Generative AI in Studio-Based Fashion Education: A Systematic Literature Review.

Rabia Anwar [1], Fahd Ali Raza [1], Mostafa El-Sayed Marzouk [2*]

[1] Digital Learning Hub, Asia Pacific University of Technology & Innovation, Kuala Lumpur, Malaysia
[2] Intermarkets Advertising Agency, Giza, Egypt
*Corresponding Author: hello.m.marzouk@intermarkets.com.eg

Abstract

This systematic literature review explores the integration of generative artificial intelligence (GenAI) into studio-based fashion education between 2018 and 2025. Drawing from 28 academic sources across design, architecture, and education, the review synthesizes current knowledge on how GenAI influences key pedagogical dimensions within the studio model. Four core thematic pillars emerge: Knowledge Construction, Learner Identity & Authorship, Teaching Practice, and Studio Culture & Ethics. These themes reveal both the opportunities and tensions presented by GenAI, ranging from enhanced creative ideation and efficiency to concerns over originality, ethical responsibility, and equitable access. To guide implementation, the paper proposes the Simplified GAI–SBL Model, a conceptual framework aligning GenAI use with established pedagogical values and design practices. This model serves as a foundation for future empirical validation and practical adaptation in curriculum design. The review highlights the need for deliberate integration strategies that preserve studio culture while embracing technological innovation. By balancing innovation with ethical and educational rigor, the field can shape a future where GenAI enhances, rather than displaces, the core objectives of fashion design education.

Keywords: *Generative AI, Fashion Education, Studio-Based Learning, Design Pedagogy, Authorship Ethics.*

1. Introduction

Generative Artificial Intelligence (GenAI) is reshaping studio-based learning (SBL) in creative disciplines like fashion design. SBL, grounded in Beaux-Arts and Bauhaus traditions, relies on mentorship, project-based learning, and iterative feedback (Coffman, 2024; Ng, 2022; Riskiyanto, 2023). The integration of GenAI introduces new tools for ideation, visualization, and collaboration, raising questions about creativity, authorship, and the educator's role.

Since 2018, advances in GenAI, including GANs and tools like DALL·E, Midjourney, and ChatGPT, have sparked debate in design education. GenAI is praised for enabling rapid prototyping and expanding creative possibilities, but also criticized for risks to originality, ethics, and personal design voice. These tensions highlight a clash between GenAI's efficiency and the reflective, original learning central to studio work.

This review examines literature from 2018 to 2025, covering fashion education and drawing insights from related fields. It considers various educational levels and global perspectives. The paper outlines the methodology, presents findings in four key themes, Knowledge Construction, Learner Identity and

Authorship, Teaching Practice, and Studio Culture and Ethics, discusses their intersections, and introduces a "Simplified GAI–SBL Model" as a framework for future curriculum design. The conclusion discusses implications for educators and researchers as GenAI's role in studio-based fashion education grows.

2. Methods

This review used a systematic approach to examine research on generative AI in studio-based fashion education from 2018 to 2025. Following established guidelines, we applied a transparent search strategy, clear inclusion/exclusion criteria, and thematic analysis, focusing on recent GenAI developments like GANs, transformers, and diffusion models.

Searches covered multiple databases (Scopus, Web of Science, Google Scholar, design-specific indices), with keywords such as "generative AI," "fashion design education," and "studio-based learning," in English and other major languages. We included conference proceedings, theses, and credible grey literature (e.g., UNESCO, industry white papers), provided they offered substantive, research-backed insights. Non-English sources were considered if translated or summarized in English for international coverage.

Inclusion criteria were: (1) publication between 2018–2025, (2) focus on GenAI in creative ideation or studio learning, and (3) relevance to at least one core theme, learning, identity, teaching, or ethics. Fashion design education studies were prioritized, but related fields like architecture and product design were included if relevant. Studies on technical manufacturing/retail or lacking analysis were excluded.

Data from each study included aims, methods, context, GenAI tools, and key findings. Inductive coding identified four main themes: Knowledge Construction, Learner Identity & Authorship, Teaching Practice, and Studio Culture & Ethics. Findings were mapped to these themes, compared across studies, and iteratively refined.

Validity was ensured by triangulating peer-reviewed articles, conference papers, theses, and reports, with critical appraisal of methodological rigor. Including multiple disciplines allowed for theoretical triangulation. In total, 28 studies from diverse geographies and methods were included, with foundational works (e.g., Jin et al., 2024; Kee, Kuys, & King, 2024a; Özorhon et al., 2025; Wadinambiarachchi et al., 2024) shaping the analysis and conceptual framework. A PRISMA diagram and a source table summarize the selection process.

PRISMA Flow Diagram

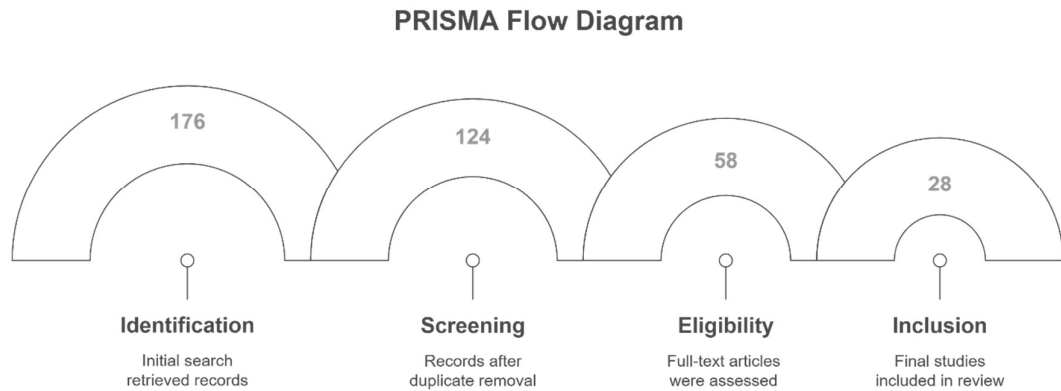| 176	124	58	28
Identification	**Screening**	**Eligibility**	**Inclusion**
Initial search retrieved records	Records after duplicate removal	Full-text articles were assessed	Final studies included in review

Figure 1: PRISMA-style summary of source selection for the GenAI–SBL literature review (2018–2025).

To provide a comprehensive overview of the current research landscape, Table 1 outlines the key sources analyzed in this review, spanning conceptual frameworks, empirical studies, and theoretical critiques from 2018 to 2025.

Table 1: Summary of Included Sources (2018–2025)

Author(s)	Year	Title	Method/Type	Relevance
Agarwal & Sivaraman	2025	*Education in the Era of Generative AI*	Conceptual	Ethics, benefits, and integration challenges of GenAI in education
AlAli & Wardat	2024	*Opportunities and Challenges of Integrating GenAI in Education*	Conceptual	Overview of opportunities and challenges in educational contexts
Bartlett & Camba	2024	*GenAI in Product Design Education*	Empirical	Originality and authorship concerns in student work
Davis	2022	*Colonialism as Style: On the Beaux-Arts Tradition*	Theoretical	Critique of traditional studio models, background relevance
Gabriel	2024	*GenAI and Educational (In)Equity*	Conceptual	Access, equity, and digital divide in AI-supported learning
George	2023	*Preparing Students for an AI-Driven World*	Conceptual	Curriculum reform and pedagogical transformation
Gurung, Chick & Haynie	2023	*Exploring Signature Pedagogies*	Conceptual	Authorship and reflective learning in studio pedagogy
Holmes & Miao	2023	*Guidance for GenAI in Education and Research*	Conceptual	UNESCO guidance and ethical use of GenAI in academic settings
Jin et al.	2024	*Fashion Designers' Behavior Using GenAI for Ideation*	Empirical	Application of GenAI for early-stage design thinking and revision
Kee, Kuys & King (a)	2024	*GenAI to Enhance Architecture Education*	Empirical	Enhancing digital literacy and creativity in design education
Kee, Kuys & King (b)	2024	*Same as above (duplicate)*	Empirical	Duplicate entry
Kim & Cho	2023	*My Teammate is AI*	Empirical	Student perceptions of AI collaboration in drawing tasks
Kim, Ham & Lee	2024	*Student-AI Interaction in Drawing Tasks*	Empirical	Attitudes, skills, and co-creation process with AI
Lee & Song	2024	*Perceptions of AI-Generated Explanations in CS Education*	Empirical	Implications for integrating GenAI in STEM and computing education
Lee et al.	2024	*Prompt Aloud!*	Empirical	Classroom integration, prompt analysis, and student engagement
Morandín-Ahuerma	2023	*Ten UNESCO Recommendations on Ethics of AI*	Policy Paper	Ethical framing for GenAI in academic and creative disciplines
Mutawa & Sruthi	2025	*UNESCO's AI Competency Framework*	Conceptual	Competency-based design, global education policy relevance

Nedungadi, Tang & Raman	2024	*GenAI and SDG4: Quality Education*	Conceptual	Links AI to broader educational goals and sustainable development
Ng	2022	*Beyond the Beaux-Arts Tradition*	Theoretical	Historic studio models and the evolution toward modern design education
Omran Zailuddin et al.	2024	*AI in Design Courses: A Case Study*	Empirical	Student perspectives and learning outcomes in AI-supported courses
Özorhon et al.	2025	*AI-assisted Architectural Design Studio*	Empirical	Four-stage instructional model for GenAI in design studios
Peck & Stamatiou	2024	*Critical Acting Pedagogy*	Conceptual	Authorship and self-expression in performative/creative pedagogy
Pellas	2025	*Impact of AI-Generated Videos in Science Education*	Empirical	Impact of AI on problem-based learning and student outcomes
Riskiyanto	2023	*Material-Based Learning in Architecture Design Studio*	Theoretical	Historic shifts in design education, relevant to studio culture
Särmäkari & Vänskä	2022	*Fashion 4.0 Designers as Cyborgs*	Empirical	Designers co-creating with GenAI tools, identity and authorship implications
Shah	2023	*AI and the Future of Education*	Conceptual	Shifting instructor roles from demonstration to mentorship
Wadinambiarachchi et al.	2024	*Effects of GenAI on Design Fixation and Divergent Thinking*	Empirical	How AI influences creativity and cognitive flexibility in design
Zhan & Wang	2024	*GenAI in Higher Ed: Assessment Innovations in Engineering*	Conceptual	Innovations and risks in using AI for student evaluation and assessment

As shown in the table above, the literature reflects a growing intersection between AI technologies and creative pedagogies. This diversity of sources forms the basis for the thematic analysis presented in the following section. Organized by the four key themes, each theme is discussed with representative studies and examples, setting the stage for a subsequent integrative discussion and the development of a conceptual framework for GenAI in studio learning.

3. Findings

3.1. Knowledge Construction

Generative AI (GenAI) has become a key tool for early-stage design, especially for ideation and visual exploration. Tools like Midjourney and DALL·E enable students to quickly generate diverse alternatives, expanding their conceptual thinking (Jin et al., 2024; Kim, 2024; Kim et al., 2024; Kim & Cho, 2023; Lee et al., 2024). In architecture, similar benefits are seen in spatial ideation (Ozorhon et al., 2025).

GenAI's speed allows rapid iterations, enabling more experimentation in limited studio time. In UX/UI, it improves time management and lowers creative anxiety by automating routine tasks (Kee et al., 2024), freeing students to focus on higher-order thinking. However, without guidance, GenAI can lead to shallow exploration or early fixation. Wadinambiarachchi et al. (2024) found AI users sometimes produced fewer, less original ideas, narrowing their focus. The value of GenAI-supported ideation depends on students' effective prompting and reflection.

Used thoughtfully, GenAI deepens conceptual learning and boosts creativity and initiative (Kee et al., 2024; Agarwal et al., 2025). Group critiques of ambiguous AI outputs foster critical thinking and clarify design reasoning (Ozorhon et al., 2025). Still, GenAI lacks contextual understanding. Kim (2024) notes AI-generated fashion may miss cultural or material context, shifting students into curator roles where they must critically filter AI outputs. Without this, essential design understanding may be lost.

3.2. Learner Identity and Authorship

GenAI's rise in design education challenges traditional concepts of authorship and learner identity. In studio pedagogy, authorship reflects a student's personal creative imprint (Gurung et al., 2023; Omran Zailuddin et al., 2024; Peck & Stamatiou, 2024), but GenAI blurs these boundaries. Särmäkari and Vänskä (2022) describe today's designers as "cyborgs," shifting from sole authors to co-creators with AI. Maintaining student agency is crucial. Bartlett and Camba (2024) emphasize that AI should be a tool, not the creator, so students retain authorship. They recommend against using AI outputs as final work and stress documenting AI use and decisions for legal and educational reasons.

There's an ongoing tension between originality and co-creation, as GenAI's remixing can complicate "design plagiarism." Bartlett and Camba (2024) argue the real issue is in how AI is used. Kim (2024) supports co-creativity, finding that students who integrate AI with their own ideas produce more original work. AI use also shapes designer identity. Prompt engineering and AI curation may become core creative skills (Särmäkari & Vänskä, 2022). While AI can democratize creativity and boost confidence (Kee et al., 2024), Kim (2024) finds that strong identity emerges only when students actively guide AI outputs. To support this, educators encourage students to reflect on and distinguish between AI-generated and personal work, reinforcing authorship and responsibility. Ultimately, GenAI requires redefining learner identity, ensuring students remain empowered as co-creators.

3.3. Teaching Practice

GenAI's integration into studio-based education is transforming teaching practice and curriculum design. Instead of banning or loosely permitting AI, scholars recommend structured, intentional use. Ozorhon et al. (2025) describe studios where GenAI tools like Midjourney are introduced in stages, helping students build both conceptual and reflective skills. Teaching GenAI literacy, covering model basics, ethics, and prompt engineering, is now essential for developing critical users. Clear course policies matter. Bartlett and Camba (2024) advise treating AI as a process tool, for example allowing DALL·E for ideation but requiring students to create final visuals themselves. Documenting AI-generated content supports transparency and integrity. Involving students in policy creation increases engagement and ethical awareness.

Pedagogy is shifting toward critical reflection, with group critiques and prompts helping students distinguish their own ideas from AI-generated ones (Ozorhon et al., 2025). Case-based learning exposes students to real-world ethical and professional issues. Skill-building is evolving. Prompt engineering is taught as a creative skill, and students learn to refine AI outputs through critique and technical adaptation. In fashion, students may turn AI-generated ideas into practical designs, reinforcing judgment and craftsmanship.

Educators now act more as mentors, guiding students' conceptual and ethical development. George (2023) observes that AI has shifted instructors' focus from demonstration to critical guidance. Challenges remain: faculty need ongoing upskilling, and assessments must adapt, with some programs emphasizing process documentation and reflection over final outcomes to ensure real learning.

3.4. Studio Culture and Ethics

GenAI is transforming studio culture by changing how students collaborate, critique, and engage in design. Studios now incorporate AI-generated content, with shared outputs during ideation promoting collaboration among students as well as with AI. Ozorhon et al. (2025) call this a "polyphonic studio," where group reflection on AI ideas boosts collective creativity.

Tensions exist between students who use AI and those who prefer traditional methods, especially when both approaches receive equal recognition. Educators address this through dual-method projects and open dialogue to respect diverse processes. Ethical issues are significant. GenAI often uses unlicensed data, raising intellectual property, consent, and compensation concerns (Bartlett & Camba, 2024). Rather than banning AI, curricula promote transparent tool use and attribution, expecting students to disclose AI involvement for accountability.

Bias is another challenge, as AI models may reinforce stereotypes. Educators now teach students to critically evaluate and correct biased outputs, fostering media literacy and cultural awareness. Studio norms around originality are changing. Disclosure of AI usage is now required, and many follow Bartlett and Camba's (2024) advice to permit AI in process, but not in final outputs. Ensuring all students have access to GenAI is also a growing policy concern.

GenAI can help reduce anxiety and creative blocks, but too much reliance may lead to loss of skills. Faculty address this by emphasizing conceptual and craft strengths so AI supplements, not replaces, expertise. Finally, GenAI prompts ethical debates on authorship and the use of non-fabricable designs. Educators use frameworks like UNESCO's to promote ethical, human-centered AI (Morandín-Ahuerma, 2023; Mutawa & Sruthi, 2025). Studio culture is evolving, now rooted in integrity, transparency, equity, and respect, with GenAI requiring ongoing ethical engagement.

A visualization and interconnection between these themes can be seen in Figure 2.
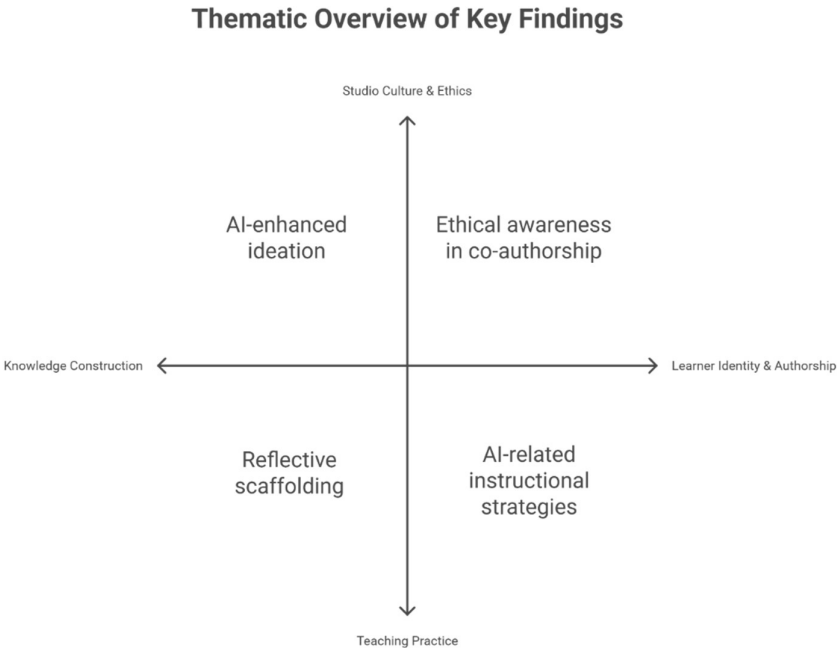
Thematic Overview of Key Findings

Figure 2. Thematic Overview of Findings

4. Discussions

The findings across the four domains, Knowledge Construction, Learner Identity and Authorship, Teaching Practice, and Studio Culture and Ethics, show that generative AI (GenAI) is transforming studio-based fashion education in complex, interconnected ways. These themes overlap and influence each other,

both enabling and constraining pedagogy, learner growth, and ethical standards. This discussion highlights the key intersections and tensions between these areas, and considers strategies educators can use to navigate them.

4.1. Balancing Speed and Depth in Knowledge Construction

A key tension exists between GenAI's ability to speed up idea generation and the need for deep, reflective learning. GenAI enables rapid prototyping and divergent thinking (Jin et al., 2024; Kim, 2024), and students report less creative anxiety and better time management (Kee et al., 2024). Yet, Wadinambiarachchi et al. (2024) warn of design fixation and superficial engagement, as learners may settle on AI-generated ideas too quickly. This highlights the importance of instructional scaffolds to balance speed with depth.

Effective strategies include building in structured reflection and requiring students to critique AI outputs before moving forward. Alternating between AI-driven and manual tasks, like hand-drawing after AI ideation, helps slow the process and reinforce understanding. While GenAI accelerates ideation, educators must design interventions that maintain analytical depth and disciplinary rigor.

4.2. Negotiating Co-Authorship and Originality

AI's role as a creative partner challenges traditional ideas of authorship and originality, especially where individual expression and intellectual ownership matter. Särmäkari and Vänskä (2022) describe the "cyborg designer" as a hybrid human–machine creator, calling for a new understanding of originality in GenAI-supported studios.

Bartlett and Camba (2024) suggest allowing AI in exploratory phases but requiring that final work showcase students' own interpretive input. This approach emphasizes student agency and sees curating and contextualizing AI outputs, as long as it's transparent, as a creative process itself, in line with constructivist, process-focused pedagogy.

How AI is perceived in studio culture also matters. When AI-supported work is viewed as a valuable skill, students confidently integrate GenAI into their creative identity. Where it is stigmatized, self-efficacy suffers. Educators should normalize GenAI as a tool for augmentation, not substitution, to support student authorship and uphold ethical standards.

4.3. Embedding Ethical Reasoning in Creative Process

Balancing studio culture and ethics with knowledge construction means harmonizing GenAI's technical benefits with ethical awareness. GenAI tools are often trained on copyrighted or culturally sensitive data, raising issues of intellectual property and consent (Bartlett & Camba, 2024). Algorithmic biases, like overrepresentation of Western aesthetics, further highlight the need for critical media literacy (Kim, 2024).

Integrating ethical evaluation into the design process is essential. Students should audit their AI-assisted work for cultural appropriateness, attribution, and data transparency. This embeds ethical awareness within creative practice and aligns with UNESCO's call for responsible, human-centered AI use in education (Morandín-Ahuerma, 2023; Mutawa & Sruthi, 2025). Ethical reasoning thus becomes a core part of creative knowledge-building.

4.4. Studio Culture as Enabler of Pedagogical Innovation

A transparent, supportive studio culture is essential for effective teaching. Ozorhon et al. (2025) describe "polyphonic" studios where AI-generated work fuels collective critique and learning, with instructors acting as facilitators or co-learners, especially when students bring new AI techniques. In contrast, competitive or perfectionist cultures can reduce GenAI's role to surface-level aesthetics. Educators can address this by positioning GenAI as a tool for inquiry and experimentation, and by setting norms that encourage risk-taking and ethical reflection. Three key dynamics illustrate this:

- **Efficiency vs. Mastery:** GenAI enables quick pattern creation, but may bypass manual skill-building. Educators might require physical prototyping or annotation to maintain rigor.

Wadinambiarachchi et al. (2024) warn that fast AI ideation can cause design fixation and reduce originality, emphasizing the need for moderation.

- **Creative Freedom vs. Ethical Responsibility:** AI outputs can resemble existing works, raising originality and IP concerns. Educators should foster critique and iteration for more original results. Bartlett and Camba (2024) highlight GenAI's complexity for plagiarism and the need for ethical guidance.
- **Access and Equity:** Not all students have equal access to GenAI tools. Institutions should provide shared resources, use open-source tools, and focus on process-based assessment. Literature highlights this as a growing equity issue (AlAli & Wardat, 2024; Gabriel, 2024; Holmes & Miao, 2023; Nedungadi et al., 2024).

4.5. Toward Integrated Models of Practice

These thematic interactions highlight the need for holistic models that align pedagogy, technology, and ethics. Choices in one area, like assignment design, directly affect learner identity and studio culture. The literature increasingly supports developing integrated strategies that address all four domains together for effective GenAI integration in studio education.

With thoughtful design, GenAI can enhance studio-based learning by expanding visual exploration, fostering creative agency, building ethical awareness, and strengthening design judgment in a collaborative setting. The tensions, such as speed versus depth and co-authorship versus originality, offer valuable opportunities for refining pedagogy. This analysis sets the stage for the next section, which introduces the Simplified GAI–SBL Model to guide educators through these complexities.

4.6. The Simplified Generative AI–Studio-Based Learning Model

Based on the thematic findings, this paper introduces the Simplified GAI–SBL Model as a conceptual framework for integrating generative AI into studio-based fashion education. The model brings together the four key pillars, Knowledge Construction, Learner Identity and Authorship, Teaching Practice, and Studio Culture and Ethics, into a clear structure to guide curriculum, teaching strategies, and policy. The "simplified" label highlights its practical, actionable focus while maintaining theoretical depth. Though conceptual, the model is meant to inform practice and can be further tested and refined through classroom use and future research. A visualization of the model can be seen in Figure 3.
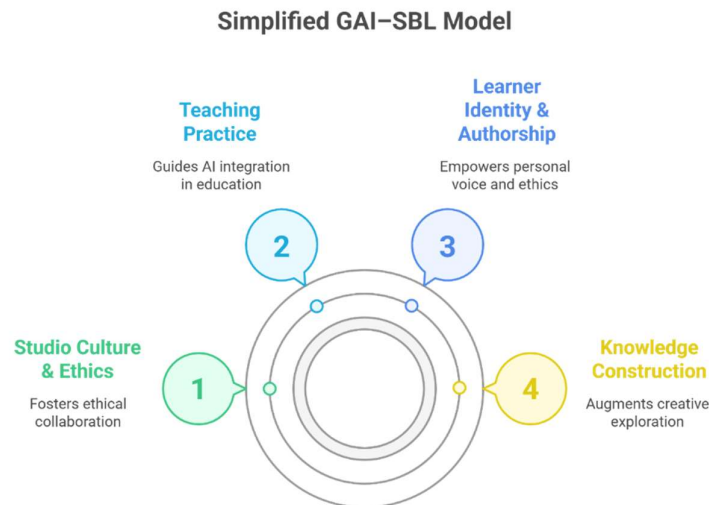

Figure 3. The Simplified GAI-SBL Model

Pillar 1: Knowledge Construction

Principle: GenAI should broaden students' ideation and support conceptual growth without replacing core design thinking.

This pillar highlights GenAI's role in extending creative ideation, encouraging educators to link GenAI use to clear learning outcomes, like quickly visualizing design options in early project stages. The model warns against superficial use, urging reflection and critical analysis of AI outputs. Practical strategies include AI-supported brainstorming, prompt-based moodboards, and variation assignments within structured lessons.

To prevent design fixation or overreliance, educators should include critique checkpoints and encourage reinterpretation. GenAI tools are best placed in early ideation, not in final execution stages needing craftsmanship. Future research may examine how GenAI impacts originality or students' conceptual reasoning through repeated use.

Pillar 2: Learner Identity and Authorship

Principle: *Promote student ownership and authorship in AI-assisted design, positioning GenAI as a creative tool guided by the learner.*

This pillar focuses on building students' identities as "augmented designers," using GenAI to extend their personal expression rather than simply generating content. Strategies include requiring students to link their personal vision to AI use and to write reflective authorship statements explaining what was influenced by AI versus their own input.

Ethical authorship, copyright, and ownership limits should be part of instruction, with activities like workshops on blending AI with personal style and case studies on hybrid authorship. The goal is to ensure GenAI strengthens, not weakens, student voice and design identity. Future research could explore how student identities and perceptions of authorship evolve in AI-integrated settings.

Pillar 3: Teaching Practice

Principle: *Integrate GenAI into studio pedagogy with clear policies, instructional scaffolds, and skill-building, ensuring alignment with academic and pedagogical goals.*

This pillar highlights the educator's key role in responsibly managing GenAI integration. It calls for clear guidelines on where and how AI can be used, such as permitting AI for ideation but not for final submissions or reflective texts, and encourages co-creating these rules with students to build ethical awareness.

Instructionally, it promotes phased learning: GenAI tools should be introduced, practiced, and critiqued step by step. Methods include workshops, scaffolded assignments (e.g., using the DCIE model), and formative assessments that evaluate both the process and the final product, including prompt quality and post-AI refinement. Upskilling faculty is essential so instructors can model critical, ethical AI use. The pillar also recommends ongoing feedback and peer reviews to adjust GenAI pedagogy as technology and culture evolve. Future research may compare GenAI-integrated and traditional teaching or assess faculty preparedness for AI in design education.

Pillar 4: Studio Culture and Ethics

Principle: *Foster a studio culture that integrates GenAI ethically, prioritizing transparency, inclusivity, and collective learning.*

This pillar emphasizes building a studio environment that welcomes GenAI while reinforcing ethical standards such as disclosure, critique, and respect for diverse approaches. Tools like collaboratively created studio charters can formalize responsible AI use, including acknowledging AI input, valuing varied design methods, and examining outputs for bias.

Ethical discussions should be embedded in design critiques, addressing issues like data sources, visual bias, and cultural appropriation. Institutions should ensure equitable access to GenAI tools, through shared licenses or infrastructure, to prevent technological disparities. This pillar also considers students' emotional experiences. While GenAI can boost confidence and reduce anxiety, overreliance may cause concerns about lost skills or authorship. Educators should balance AI fluency with core competencies and

align studio practice with global standards for ethical AI, such as UNESCO's recommendations (Morandín-Ahuerma, 2023; Mutawa & Sruthi, 2025).

4.7. Integrative Utility and Implications

The Simplified GAI–SBL Model serves as a flexible guide for educators, curriculum designers, and leaders. By structuring GenAI's impact into four pillars, it offers a practical way to align pedagogy, technology, learner growth, and ethics. The model supports thoughtful, adaptable GenAI integration that fosters innovation without sacrificing the core values of design education.

Rather than a fixed blueprint, this framework acts as a conceptual map, allowing practitioners to tailor AI integration to their unique institutional and cultural contexts. As GenAI evolves, pedagogical approaches must also adapt, remaining both purpose-driven and responsive to technological advances.

Using the Simplified GAI–SBL Model

The Simplified GAI–SBL Model serves as a practical checklist and planning tool for teachers and curriculum designers. When creating AI-inclusive projects, instructors can ask: Are learning goals for AI clear (Pillar 1)? Is student authorship protected (Pillar 2)? What guidelines or scaffolds are needed (Pillar 3)? Are ethical norms reinforced (Pillar 4)? Program directors can audit curricula to ensure all pillars are addressed, perhaps focusing each course or workshop on a different pillar, such as creative exploration or ethical use.

For research, the model points to key dimensions for study, measuring learning outcomes (Pillar 1), exploring identity shifts (Pillar 2), surveying pedagogy changes (Pillar 3), and assessing classroom climate (Pillar 4). It encourages interdisciplinary research, blending pedagogy, creativity, ethics, and human-computer interaction for a holistic evaluation of AI in education. While organized into distinct pillars, GenAI integration works best at their intersections, for example, a policy requiring students to cite AI use (Teaching Practice and Studio Ethics), or pairing AI-driven ideation with authorship reflection (Knowledge and Identity). The model helps ensure all critical aspects are considered and aligned. By adopting this model, design programs can confidently harness GenAI's creative and educational potential while maintaining the core values and outcomes of studio learning, preparing students with the skills and ethics for an AI-enhanced future.

5. Conclusion

This systematic review examined the evolving role of generative AI in studio-based fashion education, drawing from studies published between 2018 and 2025. The literature demonstrates that GenAI can expand students' creative capacity, accelerate ideation, and support more confident and efficient workflows. At the same time, it presents challenges related to authorship, originality, ethical use, and equitable access, particularly in the highly personalized and iterative context of studio pedagogy.

Four core themes, Knowledge Construction, Learner Identity & Authorship, Teaching Practice, and Studio Culture & Ethics, emerged from the review, capturing the key tensions and opportunities design educators face. These informed the development of the Simplified GAI–SBL Model, a conceptual framework offering structured guidance for incorporating GenAI into design education. The model is intended as a practical yet theoretically grounded scaffold for educators and curriculum designers. While not empirically tested, it lays the groundwork for future validation and application in varied studio contexts.

The literature points toward a necessary shift in pedagogical priorities: from debating whether to permit GenAI, to strategically guiding students in how to work with it. This shift requires balancing speed with mastery, augmentation with authorship, and innovation with ethical responsibility. Our findings suggest that with thoughtful integration, GenAI can support, not replace, the educational values central to studio-based learning: creative agency, critical reflection, and collaborative ethics. Looking ahead, further research is needed to evaluate long-term impacts on student learning, authorship development, and

institutional policy. Comparative and cross-cultural studies, in particular, could deepen our understanding of how GenAI is shaping creative education globally. If implemented with care and guided by clear pedagogical frameworks, GenAI can become a generative force in studio-based fashion education, expanding creative possibilities while sustaining the values that define the discipline.

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