professional practice.	Freeman et al. (2015)[26]
8	Fashion illustration functions as an artistic medium for representing aesthetics, brand identity, and cultural expression in fashion design.	Hall (2025)[27]
9	Fashion illustration is understood as a visual language that expresses designers' imagination and sociocultural phenomena.	Son (2022)[28]
10	Fashion illustration constitutes a graphic visual approach that facilitates aesthetic exploration and simplifies the fashion design process.	Han (2020)[29]

METHOD

Research Design

This study adopts a quantitative bibliometric research design to map and analyze the global development of scholarly research on fashion illustration. Bibliometric analysis enables a systematic and objective examination of publication patterns, intellectual structures, scientific collaboration networks, and the evolution of research themes through large-scale bibliographic data.[30,31] This approach is particularly suitable for identifying research trends and knowledge structures within an expanding and multidisciplinary field such as fashion illustration.

Data Source

Bibliographic data were retrieved exclusively from the Scopus database. Scopus was selected due

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[21] Zhang, Xue, and Yu Zhang. "Mapping the Research Agenda for Sustainable Fashion Design: Constructing Knowledge Maps Through Bibliometric Analysis and LDA Machine Learning." *SAGE Open* 15, no. 3 (2025): 21582440251366779.

[22] Liu, Kaixuan, Xianyi Zeng, Xuyuan Tao, and Pascal Bruniaux. "Associate design of fashion sketch and pattern." *IEEE access* 7 (2019): 48830-48837.

[23] Simončič, Katarina Nina. "Maša Janković's Contribution to the Development of Fashion Illustration in Croatia in the Early 20th Century." *Život umjetnosti: časopis o modernoj i suvremenoj umjetnosti i arhitekturi* 112, no. 1 (2023): 24-47.

[24] Marcella-Hood, Madeleine. "Exploring contemporary illustrations of Scottish identity through a study of Scottish fashion influencers on Instagram." *Scottish Affairs* 28, no. 4 (2019): 367-394.

[25] Gutiérrez, Camila, and Kendra McDuffie. "Fashion Illustration History: Repairing the Links from Ukiyo-e to Shōjo Manga." *Fashion Theory* 28, no. 7 (2024): 927-969.

[26] Freeman, Charles, Jihyeong Son, and Lisa Barona McRoberts. "Comparison of novice and expert evaluations of apparel design illustrations using the consensual assessment technique." *International Journal of Fashion Design, Technology and Education* 8, no. 2 (2015): 122-130.

[27] Hall, Suzanna. "Chimeras in Couture: Hybridity and animality in Leonor Fini's fashion illustrations for Elsa Schiaparelli." *Dress* 51, no. 1 (2025): 85-106.

[28] Son, Ju Hee, and Jaehoon Chun. "Surrealistic Characteristics Expressed in Ignasi Monreal's Fashion Illustrations-Focusing on the 2018 S/S Gucci Hallucination Collection." *Journal of the Korean Society of Clothing and Textiles* 46, no. 3 (2022): 407-423.

[29] Xuhui, H. A. N. "Fashion design based on occlusion visual illusion." *Wool Textile Journal* 48, no. 10 (2020).

[30] Aria, Massimo, and Corrado Cuccurullo. "bibliometrix: An R-tool for comprehensive science mapping analysis." *Journal of informetrics* 11, no. 4 (2017): 959-975.

[31] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.

to its extensive coverage of high-quality, peer-reviewed journals across the fields of arts, design, social sciences, and interdisciplinary studies. Moreover, Scopus is widely recognized for its rigorous data curation standards and is frequently used in large-scale bibliometric research to represent the global scholarly landscape reliably.[32,33]

Data Search Strategy

Data collection was conducted in January 2026 and covered journal publications published between 2015 and 2025. This time span was chosen to capture contemporary research developments, particularly those related to digitalization, design visualization, and technological integration in fashion illustration.[34]

The search was applied to the Title, Abstract, and Keywords fields (TITLE-ABS-KEY) to ensure topical relevance, following established guidelines for systematic literature searches[35]. The search string used was:

TITLE-ABS-KEY ("fashion illustration" OR "fashion design illustration" OR "digital fashion illustration")

AND PUBYEAR > 2014 AND PUBYEAR < 2026

AND (LIMIT-TO (SUBJECT AREA, "Arts and Humanities"))

AND (LIMIT-TO (DOCUMENT TYPE, "Article"))

Boolean operators (OR, AND) were employed to capture variations in terminology related to both conventional and digital forms of fashion illustration while maintaining relevance to the fashion design context.[36]

Inclusion and Exclusion Criteria

Inclusion and exclusion criteria were established to ensure that the analyzed documents accurately represented the field of fashion illustration research.[37] The inclusion criteria comprised Scopus-indexed, peer-reviewed journal articles written in English that explicitly addressed fashion illustration, as identified through title, abstract, and keyword screening.

Documents were excluded if they lacked substantive relevance to fashion illustration or focused on unrelated methodological or disciplinary contexts. Publications from subject areas outside arts and design were excluded to maintain analytical focus. Additionally, non-journal publication types—such as books, conference proceedings, book chapters, editorials, and reviews—were omitted to ensure data homogeneity and the reliability of citation-based analyses.[38] The application of these criteria ensured that the final dataset consisted solely of high-quality journal articles from reputable academic sources, thereby enhancing the validity and robustness of the findings.[39]

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[32] Baas, Jeroen, Michiel Schotten, Andrew Plume, Grégoire Côté, and Reza Karimi. "Scopus as a curated, high-quality bibliometric data source for academic research in quantitative science studies." *Quantitative science studies* 1, no. 1 (2020): 377-386.

[33] Mongeon, Philippe, and Adèle Paul-Hus. "The journal coverage of Web of Science and Scopus: a comparative analysis." *Scientometrics* 106, no. 1 (2016): 213-228.

[34] Snyder, Hannah. "Literature review as a research methodology: An overview and guidelines." *Journal of business research* 104 (2019): 333-339.

[35] Gusenbauer, Michael, and Neal R. Haddaway. "Which academic search systems are suitable for systematic reviews or meta-analyses? Evaluating retrieval qualities of Google Scholar, PubMed, and 26 other resources." *Research synthesis methods* 11, no. 2 (2020): 181-217.

[36] Zupic, Ivan, and Tomaž Čater. "Bibliometric methods in management and organization." *Organizational research methods* 18, no. 3 (2015): 429-472.

[37] Snyder, Hannah. "Literature review as a research methodology: An overview and guidelines." *Journal of business research* 104 (2019): 333-339.

[38] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.

[39] Kraus, Sascha, Matthias Breier, and Sonia Dasí-Rodríguez. "The art of crafting a systematic literature review in entrepreneurship research." *International Entrepreneurship and Management Journal* 16, no. 3 (2020): 1023-1042.

Data Screening Procedure

As illustrated in Figure 1, the data screening process followed an adapted PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) flow diagram tailored for bibliometric research. The procedure involved four main stages: document identification, title and abstract screening, eligibility assessment, and final inclusion for analysis.[40]
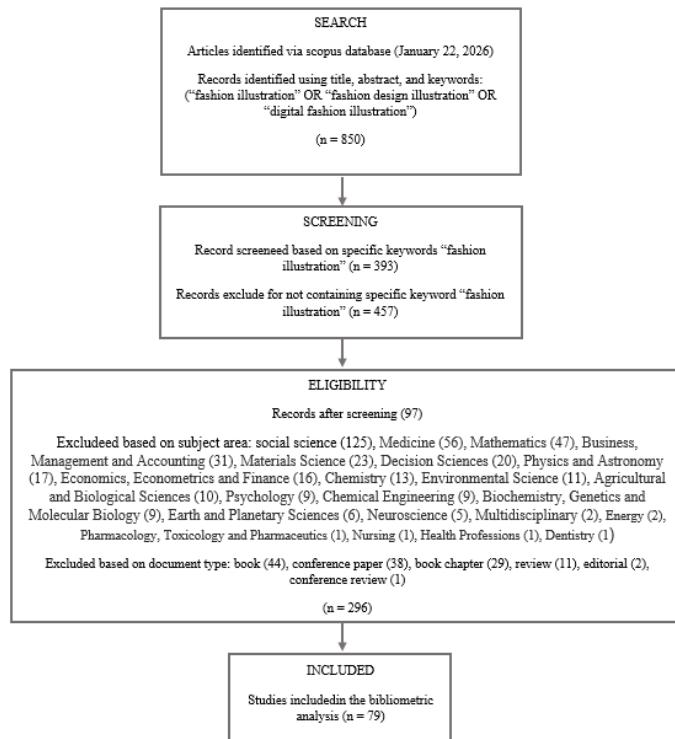
Figure 1. PRISMA flow diagram.

The initial search conducted on January 22, 2026 yielded 393 documents. Subsequently, the refine results function in Scopus was used to exclude documents based on subject areas outside arts and design, document type (restricting inclusion to journal articles), and language (restricting inclusion to English-language publications). After applying all inclusion and exclusion criteria, a total of 79 journal articles met the eligibility requirements and were retained for further bibliometric analysis. The use of the PRISMA framework ensured transparency, reproducibility, and minimized selection bias in the literature selection process.[41]

Data Analysis Techniques

Data analysis was conducted using a combination of descriptive bibliometric analysis and scientific network mapping with the assistance of VOSviewer software.[42] Descriptive bibliometric analysis was employed to examine annual publication trends, journal source distribution, and contributions by authors and countries.[43]

Subsequently, bibliometric mapping techniques were applied to explore the intellectual structure and thematic development of fashion illustration research through keyword co-occurrence

[40] Page, Matthew J., Joanne E. McKenzie, Patrick M. Bossuyt, Isabelle Boutron, Tammy C. Hoffmann, Cynthia D. Mulrow, Larissa Shamseer et al. "The PRISMA 2020 statement: an updated guideline for reporting systematic reviews." *bmj* 372 (2021).

[41] Rethlefsen, Melissa L., Shona Kirtley, Siw Waffenschmidt, Ana Patricia Ayala, David Moher, Matthew J. Page, and Jonathan B. Koffel. "PRISMA-S: an extension to the PRISMA statement for reporting literature searches in systematic reviews." *Systematic reviews* 10, no. 1 (2021): 39.

[42] Van Eck, Nees, and Ludo Waltman. "Software survey: VOSviewer, a computer program for bibliometric mapping." *scientometrics* 84, no. 2 (2010): 523-538.

[43] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.

analysis. This method enables the identification of dominant research themes as well as emerging topics within the field.[44] In addition, co-authorship analysis was conducted to map collaboration patterns among authors, institutions, and countries, thereby providing insights into global scientific collaboration networks.

All network analyses were performed using the full counting method.[45] Minimum occurrence thresholds were applied to reduce data noise and improve the clarity and interpretability of the resulting bibliometric maps.[46]

Unit of Analysis

The units of analysis in this study comprised key bibliographic elements, including the annual number of publications as an indicator of research growth; authors and institutional affiliations to identify major contributors; and countries of publication to map the geographical distribution of research activity. Journals and publication sources were analyzed to determine influential scholarly outlets. In addition, author keywords and indexed keywords were examined as primary thematic units to reveal research foci, inter-topic relationships, and the global developmental trajectories of fashion illustration research.

RESULTS AND DISCUSSION

This section presents and discusses the findings derived from the analysis of 79 Scopus-indexed journal articles on fashion illustration published between 2015 and 2025. The results are organized into several thematic dimensions, including publication trends, geographical distribution, international collaboration networks, institutional contributions, journal sources, author productivity, and thematic structures based on keyword co-occurrence analysis. Together, these dimensions provide a comprehensive overview of the intellectual structure and developmental trajectory of fashion illustration research at the global level.

Publication Trends in Fashion Illustration Research

The analysis of annual publication output reveals dynamic patterns in fashion illustration research over the 2015–2025 period. In 2015, seven articles were published, followed by a decline to four articles in 2016. Publication output gradually increased between 2017 and 2019, with five, seven, and eight articles published, respectively. A notable decline occurred in 2020, when only two articles were recorded, before research activity rebounded in subsequent years. In 2021, publication output rose to nine articles, followed by eight articles in both 2022 and 2023. As seen in **Figure 2**, the peak was observed in 2024, with 15 articles published, while six articles were recorded in 2025.

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[44] Zupic, Ivan, and Tomaž Čater. "Bibliometric methods in management and organization." *Organizational research methods* 18, no. 3 (2015): 429-472.

[45] Perianes-Rodriguez, Antonio, Ludo Waltman, and Nees Jan Van Eck. "Constructing bibliometric networks: A comparison between full and fractional counting." *Journal of informetrics* 10, no. 4 (2016): 1178-1195.

[46] Cobo, Manuel J., Antonio Gabriel López-Herrera, Enrique Herrera-Viedma, and Francisco Herrera. "Science mapping software tools: Review, analysis, and cooperative study among tools." *Journal of the American Society for information Science and Technology* 62, no. 7 (2011): 1382-1402.
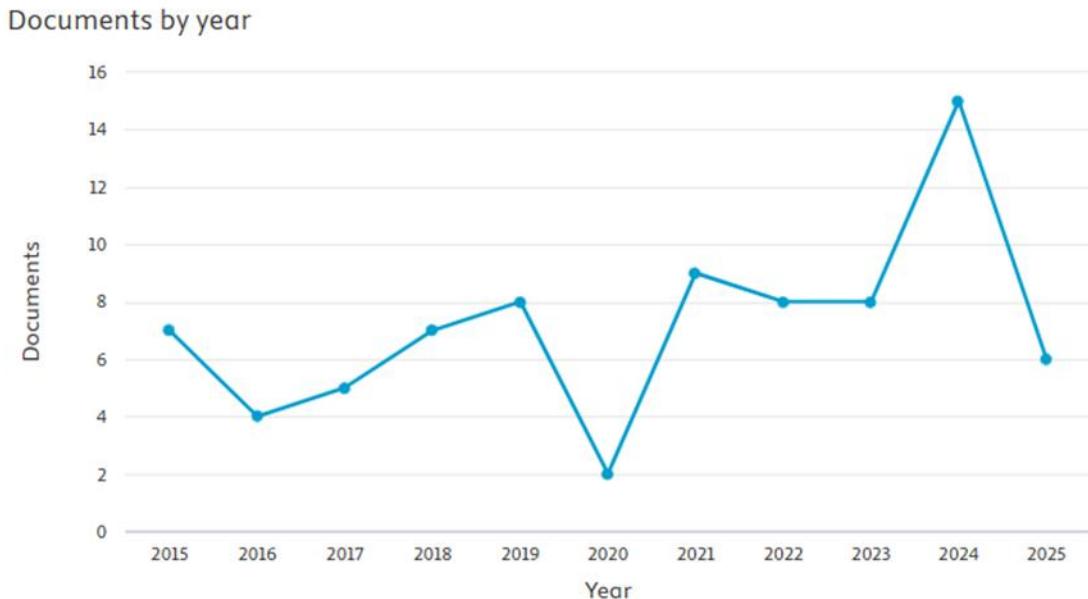
Figure 2. Annual number of fashion illustration publications.

Overall, these findings indicate a growing scholarly interest in fashion illustration, particularly in the later years of the observation period. The sharp increase in publications after 2021 suggests that fashion illustration has gained increased academic recognition as a relevant research domain within design studies, visual communication, and the creative industries. The temporary decline observed in 2020 is consistent with broader disruptions in academic publishing during the global COVID-19 pandemic and has been reported in bibliometric studies across various disciplines.[47,48] Taken together, the upward trend in publication output demonstrates that fashion illustration research exhibits strong growth potential and is likely to continue developing in response to digital transformation and evolving industry needs.

Distribution of Publications by Country or Region

The geographical distribution of publications provides insight into the global production of knowledge on fashion illustration. Research output is dominated by the United States (18 publications), followed closely by China (17 publications) and the United Kingdom (15 publications). These findings reflect the strong research ecosystems and established academic infrastructures in these countries, particularly in fields related to design, visual culture, and creative industries. Moderate contributions are observed from India (five publications) and the Russian Federation (four publications), while Canada, France, and Spain each contribute three publications. In **Figure 3**, Finland records the lowest output among the top ten contributing countries.

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[47] Aria, Massimo, and Corrado Cuccurullo. "bibliometrix: An R-tool for comprehensive science mapping analysis." *Journal of informetrics* 11, no. 4 (2017): 959-975.

[48] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.

Documents by country or territory

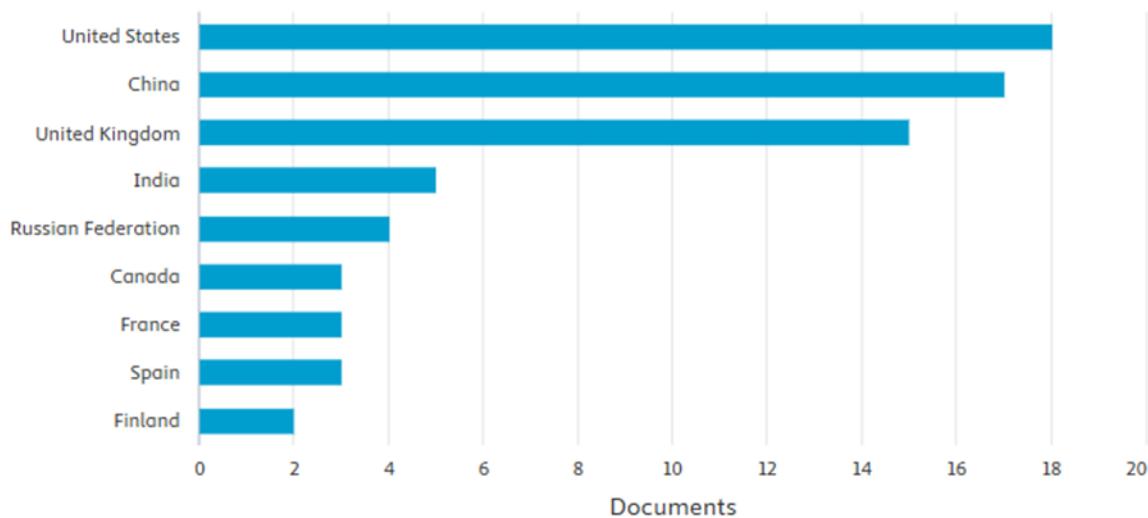Compare the document counts for up to 15 countries/territories.

Figure 3. Number of articles by country or region (top 10 countries).

This distribution indicates that fashion illustration research remains largely concentrated in North America, Western Europe, and East Asia. Limited participation from regions such as Africa, South America, and parts of Southeast Asia suggests an imbalance in global knowledge production. From a developmental perspective, this uneven distribution highlights opportunities for expanding fashion illustration research through cross-regional collaboration and greater inclusion of diverse cultural and industrial contexts, which may enrich future theoretical and empirical contributions.[49]

Country Collaboration Networks in Fashion Illustration Research

International collaboration patterns were examined through co-authorship network analysis using VOSviewer. The results reveal strong collaborative linkages among the United States, China, and the United Kingdom, confirming their central roles in the global research network. China emerges as a particularly important connecting node, linking multiple research hubs and facilitating transnational collaboration.

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[49] Gan, Ye-na, Duo-duo Li, Nicola Robinson, and Jian-ping Liu. "Practical guidance on bibliometric analysis and mapping knowledge domains methodology–A summary." *European Journal of Integrative Medicine* 56 (2022): 102203.
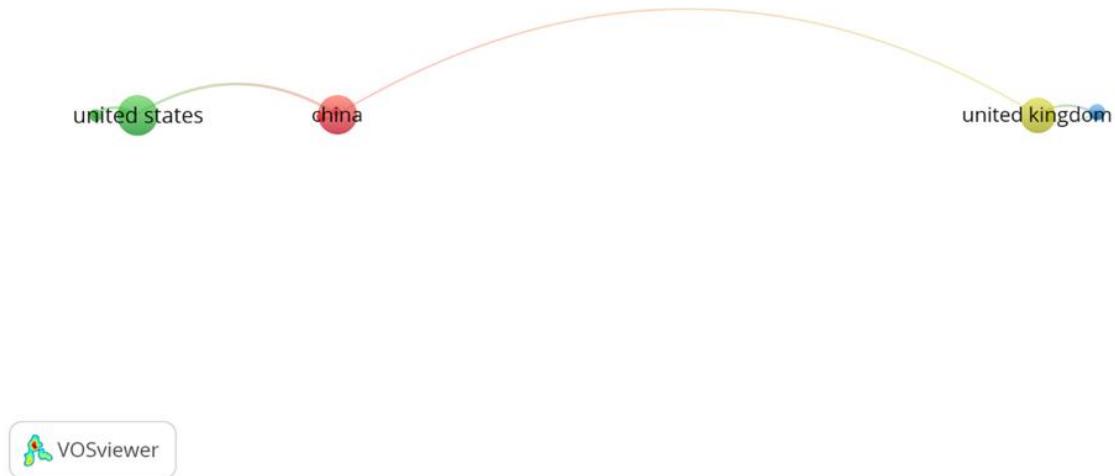
Figure 4. Visualization of the country collaboration network in Scopus-based fashion illustration research using VOSviewer.

These collaboration patterns suggest that fashion illustration research has increasingly developed through international partnerships rather than isolated national efforts. The presence of interconnected networks reflects the globalized nature of fashion research and underscores the importance of cross-border knowledge exchange in advancing theoretical innovation and methodological diversity. Such collaboration is especially relevant in a field that intersects cultural studies, digital technology, and creative industries.

Distribution of Publications by Institutional Affiliation

Analysis of institutional affiliations shows that fashion illustration research is produced by a diverse range of universities and research organizations worldwide. Jiangnan University leads with approximately four publications, followed by Shenzhen University and the Ministry of Education of the People's Republic of China, each contributing around three publications. The University of Sheffield and Hangzhou Dianzi University each account for approximately two publications, while several other institutions contribute one publication each as seen in Figure 5.

The diversity of contributing institutions reflects the multidisciplinary character of fashion illustration research. The involvement of universities with strengths in design, technology, and education suggests that fashion illustration is increasingly positioned at the intersection of creative practice and technological innovation. This institutional diversity supports the view that fashion illustration research extends beyond traditional art and design domains, engaging with broader educational and digital contexts.

Documents by affiliation
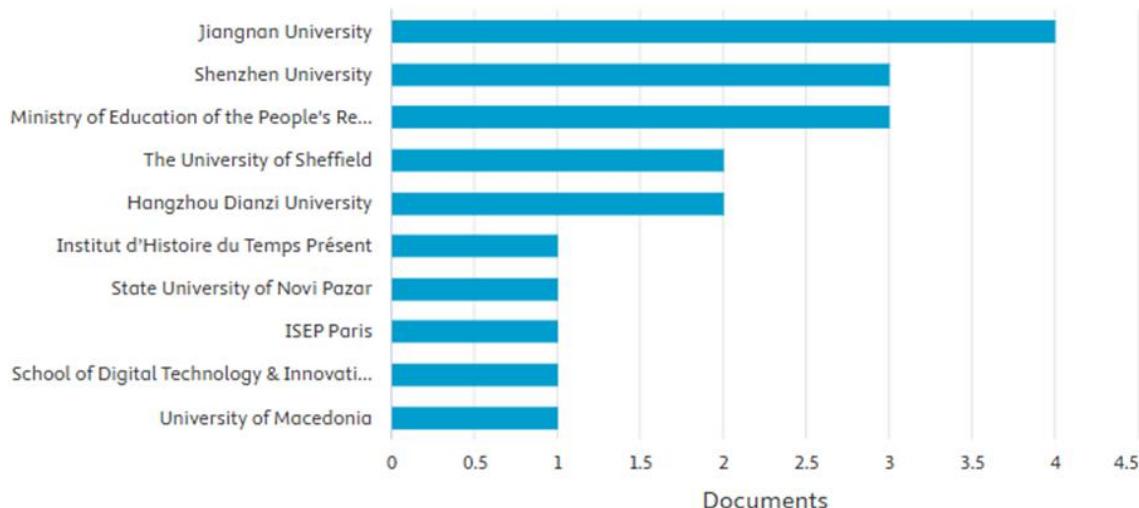
Compare the document counts for up to 15 affiliations.

Figure 5. Number of fashion illustration publications by authors' institutional affiliations.

Distribution of Publications by Source (Journals)

The analysis of publication sources indicates that fashion illustration research is dispersed across a variety of journals rather than concentrated in a single outlet. The Journal of Silk and Costume records the highest number of publications (four articles), followed by the International Journal of Fashion Studies and Fashion Theory: Journal of Dress, Body and Culture, each with three articles. As shown in Figure 6, other journals contribute smaller numbers of publications, including interdisciplinary outlets related to textiles, art education, technology, and artificial intelligence.

Documents per year by source

Compare the document counts for up to 10 sources.   Compare sources and view CiteScore, SJR, and SNIP data

- Journal of Silk
- Costume
- International Journal of Fashion Studies
- Fashion Theory Journal of Dress Body and Culture
- Fibres and Textiles in Eastern Europe
- International Journal of Fashion Design Technology and Education
- Textile the Journal of Cloth and Culture
- Computers in Industry
- Engineering Applications of Artificial Intelligence
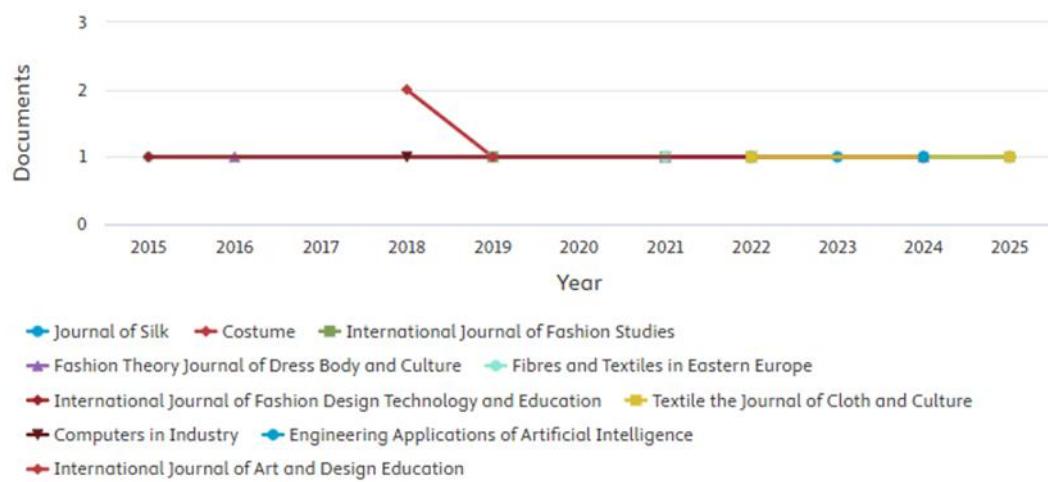- International Journal of Art and Design Education

Figure 6. Number of publications by source (Top 10 Journals).

This distribution pattern demonstrates that fashion illustration research is inherently interdisciplinary. Its presence in journals spanning fashion studies, textile research, design education, and technology indicates that the field intersects cultural, material, pedagogical, and technological dimensions. At the same time, the relatively low number of publications per journal suggests that fashion illustration has not yet consolidated a dedicated core outlet, presenting opportunities for

broader dissemination and increased visibility across high-impact interdisciplinary journals.[50]

Author Productivity Analysis

Author productivity analysis reveals that a small number of scholars contribute disproportionately to fashion illustration research. Zhang, J. emerges as the most prolific author with five publications, followed by Gai, Y. with three publications. Several other authors contribute two publications each, while the majority of authors appear only once in the dataset.
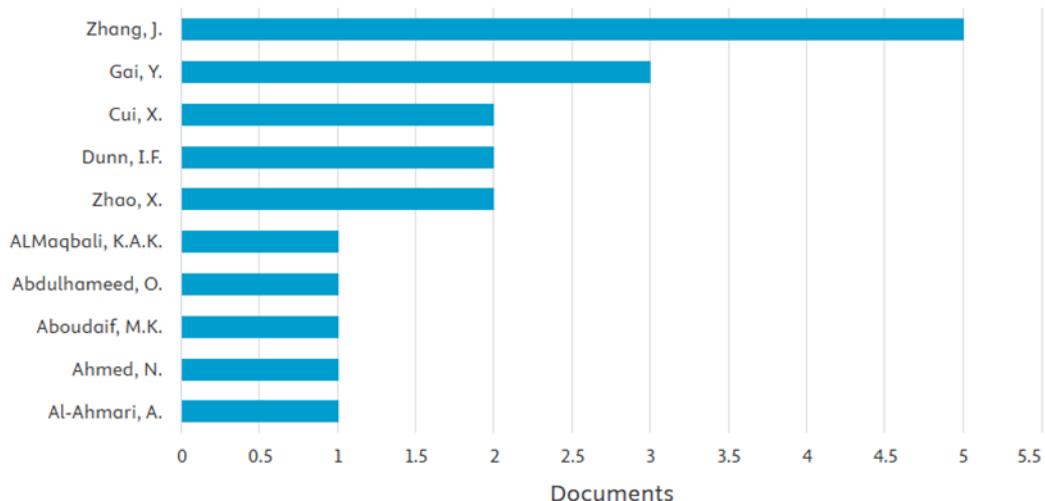

Figure 7. Number of publications by author (Top 10 Authors)

This pattern is characteristic of emerging research fields, where a limited group of scholars plays a central role in shaping early research trajectories, while a broader group contributes sporadically. The dominance of highly productive authors suggests the presence of influential research leaders who may guide future thematic and methodological developments. Simultaneously, the high proportion of single-publication authors indicates that fashion illustration research remains open and accessible, allowing for continuous entry of new researchers and perspectives.[51,52]

Keyword Co-occurrence and Thematic Cluster Analysis

Keyword co-occurrence analysis was conducted to identify dominant themes and intellectual structures within fashion illustration research. As expected, fashion illustration occupies a central position in the network, strongly connected to keywords related to visual studies, history, culture, and media. These linkages suggest that fashion illustration is predominantly conceptualized as a form of visual representation and cultural artifact.

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[50] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.

[51] Aria, Massimo, and Corrado Cuccurullo. "bibliometrix: An R-tool for comprehensive science mapping analysis." *Journal of informetrics* 11, no. 4 (2017): 959-975.

[52] Donthu, Naveen, Satish Kumar, Debmalya Mukherjee, Nitesh Pandey, and Weng Marc Lim. "How to conduct a bibliometric analysis: An overview and guidelines." *Journal of business research* 133 (2021): 285-296.
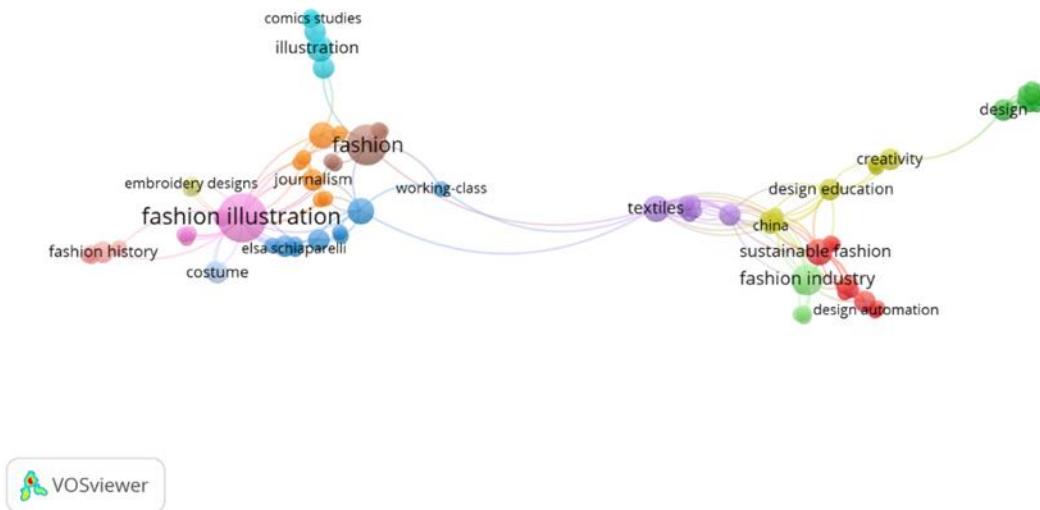
Figure 8. Keyword co-occurrence network map of Scopus-based fashion Illustration Research Using VOSviewer.

Table 2. Author keywords and total link strength in fashion illustration research.

Rank	Keyword	Total link strength
1	Fashion illustration	30
2	Fashion industry	18
3	Textiles	17
4	Sustainable fashion	16
5	Fashion	13
6	Design education	11
7	Design	9
8	Artificial intelligence	8
9	Creativity	4
10	Illustration	3

In contrast, thematic clusters related to sustainable fashion, design education, and artificial intelligence exhibit weaker connections to fashion illustration. This indicates that, despite growing interest in digitalization and sustainability within fashion research, these themes have not yet been fully integrated into fashion illustration scholarship. The limited connectivity between fashion illustration and industry-oriented or pedagogical themes highlights a significant research gap.

From a theoretical perspective, this gap suggests that the potential of fashion illustration as a strategic pedagogical tool and as a medium for communicating industry values remains underexplored. Strengthening the integration of fashion illustration with digital technologies, sustainability frameworks, and design education may reposition it as a core competency within contemporary fashion practice. Consequently, future research should focus on developing integrative theoretical models that situate fashion illustration at the intersection of visual communication, technological innovation, and sustainable creative industries.

Theoretical and Research Implications

The dominance of visual, historical, and cultural themes within the keyword co-occurrence network indicates that fashion illustration research remains largely anchored in representational and interpretive paradigms. This finding aligns with prior scholarship that positions fashion illustration primarily as a visual language for expressing aesthetic values, cultural narratives, and historical

identities within fashion discourse.[53,54] While this orientation underscores the cultural significance of fashion illustration, it also suggests a relative stagnation in theoretical diversification, particularly in relation to contemporary challenges faced by the fashion industry.

The weak integration between fashion illustration and sustainability-related keywords reflects a broader disconnect between visual design practices and sustainability frameworks within fashion research. Although sustainability has become a dominant theme in fashion studies—particularly in relation to materials, production systems, and consumption patterns[55,56]—its limited association with fashion illustration suggests that illustration is still perceived as peripheral rather than instrumental in advancing sustainable fashion narratives. This represents a missed opportunity, as visual communication has been shown to play a critical role in shaping consumer awareness, ethical perception, and value-driven decision-making in creative industries.[57,58]

Similarly, the marginal presence of design education within the thematic network highlights an underexplored pedagogical dimension of fashion illustration research. Existing studies tend to treat fashion illustration as a technical skill or artistic outcome, rather than as a structured pedagogical tool that supports cognitive development, design thinking, and professional competency formation.[59,60] Research in design education emphasizes that visual representation tools are central to ideation, problem-solving, and reflective practice, particularly in digitally mediated learning environments.[61,62] The limited linkage between fashion illustration and educational research therefore indicates a significant gap that warrants systematic investigation.

The relatively weak association between fashion illustration and digital technologies—particularly artificial intelligence—further suggests that the field has not yet fully engaged with emerging technological paradigms. Recent studies demonstrate that artificial intelligence and generative design tools are increasingly transforming creative processes in fashion, including pattern generation, visual simulation, and design automation.[63,64] However, the bibliometric findings indicate that fashion illustration research has yet to meaningfully integrate these developments into its core theoretical and methodological frameworks. This gap may constrain the relevance of fashion illustration research in the context of Industry 4.0 and digitally driven creative economies.

From an intellectual structure perspective, the concentration of research output within a limited number of countries and institutions further reinforces the need for more inclusive and globally representative research agendas. Scholars have noted that bibliometric dominance by established research hubs can lead to epistemic bias, where theoretical frameworks and methodological

[53] Gutiérrez, Camila, and Kendra McDuffie. "Fashion Illustration History: Repairing the Links from Ukiyo-e to Shōjo Manga." *Fashion Theory* 28, no. 7 (2024): 927-969.

[54] Hall, Suzanna. "Chimeras in Couture: Hybridity and animality in Leonor Fini's fashion illustrations for Elsa Schiaparelli." *Dress* 51, no. 1 (2025): 85-106.

[55] Niinimäki, Kirsi, Greg Peters, Helena Dahlbo, Patsy Perry, Timo Rissanen, and Alison Gwilt. "The environmental price of fast fashion." *Nature reviews earth & environment* 1, no. 4 (2020): 189-200.

[56] Fletcher, Kate. *Sustainable fashion and textiles: Design journeys*. Routledge, 2013.

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[58] Pedersen, Esben Rahbek Gjerdrum, and Kirsti Reitan Andersen. "Sustainability innovators and anchor draggers: a global expert study on sustainable fashion." *Journal of Fashion Marketing and Management* 19, no. 3 (2015): 315-327.

[59] Freeman, Charles, Jihyeong Son, and Lisa Barona McRoberts. "Comparison of novice and expert evaluations of apparel design illustrations using the consensual assessment technique." *International Journal of Fashion Design, Technology and Education* 8, no. 2 (2015): 122-130.

[60] Oxman, Rivka, and Ning Gu. "Theories and models of parametric design thinking." In *Proceedings of the 33rd eCAADe Conference*, vol. 2, pp. 477-482. 2015.

[61] Cross, Nigel. *Design thinking: Understanding how designers think and work*. Bloomsbury Publishing, 2023.

[62] Oxman, Rivka, and Ning Gu. "Theories and models of parametric design thinking." In *Proceedings of the 33rd eCAADe Conference*, vol. 2, pp. 477-482. 2015.

[63] Giri, Chandadevi, Sheenam Jain, Xianyi Zeng, and Pascal Bruniaux. "A detailed review of artificial intelligence applied in the fashion and apparel industry." *IEEE Access* 7 (2019): 95376-95396.

[64] Zhang, Xiaoming, and Yuanyuan Lin. "Exploring the development trend of digital media fashion illustration art based on the content analysis method." *Applied Mathematics and Nonlinear Sciences* 9, no. 1 (2024): 21.

approaches reflect specific cultural and industrial contexts.[65,66] Expanding fashion illustration research to include perspectives from underrepresented regions—particularly those with rich visual traditions and emerging fashion industries—may contribute to more pluralistic and context-sensitive theoretical developments.

Taken together, these findings suggest that future research should move beyond viewing fashion illustration solely as a representational artifact and instead reposition it as a strategic medium that intersects visual communication, sustainability discourse, digital innovation, and design education. Integrative research frameworks that combine bibliometric mapping with qualitative content analysis, practice-based research, or experimental design studies may offer more comprehensive insights into how fashion illustration can function as a core competency within contemporary fashion systems. Such an approach would not only enhance the academic relevance of fashion illustration research but also strengthen its practical contribution to education and the evolving creative industries.

CONCLUSION

This study shows a substantial increase in Scopus-indexed publications on fashion illustration between 2015 and 2025, reflecting its growing recognition as an academic field. The findings indicate that existing research is still dominated by visual, historical, and cultural perspectives, while connections to industry practice, sustainability, digital technology, and design education remain limited. This suggests that fashion illustration has not yet been fully positioned as a strategic component of contemporary creative industries.

This study contributes by mapping the intellectual structure and identifying key research gaps in fashion illustration scholarship. However, as the analysis is limited to Scopus metadata, future research should integrate bibliometric methods with qualitative approaches or systematic reviews to provide deeper insights and strengthen the field's relevance to educational and industrial contexts.

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