Malaysian Journal of Social Sciences and Humanities (MJSSH) (e-ISSN : 2504-8562)
2025, Volume 10, Issue 3, e003173
DOI: https://doi.org/10.47405/mjssh.v10i3.3173

REVIEW ARTICLE

The Impact of AIGC Technology on Furniture Design Education

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KEYWORDS:
AIGC
Education
Furniture Design

CITATION:
Li, Z., Nurul 'Ayn Ahmad Sayuti, & Wang, J. (2025). The Impact of AIGC Technology on Furniture Design Education. *Malaysian Journal of Social Sciences and Humanities (MJSSH), 10*(3), e003173. https://doi.org/10.47405/mjssh.v10i3.3173

ABSTRACT

The rapid advancement of AIGC technology is transforming creative industries. ChatGPT, Midjourney, and Stable Diffusion are revolutionizing creative design through optimized processes. This study assesses AIGC technology's impact on furniture design creativity and investigates strategies for curriculum integration to boost student innovation. Through a practice-based research methodology, this study compares traditional and AIGC-assisted design methods, evaluating their efficiency, innovation, and practicality. The findings reveal that AIGC technology enhances both design efficiency and solution diversity, enabling students to develop innovative solutions quickly. The technology offers vital support for research analysis, concept development, and visual presentation—expanding creative horizons. As an effective complement to traditional approaches, AIGC technology shows promise in advancing design education. We propose incorporating AIGC training into curricula and strengthening students' adaptability to the evolving design industry through interdisciplinary learning and professional growth.

Contribution/Originality: This study contributes to the existing literature by exploring the application of AIGC technology in furniture design education, providing insights into improving creativity and efficiency. As one of the systematic studies, this research investigates the practical applications and potential challenges of integrating AIGC into design education.

1. Introduction

The release of ChatGPT on November 30, 2022, marked a significant milestone in artificial intelligence (Cao et al., 2023). This technology now plays a vital role across industries, particularly in design. AIGC technology has revolutionized design processes through its text, image, and audio generation capabilities (Bengesi et al., 2024). In

industrial and furniture design, AIGC systematically produces diverse design solutions while optimizing outcomes through data analysis and user feedback, enabling highly personalized customization (Jonasson, 2023). This integration of technology and design has created a new paradigm, allowing designers to transcend traditional boundaries and explore innovative forms, materials, and aesthetic expressions (Elal & Özsoy, 2024). However, AI's role in design has sparked debate: proponents argue that AIGC democratizes design through technological empowerment, while critics worry about creative homogenization. AIGC technology has fundamentally transformed design education (Hashem & Hakeem, 2024). Traditional furniture design education emphasizes core practical skills—hand-drawing techniques and model-making—while nurturing creative thinking through hands-on experience. As AIGC technology rapidly advances, educational curricula must evolve systematically to preserve design disciplines' core values while incorporating digital capabilities and AI skills (Bartlett & Camba, 2024). This evolution requires a careful balance between technological innovation and traditional design education (Huang et al., 2024). In practice, AIGC's educational impact needs thorough evaluation. While research confirms its benefits for student innovation, significant challenges persist in curriculum integration (Ma et al., 2024). This underscores the need for a comprehensive teaching framework that ensures balanced development between technological application and core competency building.

1.1. Research Objectives

This research is dedicated to exploring the application prospects of AIGC technology in furniture design education and exploring how to organically integrate this cutting-edge technology with existing teaching systems to improve educational quality. The study will conduct detailed analysis of AIGC's specific applications in the furniture design field, identify major obstacles in implementation, and provide practical solutions. Meanwhile, we will objectively evaluate AIGC's optimization effectiveness on design processes and its actual impact on students' professional skill development, thereby constructing a scientifically complete teaching system to provide practical professional guidance for educators during the AI transformation period.

2. Literature Review

AIGC technology is a revolutionary technology that can automatically generate various types of content, including text, images, and audio (Wu et al., 2023), by simulating human creativity and intelligence. In the field of furniture design, the application of AIGC technology opens numerous possibilities for innovation. Designers can utilise this technology to swiftly generate diverse furniture design concepts, thereby enhancing design efficiency and creativity (Dokter et al., 2021).

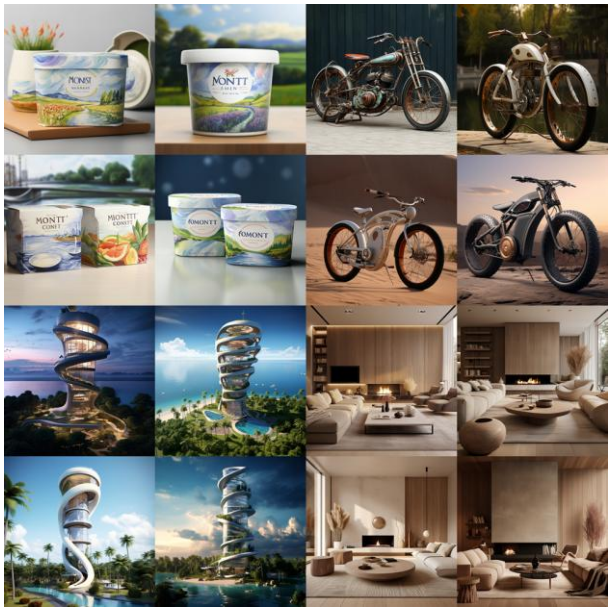
In China, the concept of AIGC enjoys widely acceptance (Liu et al., 2023), while in countries like the United States, it is more commonly known as Generative AI, representing a rapid advancing technology (Jovanović & Campbell, 2022). It first appeared as chatbots, which have since evolved into AI tools capable of writing, composing music, and generating creative images. Subsequently, large language models (LLMS) emerged, capable of task decomposition and independent learning. These generative AI technologies continuously push boundaries and accomplish tasks previously exclusive to humans. With ongoing technological development and innovation, we anticipate generative AI playing a more substantial role in the future, fostering further progress and development in society.

In the field of visual design, technologies like Midjourney, Stable Diffusion, and DALL-E have revolutionised how we create designs using artificial intelligence image generation (Turgay et al., 2023). This new approach enables design based on linguistic descriptions, marking a notable shift in our creative process. The emergence and application of these technologies have greatly impacted various aspects of our lives, work, and education, continuously reshaping our world. However, as technology advances, there are concerns among creators about the potential replacement by artificial intelligence. As designers, design educators, and students in design disciplines, it is crucial for us to contemplate on the impact of AI (Lee et al., 2024), particularly on our working methods. Confronted with these new challenges and opportunities (Yu et al., 2023), it is essential to proactively respond and find ways to adapt to technology advancements.

2.1. Application of AIGC Technology in Design Field

AIGC technology, or Artificial Intelligence Generated Content, is a ground-breaking technology that utilises AI algorithms to produce creative content (Buonamici et al., 2020). This technology is not confined to any specific industry or field but rather spans across various creative domains that rely on innovation and imagination. AIGC technology has a significant impact on multiple creative industries, including art, literature, music, and design (Xu et al., 2023). It encompasses different forms such as text generation, image generation, audio generation, video generation, and multimodal generation (Li et al., 2023a). Within the field of design, image generation is the most applied aspect. Some commonly utilised AIGC tools include ChatGPT, Midjourney, and Stable Diffusion (Hakimshafaei, 2023). AIGC technology has the ability to generate highly personalised content, creating imaginative and innovative outputs by analysing conversations or keywords (Park, 2023). Currently, prevalent applications of AIGC technology in the design field include generated graphic design works, architectural design works, and industrial design works, among others. The Figure 1 showcases various design works, including visual design, industrial design, and architectural design, created using AIGC tools. These tools significantly enhance designers' creative thinking abilities and serve as a convenient source of inspiration for creative design.

Figure 1: AI Generated creative works (created by the author using Midjourney)



AIGC technology, as an innovative AI technology, holds immense promise and potential for wide range of applications. Through ongoing research and development, we can continue to explore and uncover new possibilities on applications of AIGC technology in the design field, thereby bringing more creativity and imagination to designers in their design process.

3. Research Methods

3.1. Research Design

This study employs a practice-based research approach to explore the application value of Artificial Intelligence Generated Content (AIGC) tools in furniture design. The research aims to demonstrate how AIGC tools (such as Midjourney) can enhance creativity and efficiency in the design process. Through the author's practical application of these tools, we focus on studying their performance in design concept generation and iteration processes.

3.2. Practice-Based Process

The practice-based process includes the following steps:

3.2.1. Tool Selection

Midjourney was chosen as the primary tool based on its excellence in generating high-quality visual designs and intuitive interface (Mansour, 2023). The tool not only accurately understands design intentions through natural language descriptive prompts but can also quickly generate diverse design concept solutions. Its powerful image generation engine can transform abstract textual descriptions into concrete visual designs, providing designers with rich creative inspiration and exploration space. Additionally, its user-friendly interface design allows designers to easily master and fully utilize this tool for creation.

3.2.2. Creative Generation Process

In the initial phase, researchers established a precise and comprehensive design parameter system (Li et al., 2024). Through in-depth analysis of user needs and market trends, the following professional instructions were proposed: "Build a high-precision living room bamboo sofa 3D model, focusing on product presentation effects, using Cinema 4D for modeling. Employ professional studio lighting techniques, combining ambient occlusion and global illumination technology, to ensure precise rendering of material textures and details, with final output in 8K resolution to achieve hyper-realistic visual effects."

In the optimization phase, researchers refined the design solutions through a systematic iteration method, establishing a multi-level parameter optimization framework (Weisz et al., 2023). Each iteration specifically adjusted technical parameters and design instructions, including model geometry, material properties, lighting environment, and rendering settings, to achieve comprehensive improvement in visual effects, functionality, and aesthetic value. Researchers particularly emphasized material authenticity, ensuring accurate bamboo material representation through fine-tuning of parameters such as reflectivity, roughness, and displacement mapping.

In the evaluation phase, researchers employed a multi-dimensional evaluation system (Gmeiner et al., 2023), constructing a comprehensive assessment framework including technical indicators and aesthetic standards. Comprehensive analysis was conducted from aspects including visual presentation, innovation level, material authenticity, structural rationality, and goal alignment, with professional designers invited for peer review. Through continuous optimization of technical parameters and design instructions, combining qualitative and quantitative analysis methods, design solutions were repeatedly verified and improved to achieve the expected design outcomes.

3.3. Result Evaluation

In the result evaluation phase, we analyzed from three main dimensions: first, evaluating the visual effects of design outcomes, including detail completeness, realism, and overall aesthetics; second, comparing the time efficiency between AIGC tools and traditional design methods by measuring the time spent on design generation and optimization; finally, evaluating the diversity and innovation of design solutions, examining the tool's capability in generating novel design concepts. Through systematic evaluation of these dimensions, we can accurately grasp the application value of AIGC tools in furniture design practice.

4. Results

4.1. Application of AIGC Technology in Furniture Design

However, the rise of AIGC technology also brings new challenges for furniture design education. Traditional furniture design education primarily focuses on nurturing students' design skills and creativity. However, in the era of AIGC technology, designers must master and incorporate this new technology. Consequently, furniture design education should adapt its curriculum and teaching methods, reinforcing education and training on AIGC technology to enable students to embrace this change and harness its advantages.

AIGC technology is commonly used in furniture design. In 2019, at the Milan International Furniture Fair, designer Philippe Starck collaborated with the brand Kartell and Autodesk to create the world's first furniture chair generated by artificial intelligence technology. This chair, known as the "AI Chair," took inspiration from organic forms found in nature (Dezeen, 2019). By utilising AIGC technology, the chair's design was generated by analysing abundant natural elements and ergonomic data, resulting a unique and comfortable furniture design. The successful application of the "AI Chair" not only demonstrates the potential of AIGC technology in furniture design, but also provides furniture designers with additional sources of creativity and inspiration (Uludüz & Aydın, 2022).

Apart from the "AI Chair," AIGC technology plays various roles in the field of furniture design. It can be applied not only to customised furniture design but also to home decoration and interior design (Yu et al., 2023). By analysing user inputs and requirements, AIGC systems can generate a wide range of design options to cater to different users' needs and preferences. These personalised design solutions not only offer more comfort and practicality but also create distinctive home environments for users. Moreover, AIGC technology enhances design efficiency and accuracy, opening

more possibilities for furniture designers. In summary, AIGC technology plays a significant role in furniture design, providing users with more personalised and diverse furniture solutions (Wang et al., 2024).

4.2. AIGC Generative Furniture Experiment

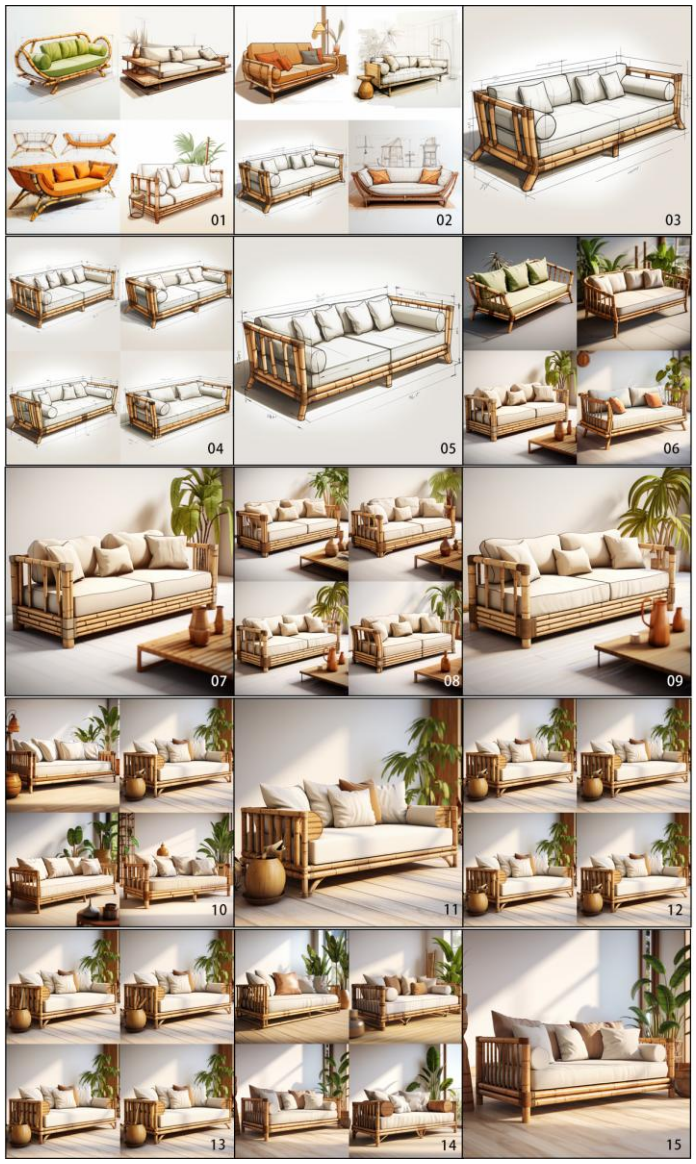
The Figure 2 showcases the utilisation of the Midjourney tool with the following prompt: "Create a hyper-realistic 3D model of a bamboo material sofa for the living room, with a focus on product shots and utilising Cinema 4D. Achieve an exceptional level of detail and realism through studio lighting techniques, ensuring the final render is in 8K resolution." This prompt led to six iterations of pattern generation, resulting in the rapid creation of 24 innovative design concepts.

Figure 2: AI-assisted creatively generated bamboo furniture works (created by the author using Midjourney)

Using the Midjourney tool, the design prompt "Write a design prompt for Midjourney involving a bamboo material sofa for the living room and include the key prompts, product shot, 8k, line drawing" was used to generate creative sketch concepts. This resulted in 8 design concepts in 01 and 02. After further iterations, 4 design concepts were developed in iteration 04 (Figure 3). One concept (iteration 05) was chosen, prompting the creation of a new design concept. Th prompt was as follows: "Create a hyper-realistic 3D model of a bamboo material sofa for the living room, with a focus on product shots and utilising Cinema 4D. Achieve an exceptional level of detail and realism through studio lighting techniques, ensuring the final render is in 8K resolution." This prompted the creative design of the visual render, resulting in the design concept 06. Subsequent design concepts were generated through iterative steps based on the previous one, leading to the attainment of a relatively satisfactory design concept (iteration 15).

Through this process, it becomes possible to rapidly generate creative design concepts for the furniture aesthetics, significantly enhancing design creativity and efficiency.

Figure 3: AI-assisted creatively generated furniture works (created by the author using Midjourney)



5. Discussion

5.1. Reshaping the Furniture Design Process with AIGC Technology

The convenience of AIGC tools has also transformed the furniture design process. Traditional furniture design processes typically require designers to invest a substantial amount of time in creative research, expressing design concepts, and sketching. However, with the application of generative AI tools, the furniture design process becomes more efficient and precise. Designers can employ generative AI tools to swiftly generate design ideas and sketches, allowing for faster exploration of various design directions and creative concepts (Liao & Song, 2021). This innovative approach enhances design creativity and diversity (Savio et al., 2018).

Additionally, AIGC technology can automatically create 3D models and render images of furniture designs, helping designers in comprehending and presenting design concepts more effectively. By reducing laborious manual tasks and expediting the design process, AIGC technology conserves a significant amount of time and effort for furniture, enabling

them to concentrate on innovative and unique design thinking. Therefore, the introduction of AIGC technology not only enhances the efficiency of furniture design but also provides more opportunities and inspiration to designers.

By comparing the traditional furniture design process with the furniture design process aided by AIGC (Table 1), we can observe that AIGC technology enhances efficiency and offers greater opportunities for creativity, thereby assisting designers in effectively completing design tasks. However, it is important to acknowledge that while AIGC technology can assist designers in generating ideas and design concepts, it cannot entirely substitute designers' creativity and personalised thinking. Instead, AIGC technology supplements designers' creativity and collaboratively advances the development of design.

Table 1: AIGC reshapes the furniture design process (By the authors, 2024)

AIGC reshapes the furniture design process			
	General process	**Manual decision-making design process**	**Design process assisted by AIGC**
Project Initiation	Background analysis User analysis Competitive analysis Pain point analysis Opportunity identification	Designers typically require a significant amount of manpower and resources to complete each stage of the task.	Effectively utilise AIGC tools (such as ChatGPT, which have the advantages of language processing and understanding reasoning abilities of natural language models) for project research, user analysis, competitor analysis, pain point analysis, and opportunity identification.
Concept definition	Brainstorming Concept Generation Concept selection Concept evaluation Product Definition	Designers typically require a significant amount of manpower and resources to complete each stage of the task.	Effectively utilise AIGC tools (such as ChatGPT to generate detailed descriptions) for brainstorming, generating design concepts, screening design concepts, and completing product definitions.
Industrial design	Requirement Idea sketch discussion 2D rendering 3D rendering Appearance model Design evaluation	Designers typically require a significant amount of manpower and resources to complete each stage of the task.	Effectively utilise AIGC tools such as ChatGPT, to generate detailed descriptive terms and import them into Midjournal or Stable Diffusion for brainstorming, generating design concepts, screening design concepts, and completing product definitions.
Structure Design	Model production 3D representation Structure handling Structural Review Design Revision	Structural engineers typically require a significant amount of manpower and resources to complete each stage of the task.	At present, there is no way for AIGC tools to replace structural design, and manual intervention is needed to complete structural design
Trial production	Module design Product trial	Manual completion of	At present, no AIGC tools can replace this process and require

	production Trial production evaluation Trial product re-production Trial production summary	each stage of the task usually requires a large amount of manpower and material resources to complete.	manual intervention for completion.
Market introduction	Product Launch Soliciting feedback Product Usage Product evaluation Summarize lessons learned Plan Iteration	Manual completion of each stage of the task usually requires a large amount of manpower and material resources to complete.	Effectively utilise AIGC tools, such as ChatGPT and other tools to create copy ideas, release products, import them into Midjournal or Stable Diffusion for visual creative design, and ultimately promote the market.

5.2. Skills Required for Furniture Design Practitioners in the Era of AIGC Technology

In the era of AIGC technology, designers still need to utilise their expertise and aesthetic judgment to make design decisions that align with user needs and brand image. Designers should learn and master the use of AIGC tools, understand their limitations, and meet the higher demands placed on furniture design practitioners.

Deep comprehension of AIGC technology: Furniture designers need to fully harness the advantages of artificial intelligence to improve efficiency, accuracy, and reduce workload and time costs. They should view AI as a source of inspiration and creative exploration, generating personalised solutions. Designers should collaborate with team members to develop innovative design methods, enhance their professional knowledge and skills, closely cooperate with clients, and continuously improve their design capabilities and influence.

Enhance innovative thinking and creativity: AIGC is an assistant tool for designers that can improve work efficiency, but it cannot replace innovative thinking and creativity. Designers should focus on higher-level tasks such as creative conceptualisation and user research to enhance value and create outstanding design works. They can utilise AIGC to enhance design quality and effects, resulting in more creative and unique designs.

Cultivate interdisciplinary integration and coordination abilities: Designers should be actively engaging throughout the entire design process, fostering communicating and collaborating with professionals from different fields to facilitate efficient and innovative design. They should continuously learn and master the latest design tools and technologies. In-depth analysis of user requirements and psychological needs should be conducted to ensure that designs align closely user expectations. Effective coordination and communication skills are crucial in effectively working with team members, technical specialists, and clients, ultimately ensuring the successful implementation and successful delivery of design solutions.

Strengthen comprehensive design learning abilities: Designers need to acquire comprehensive abilities comprising creativity, expertise, attention to detail, learning

ability, coordination and communication skills, and business acumen. They should be committed to continuously expand their skills and knowledge, while actively follow the latest trends and rapid development of artificial intelligence to enhance their comprehensive design abilities.

The incorporation of AIGC technology into the furniture design process has brought forth numerous opportunities and challenges. By effectively leveraging the advantages of AIGC technology, designers can enhance their design efficiency and nurture their creativity. AIGC technology allows designers to accurately predict and analyse market trends, thereby facilitating the development of more targeted design strategies. Additionally, AIGC technology offers designers additional inspiration and possibilities, empowering them to freely express their design concepts. As a result, AIGC technology can be seen as not just a tool, but as a valuable assistant for designers in the field of furniture design.

5.3. Strategies for AIGC in Response to Furniture Design Education

In the field of furniture design, the application of AIGC technology introduces numerous possibilities for innovation. Designers can employ this technology to promptly generate a variety of furniture design concepts, consequently enhancing design efficiency and creativity. However, the emergence of AIGC technology also presents fresh challenges to furniture design education (Baidoo-Anu & Owusu Ansah, 2023). Traditional educational methods need to be modernised, and education and training in AIGC technology must be reinforced, enabling students to adapt to this shift and harness its benefits.

5.3.1. Introducing AIGC Technology in Furniture Design Education

Educational institutions should introduce AIGC tools and software to students for learning and usage in creative design. Through AIGC technology, students can gain more creative inspiration and design references, improving their design efficiency and comprehensiveness. Workshops and training courses can also be organised to assist students in mastering the use of AIGC tools and software, gaining in-depth knowledge of creative design theory, and cultivating creativity and innovative thinking (Yu, 2023).

Meanwhile educational insitutes should guide students to actively explore, understand the impact of AIGC in the development of the furniture design industry through various channels such as classrooms, lectures, social media and many more. The students should be actively encouraged to learn and become proficient in the relevant technologies and tools related to AIGC, aprat from gaining theoretical knowledge. It is important for students to dedicate sufficient time to learn and become skilled in various AI creative tools such as Midjourney, Anthropic AI, and Runway ML. Through learning and in-depth exploration, students will develop a comprehensive understanding of the strengths and limitations of the different AIGC tools.

In furniture design courses, students must be taught the fundamentals and applications of AIGC. Through a deeper understanding of the development of AIGC technology, students will be able to gain a comprehensive understanding of its potential applications and impacts in furniture design. Students should learn to apply AIGC technology effectively in creative design, combining it with traditional design methods to expand design possibilities and enhance competitiveness.

Actively guiding students to learn and acquire the skills in effective utilisation of AIGC tools can help students think more divergently. These AIGC tools generate different styles and creative solutions based on intention maps and combined with style keywords. Through AI, student can explore more possibilities in their design process. For example, in the furniture design process, tools like ChatGPT can be used for data collection, organization, and analysis to determine the design intention. Based on the information prompt from ChatGPT, tools like Midjourney can be used for sketching and exploring creative solutions, providing high-quality design proposals that provide a more intuitive understanding of the aesthetics and effects of the creative solutions, thus allowing better decisions on the aesthetics and styling direction. Additionally, this will serve as a guide for students to fine-tune their design proposals and generate different options for comparison. Furthermore, iterations can be easily made on design renderings in generating more diverse proposals by exploring more possibilities and finding the best solutions.

Emphasis should be placed on encouraging students to innovate and experiment. Using AIGC technology, students can explore different design methodology and creative directions, breaking through traditional design boundaries and creating unique and innovative furniture design works. Educational institutions must provide ample support and resources to help students achieve their creative and design goals. The educational insitutation must encourage students to explore new ideas, bravely try different design styles, and discover their uniqueness to achieve success.

The educational institution should encourage students to explore innovative ways of combining AI-generated content with furniture design, using AI-generated images or text as foundational materials for subsequent design, editing, and personalized customization to create unique design. By integrating the designer’s creativity with AI-generated content, different angles of design can be explored, hence expanding, and enhancing creativity. This provides the users with a wider range of designs options. Additionally, AI technology can be used to analyse user preferences and needs, further improving design solutions process and creating more personalised or customised works to meet the needs of different users. This innovative approach does not only enhance the creativity and personalisation of products but also provides users with richer and more diverse options.

Utilisation of AIGC technology requires students to possess interdisciplinary skills. Educational institutions should consider offering interdisciplinary courses or projects, such as computer science, art, and design which can help students to understand better in effective utilisation of AIGC technology. This will enhance their competitiveness and innovative capabilities in the field of furniture design. By focusing on cultivating of students' interdisciplinary skills, this will provide the students more experiences, opportunities and resources to achieve greater accomplishments.

It is crucial to promote collaboration between the design students and AI professionals and technical teams to foster their growth. This collaboration allows design students to develop a thorough fundamental understanding of AI knowledge and technology, which can be applied in the field of design. By working together across disciplines, designers and AI professionals can improve communication, exchange ideas, and create more innovative design solutions. This collaboration also enables design students to explore new possibilities, generate fresh design ideas, and contribute to the advancement of the design field.

In addition to keeping students updated on technologies development and trends, it is important to encourage continuous learning. Through continuously learning and updating their skills, students will be able to remain competitive in the field of AI-generated content. They should also actively participate in industry discussions and research, collaborate with other professionals, and broaden their perspectives and learning opportunities. These efforts will equip them with the necessary skills to adapt and enhance their professional abilities in an ever-evolving technological landscape.

These strategies can help students better understand and apply AIGC technology, promote progressive furniture design education, and cultivate design talents with innovation and competitiveness.

5.3.2. Challenges and Limitations of AIGC Technology

AIGC technology faces challenges and limitations in furniture design. Firstly, AIGC systems require high-quality and large amounts of data for training. Otherwise, the generated designs may be of lower quality. Therefore, designers and researchers need to assemble and curate representative datasets to improve the effectiveness and accuracy of AIGC systems. Secondly, the algorithms and models of AIGC technology need to be improved and optimised frequently to provide more accurate and diverse design outcomes. While AIGC systems can generate innovative and imaginative design concepts, at times sometimes it may lack uniqueness and artistic value. Thus, designers need work closely with the Ai technical team in ensuring the continuously refining of the algorithms and models to enhance the generative capabilities and creativity of AIGC systems. Moreover, data privacy and ethical concerns are also in the usage of AIGC technology, personal information and data of designers and users may be collected and utilised. Therefore, designers and relevant organizations need to establish strict privacy policies and ethical guidelines to protect user privacy and ensure the use of data is used ethically.

5.3.3. The Future Development and Innovative Possibilities of AIGC Technology

In the future, AIGC technology will continue to advance in the field of furniture design. With technological advancements, we can expect the emergence of more sophisticated and personalised AIGC tools (Li et al., 2023a). These tools will generate customised furniture design solutions based on users' needs and preferences. Furthermore, the application of AIGC technology will drive innovation and development in furniture design, offering unprecedented design possibilities.

For example, by combining virtual reality (VR) and augmented reality (AR) technologies, designers can use AIGC tools for furniture design and visualisation in virtual spaces. This virtual design experience provides a more realistic and immersive feel, helping designers better understand and adjust their design concepts accordingly. The utilisation of AIGC technology will allow designers to reduce the process of prototyping and simulation testing, overall, accelerating the design cycle and reducing costs.

Moreover, AIGC technology plays a significant role in furniture design education. Traditional furniture design education focuses on cultivating skills in hand drawing and model making. However, with the development of AIGC technology, designers need to acquire more digital skills and familiarity with AIGC tools. Design education institutions

should adjust their curriculum to incorporate AIGC technology into furniture design education, nurturing students' creativity, innovative thinking, and digital capabilities. Additionally, designers need to understand the limitations and ethical considerations of AIGC technology, adhering to relevant guidelines and standards.

6. Conclusion

By conducting comprehensive and extensive discussion on the application and impact of Artificial Intelligence Generated Content (AIGC) technology in furniture design, we can see the importance of AIGC technology in the furniture design industry and education. AIGC technology not only changes the way furniture design is created, but also provides designers with an abundance of creativity and inspiration. However, AIGC technology faces challenges and limitations that requires continuous optimisation and improvement. In the future, with the further development of technology, we can expect the emergence of increasingly intelligent and personalised AIGC tools, bringing more innovation and possibilities to furniture design. Designers and educational institutions need to actively adapt to this change, cultivating students' digital capabilities and creativity to better respond to future design challenges and opportunities.

Ethics Approval and Consent to Participate

Not applicable

Acknowledgement

The authors thank the College of Creative Art, Universiti Teknologi MARA (UiTM) for providing the necessary resources and support for this research.

Funding

No funding.

Conflict of Interests

The authors reported no conflicts of interest for this work and declare that there is no potential conflict of interest with respect to the research, authorship, or publication of this article.

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