
Original Research Article

Research on AIGC-enabled teaching reform in digital media major from the perspective of industry-education integration: A case study of brand packaging design course

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Abstract: As the digital media industry shifts towards original and creative-oriented development, traditional teaching models exhibit significant deficiencies in fostering innovation capability and practical application. Taking the Brand Packaging Design course as a case study, this paper explores the application and empowering value of AIGC in the teaching of digital media programs. By integrating AIGC technology, a cyclical teaching model of "generation-evaluation-regeneration" is constructed, achieving efficient synergy in creative ideation, solution iteration, visual presentation, and interdisciplinary integration. Practical results demonstrate that AIGC not only significantly enhances students' creative efficiency and iteration speed but also boosts learning interest, engagement, and teamwork capabilities, while optimizing course structure and teaching processes. Furthermore, through virtual exhibition environments and immersive scenario designs, students can systematically train their design thinking in contexts closely resembling real-world enterprise projects, thereby enhancing their professional adaptability. This paper summarizes the experiences from this teaching reform and proposes improvement strategies for further expanding interdisciplinary integration and deepening university-industry collaboration, offering a replicable practical pathway for innovating teaching models in digital media education. The study highlights the significant role of AIGC in advancing professional education reform and cultivating high-quality, interdisciplinary design talent.

Keywords: AIGC; digital media education; brand packaging design; teaching reform

1. Introduction

With the rapid growth of the digital economy and creative industries, digital media education faces new challenges. Traditional teaching emphasizes theory and software skills, often neglecting students' creativity and practical abilities, while industry increasingly demands versatile talent capable of using advanced tools to generate high-quality content. AI-Generated Content (AIGC) technology provides a powerful solution, enabling automatic creation of multimodal content, rapid iteration, and intelligent design assistance. In courses like Brand Packaging Design, AIGC lowers creative barriers, enhances student engagement, and supports a closed-loop workflow from concept to visual output, fostering systematic design thinking and interdisciplinary integration. Exploring AIGC-enabled teaching reform is therefore essential for higher education to meet industry needs, improve talent development, and drive educational innovation. This study uses Brand Packaging Design as a case to analyze AIGC's application value and reform outcomes, offering practical insights for curriculum innovation in digital media programs.

2. Difficulties and reform needs of digital media professional teaching under the background of industry-education integration

2.1. Main issues currently existing in teaching

Despite recent efforts to improve curricula and teaching models, digital media education still faces significant challenges in course structure, content, faculty development, and industry-Education integration, leading to a mismatch with industry needs. Most programs focus on theory and software operation, lacking

industry-oriented projects, full workflow training, and team collaboration, which limits students design thinking and practical skills. Creative generation remains heavily reliant on personal experience, with inefficient methods and few diverse solutions, failing to meet industry demands for rapid, high-quality output. Faculty often lack practical experience, and course content updates lag behind emerging technologies like AIGC and virtual reality, reducing teaching relevance. University-industry collaborations are often superficial, lacking long-term mechanisms for curriculum development or training facility integration, and the absence of stable benefit- and risk-sharing limits sustainability. Internal gaps in managing industry-education integration further exacerbate misalignment, emphasizing the urgent need for systematic reform through technology adoption and deeper collaboration.

2.2. Industry upgrading drives the demand for multi-skilled innovative talent

In recent years, the digital media industry has shifted from traditional production to creativity- and technology-driven models. Emerging technologies like AI and big data have increased the demand for versatile designers who combine aesthetic skills with proficiency in intelligent tools, multi-modal integration, and problem-solving. Brand packaging design now involves market research, user experience, data analysis, and AI-generated content, making reliance on personal experience insufficient. Current higher education models, focused on theory and tool operation, lack interdisciplinary, project-based training, leaving graduates skilled in execution but weak in strategic planning and creative logic. With technologies like AIGC, industry demands integrated competencies, making it urgent for universities to reform curricula by incorporating AI tools, data analysis, and real-world projects to align talent cultivation with industry needs.

3. A Feasibility analysis of AIGC-enabled digital media design education

3.1. Key features of AIGC technology

AIGC as a cutting-edge AI technology, is transforming digital media content production and providing a new foundation for design education. Its core strength lies in generative creation: using deep learning and neural networks, AIGC can automatically produce multi-modal content-images, text, video, and 3D models-from text or image inputs, greatly reducing the time and skill needed. For example, entering "vintage-style coffee brand packaging" can generate multiple visual proposals within seconds, enabling rapid concept-to-visual conversion. AIGC supports quick iteration and multi-solution exploration, allowing students to generate diverse design options for comparison and inspiration. Features like style transfer and element recombination form a "multi-solution-rapid evaluation-regeneration" cycle, shortening the path from concept to final product. It also provides intelligent design assistance, suggesting composition, color, and layout optimizations, and generating style-consistent proposals while predicting user attention. With these generative, diverse, and intelligent capabilities, AIGC enhances teaching efficiency and reshapes students creative thinking and workflow, making it a key driver of professional education reform.

3.2. The educational value of AIGC in design teaching

As AIGC becomes more prevalent in design, its applications in digital media education are increasingly significant. It lowers the barrier to creativity, accelerates design iteration, enriches teaching resources, and fosters immersive, interdisciplinary learning. Using text or image prompts, students can quickly generate concept sketches, color schemes, and visual drafts, achieving a "low-threshold, high-feedback" creative experience that boosts engagement. Batch generation and iterative capabilities enable a "generate-evaluate-regenerate" learning cycle, while instructors can use process data to identify weaknesses and improve teaching effectiveness. AIGC also supports immersive teaching by generating virtual brand systems, interactive displays, 3D models, and animation drafts for demonstrations and project-based practice. It integrates big data, user profiles, and brand strategies, guiding students to combine research, planning, and visual execution, breaking disciplinary barriers. In brand packaging courses, students can leverage consumer data and AI-generated market analyses to develop strategies and visual solutions, completing a "data-strategy-design" loop. This approach broadens design perspectives, enhances innovation, and improves professional adaptability, making AIGC a key driver of digital media education reform.

3.3. Feasibility analysis of AIGC empowering brand packaging design courses

In digital media education, brand packaging design courses are key for developing students' creativity, visual skills, and market awareness. Traditional teaching, however, suffers from low creative efficiency, limited realism, and weak interdisciplinary integration. Integrating AIGC addresses these issues, offering practical value through reliable multimodal content generation—images, 3D models, and dynamic presentations—enabling rapid concept-to-visual transformation via text prompts or sketches. AIGC's multi-solution generation and intelligent optimization allow exploration of styles, colors, layouts, and materials, shortening iteration cycles and enhancing design efficiency to meet market demands. AIGC also enriches teaching resources and immersive learning by generating virtual brand systems, packaging models, and interactive materials. Its intelligent analysis of students' creative processes supports personalized feedback and guidance, fostering autonomy and innovation. With strong digital proficiency and AI interest, students can quickly adopt AIGC. Overall, AIGC enables a full-process loop of "concept generation-solution iteration-intelligent optimization-immersive practice," enhancing course systematization, practicality, and alignment with industry needs.

4. AIGC-empowered teaching reform practice in brand packaging design courses

4.1. Teaching reform framework design

The course reform uses a four-layer closed-loop framework: "Theory Guidance- Technical Practice-Project-Driven-Outcome Evaluation." In theory guidance, lectures are paired with online resources and cases to cover brand packaging principles, visual communication, consumer psychology, and market positioning, along with AIGC basics. In technical practice, students use AIGC for concept generation and visual experiments, producing multiple solutions quickly through text prompts or sketches while learning rapid iteration and style transfer. The project-driven stage involves team-based real or virtual brand projects, completing workflows from research and planning to solution optimization and presentation, with AIGC supporting creative generation and preliminary refinement. Outcome evaluation combines instructor grading, AI process data, and industry mentor feedback to assess creativity, iteration efficiency, visual quality, and teamwork, informing course improvements.

4.2. Case demonstration

Taking "Tea Beverage Brand Packaging Design" as an example, this case illustrates the practical application of AIGC-empowered teaching. At the project's initial stage, students conduct creative planning based on brand positioning and target consumer groups. By inputting core concepts such as "natural, healthy, youthful" into an AIGC platform, they quickly generate multiple visual solutions, including hand-drawn, modern minimalist, and retro artistic styles, achieving diverse early-stage ideas. Under instructor guidance, students then evaluate and screen these solutions, optimizing based on color schemes, typography, visual impact, and brand consistency. AIGC is further used to generate improved versions, enabling rapid iteration and enhancing design efficiency and creative flexibility. During the visual presentation stage, students employ AIGC to create 3D packaging models and virtual display environments, applying their designs to simulated supermarket shelves, advertising posters, and online display spaces. This approach strengthens immersion and realism, improving practical project experience.

4.3. Teaching process design

The course adopts a five-stage teaching process: Course Introduction Stage: Introduce fundamentals of brand packaging design, AIGC tool operations, and assign small creative exercises; Concept Generation and Solution Exploration Stage: Students use AIGC to rapidly generate multiple design solutions and perform initial selection; Solution Iteration and Optimization Stage: Guided by instructors and team discussions, students iteratively refine designs to complete final visuals; Virtual Display and Project Presentation Stage: Use AIGC to generate 3D models and simulated display environments for immersive presentation and compilation of the final portfolio; Outcome Evaluation and Feedback Stage: Combine instructor grading, AI-generated process data, and industry mentor feedback to produce comprehensive evaluation reports and improvement suggestions. This workflow establishes a closed-loop structure of "Theory -Technology-Project-Evaluation," ensuring both the

systematicity and practical relevance of the teaching content.

5. Conclusion

This study explored the integration of AIGC technology into the brand packaging design course, demonstrating the significant value of generative AI in digital media education. The practice shows that AIGC not only markedly improves students' creative generation efficiency, iteration speed, and visual performance, but also lowers the design threshold and enhances learning motivation and engagement. Through multi-solution generation, intelligent design assistance, and immersive virtual environments, students can systematically train design thinking, integrate interdisciplinary information, and strengthen teamwork skills within real or simulated projects, achieving an effective connection between theoretical learning and practical application. Teaching data and student feedback indicate that the AIGC-enabled model optimizes course structure and produces quantifiable, replicable teaching outcomes, providing a novel approach for higher education curriculum reform.

About the author

Wenjing Yan (1998-), female, from Dazhou, Sichuan, China, master's degree, engaged in digital media research.

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