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# Construction of an AIGC-aided Design Course Teaching and Experiment Base

Guofang ZHANG

*Anhui University of Finance and Economics*

**Abstract**

With the rapid advancement of global digitalization, artificial intelligence (AI) technology is being widely applied across various fields. The Ministry of Education launched a special campaign in March 2024 to promote the integration, intelligence, and internationalization of digital education. In response, the School of Art at Anhui University of Finance and Economics has proposed the construction of an AIGC-aided design course teaching and experiment base. This project aims to integrate AI technologies into design education, enhancing students' practical training and fostering high-quality AI design talent. By building state-of-the-art teaching facilities and introducing cutting-edge AI tools, the base will provide students with immersive, hands-on learning experiences. The project emphasizes interdisciplinary learning, blending traditional design education with advanced technologies, and seeks to promote collaboration between academia and industry.

**Keywords** AIGC, AI-Aided Design, Design Education, Industry-University Collaboration, Practical Training

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## 1 Project Background and Foundation

### 1.1 Project Background

With the accelerated progress of global digitalization, artificial intelligence (AI) technology is gradually penetrating various industries, driving innovation and transformation across many sectors. In the field of education, AI is not just a technological tool but also a catalyst for profound changes and optimizations in educational models. In March 2024, the Ministry of Education launched the "Year of Expanding Quality and Efficiency" initiative, aimed at promoting the integration, intelligence, and internationalization of digital education. A key component of this

initiative is the "AI Empowering Education" project, which focuses on leveraging AI technology to enhance the personalization and intelligence of education, increase interaction in teaching, improve learning outcomes, and cultivate digitally skilled talents to meet future societal needs.

Currently, although China's AI industry is rapidly developing, it is still in the exploratory and preliminary application stages, especially in terms of talent cultivation, where there is a significant gap between supply and demand. As key institutions for nurturing top talents, universities bear the responsibility and mission of cultivating AI professionals and driving technological advancement. By collaborating closely with industry, universities can more efficiently train professionals who are forward-thinking and innovative, meeting the growing market demand for AI talent. Furthermore, this collaboration can significantly enhance students' practical abilities and employability, laying a solid foundation for their career development.

In response to this need, the School of Art at Anhui University of Finance and Economics has proposed the project "AIGC-Assisted Design Course Teaching Experimental Base Construction." This project aims to establish a forward-looking practice platform for design courses through the deep application of AI-generated content (AIGC) technology. The platform not only focuses on technological application and innovation but also provides more hands-on opportunities for students, enabling them to excel in the AI-driven design field and become high-quality, multidisciplinary professionals within the industry.

## 1.2 Project Foundation

This project builds on the School of Art's long-standing teaching accumulation and innovative practices in the field of art design education at Anhui University of Finance and Economics, combined with the current trend of rapid AI technological development. The goal is to further improve teaching quality and enhance students' learning experiences. The school has long been dedicated to exploring educational models that integrate traditional art education with modern technology, striving to cultivate both artistic literacy and innovative, practical skills in students.

Throughout this process, the school has developed a team of experienced educators and researchers who have achieved notable results in several provincial and school-level projects, accumulating a wealth of teaching resources and research outcomes. For example, the successful implementation of the hybrid online and offline course "Design Drafting" and its online course version has provided valuable practical experience and a solid technical foundation for the development of this project.

Leveraging these teaching resources and experiences, the school plans to introduce AIGC technology and incorporate it into the teaching of art design courses, further enriching course content, innovating teaching methods, and enhancing students' engagement and hands-on capabilities. Additionally, the school will collaborate with several well-known enterprises to ensure that the course content stays aligned with industry advancements, enhancing students' practical application skills. This school-enterprise partnership will not only improve the practicality of the courses but also offer students more internship and employment opportunities, helping them achieve success in their future careers.

# 2 Project Features

## 2.1 Innovative Teaching Model and Rich Practical Experience

### 2.1.1 Integration of Traditional and Modern Teaching Methods

This project combines traditional design training methods with advanced AIGC (AI-generated content) technology, creating a brand-new teaching experimental base. AIGC technology not only breathes new life into traditional design education but also offers more innovative possibilities. Through the implementation of AIGC-assisted design courses, students can build upon their mastery of traditional skills such as hand drawing and blueprint design, while also learning how to leverage AI technology for intelligent and automated design creation. This combination not only enriches the curriculum but also unleashes students' creative potential, encouraging them to explore the integration of new technology with traditional design thinking, helping them develop a unique design style and perspective.

### 2.1.2 Interdisciplinary Comprehensive Learning

The project fully incorporates cutting-edge technologies such as virtual reality (VR), multimedia, and human-computer interaction, promoting the deep integration of art design with modern technology. Students not only learn professional knowledge in art design but also gain exposure to interdisciplinary fields such as computer technology and AI algorithms, breaking down the boundaries between disciplines and fostering their ability to think critically and innovate. During the learning process, students are encouraged to integrate knowledge from various fields, which will equip them with broader perspectives and stronger adaptability to tackle complex design projects in their future careers, enhancing their competitiveness.

## 2.2 Technology-Driven and Blended Reality Training Environment

### 2.2.1 Advanced Training Facilities

The experimental base will be equipped with top-of-the-line hardware and software systems, including high-performance computing servers, GPU servers, and more, ensuring that students receive fast and efficient computational support during training. These advanced facilities not only provide strong support for complex design calculations but also offer powerful data processing capabilities for AI model training and design output generation. Furthermore, the experimental base will deploy large-capacity, high-speed data storage systems to ensure data security and reliability throughout the project's teaching process, creating a stable and trustworthy learning environment for students.

### 2.2.2 Deep Application of Virtual Reality and AI

By deeply integrating virtual reality technology with AI, the project will construct a highly immersive, interactive, and intelligent training environment for students. In this blended reality

environment, students can engage in design creation within virtual scenarios, experiencing realistic design effects, thus breaking free from the limitations of traditional design processes that involve materials, space, and context. This innovative training approach not only offers students more creative inspiration but also helps them better understand and master complex design concepts and techniques, enhancing the efficiency and precision of their work and laying a solid foundation for their future career development.

## 2.3 Leveraging Disciplinary Strengths to Cultivate Outstanding Talents

### 2.3.1 Maximizing Disciplinary Strengths

The School of Art at Anhui University of Finance and Economics has a strong academic background and extensive teaching experience in the field of art design. This project builds upon those strengths by introducing advanced technologies such as virtual reality, database management, and network communication to establish a comprehensive AIGC-assisted design training center. This not only provides faculty and students with cutting-edge resources but also enhances the overall quality of teaching by optimizing the teaching infrastructure and environment, thereby promoting improvements in art design education.

### 2.3.2 Cultivation of Outstanding Talents

The project places special emphasis on nurturing students' innovative thinking and practical skills. Through various forms of training and practical activities, students are constantly challenged to push their limits, honing their ability to apply AI technology in design creation. Moreover, the project will offer students numerous opportunities to participate in real-world projects, allowing them to accumulate valuable practical experience. This not only enables students to translate classroom knowledge into real-world applications but also enhances their competitiveness in the AI design industry, fostering a cohort of outstanding talents with global perspectives and practical abilities.

## 2.4 Supporting Teaching Reform and Industry-Academia Collaboration

### 2.4.1 Promoting Teaching Reform

This project will explore new models of AI-assisted design teaching, providing valuable experiences and reference cases for the school's teaching reform. Through innovative teaching methods, the school has the opportunity to achieve breakthroughs in both content and pedagogy, helping students to master cutting-edge knowledge and skills that meet the demands of the rapidly advancing AI field. This reform not only improves teaching quality but also offers useful insights for related disciplines.

#### 2.4.2 Strengthening Industry-Academia Collaboration

The project will collaborate with multiple enterprises to jointly develop and implement AIGC-assisted design courses. This close collaboration will extend beyond course development and practice, serving as a window for students to gain insights into the latest industry trends. Additionally, by offering more internship opportunities and career guidance, it will help students better integrate into society and adapt to future work environments. This collaborative model will effectively enhance students' professional competencies and market adaptability, laying a solid foundation for the integrated development of academia and industry.

## 3 Project Construction Goals

### 3.1 Meeting the Teaching Needs of AI-Driven Design Courses

#### 3.1.1 Establishing an Efficient Teaching Experimental Base

The primary goal of the project is to build an AIGC-assisted design course teaching experimental base to fully meet the teaching needs of AI-related design courses. The base will be equipped with state-of-the-art hardware and software, including high-performance computers, AI design software, virtual reality devices, and more, ensuring that students can practically operate, experience, and apply AIGC technology throughout their learning process. Additionally, the experimental base will create an intelligent learning environment that supports real-time interaction between teachers and students, enhancing the overall teaching effect. Through this base, students will have access to the latest technological tools and learn how to apply AI-generated content in design, laying a solid foundation for their future careers.

#### 3.1.2 Supporting Practical Teaching in Design Courses

The teaching experimental base will provide a complete and multifunctional practical teaching platform for design courses. Students will not only be able to validate their design concepts and practice using AI tools but also simulate real-world design projects and experience the application of AI technology in various design stages. This platform will allow students to intuitively understand and master the practical use of AI in design, enhancing their innovation and problem-solving abilities. Through real project training, students will be better prepared to confidently handle complex design tasks and challenges in their future careers, providing a solid foundation for professional success.

### 3.2 Promoting AI Curriculum Development and Talent Cultivation

#### 3.2.1 Cultivating High-Quality AI Design Talents

Another key goal of the project is to cultivate high-quality AI design talents with innovative thinking and practical skills through a diversified curriculum and practical training activities. By introducing AIGC technology, the project will design a series of courses ranging from basic to

advanced levels, gradually improving students' comprehensive abilities in the integration of AI and design. Through practical training courses, students will have the opportunity to deeply understand the practical operation and application of AI technology, enhancing their hands-on and project implementation abilities. The goal is to train a cohort of AI design professionals who can handle complex tasks and are competitive in the industry, thereby supporting the future development of AI-driven design innovation.

#### 3.2.2 Supporting Student Innovation and Entrepreneurship

The experimental base will also provide a platform for student innovation and entrepreneurship, encouraging them to participate in design competitions, innovation projects, and entrepreneurial practices. The base will offer abundant resources and technical support to help students transform classroom knowledge into real-world products and services. Through these practical activities, students will not only improve their technical skills but also accumulate valuable entrepreneurial experience, creating more opportunities for their future careers. Additionally, the base will actively collaborate with industry partners to provide students with more practical opportunities and industry connections, assisting them in achieving success in the job market.

### 3.3 Establishing a Research Center for AI and Design Education

#### 3.3.1 Promoting Research on Information Technology

The project plans to establish a research center focused on AI and design education, dedicated to studying the application and development of AIGC technology in design education. This center will become the school's innovation hub for AI and design research, advancing the frontiers of information technology, particularly in the integration of AIGC and design. Through the research center, the school will not only provide more learning resources for students but also drive technological progress in the industry, promoting the organic fusion of AI and design education. The center will also support interdisciplinary research efforts by faculty and researchers, laying a solid foundation for the transformation of research outcomes into real-world applications.

#### 3.3.2 Facilitating the Sharing and Dissemination of Educational Resources

The research center will summarize and promote the school's achievements in AIGC-assisted design education, driving the sharing of resources and experiences. The project plans to develop a series of educational tools, course materials, and learning platforms based on AIGC technology, which will be available for use by other departments within the school as well as external educational institutions. This initiative will effectively promote the open sharing of AI and design education resources, providing advanced educational solutions to more educational institutions and industry partners, and contributing to the overall improvement of educational standards.

### 3.4 Enhancing the School's Influence in AI Design Education

#### 3.4.1 Applying for Top-Tier Courses and Projects

The project will actively encourage the school's faculty to apply for and develop national and provincial top-tier courses, particularly in the field of AIGC-assisted design education. Through high-quality teaching content and innovative methods, the school is expected to set benchmarks in AI design education, enhancing its academic reputation and influence in the industry. Additionally, the project will encourage faculty to participate in research project applications and translate teaching achievements into practical applications, further strengthening the school's academic status and social influence in AI design.

#### 3.4.2 Building a University-Wide AI-Assisted Design Teaching Platform

The long-term goal of the project is to develop the AIGC-assisted design teaching experimental base into a university-wide AI-assisted design teaching platform. This platform will not only serve the needs of art and design programs but will also support other disciplines, offering immersive teaching and AI-related courses across the university. Through this platform, the school will provide richer learning resources and practical opportunities for students, driving an overall improvement in teaching quality. Additionally, the platform will offer strong support for faculty innovation and teaching reform, fostering the continuous development of AI-assisted design education at the school and expanding its influence further.

## 4 Project Construction Content

### 4.1 AIGC-Assisted Design Teaching Experimental Base Construction

#### 4.1.1 Hardware Equipment Configuration

The primary task of the AIGC-assisted design teaching experimental base construction is to equip it with advanced hardware facilities to ensure powerful computing and data processing capabilities. The project will introduce high-performance computing servers and GPU servers as key equipment, providing robust technical support for students' design creation, especially during the AI-generated design process, where fast computational power is crucial. These high-performance servers will support complex image generation, data analysis, and model training, offering students a stable and efficient operational environment. Additionally, the project plans to deploy large-capacity, high-speed data storage systems to ensure the safe and stable storage and retrieval of the large amounts of data generated during the experimental process. This data storage system will not only ensure the integrity and security of students' design work but also enable fast data transmission and sharing, improving both teaching and research efficiency. Through the configuration of advanced hardware, the experimental base will provide students with a highly technological learning environment, allowing them to conduct design experiments under cutting-edge technical conditions.

### 4.1.2 Software Tool Development and Integration

Beyond hardware setup, the project will actively promote the development and integration of AIGC software tools suitable for design courses. The rapid advancement of AI-generated content (AIGC) technology has brought immense possibilities to the design field. This project plans to integrate widely-used AI image generation tools such as Mid-Journey and Stable Diffusion. These tools will help students significantly shorten the design cycle and enhance creativity, from conceptualization to visual realization. Additionally, the experimental base will incorporate cutting-edge AI design tools such as DALL-E, Kaleido, and Artbreeder, enabling students to grasp the latest AI design techniques. These tools will be integrated into the course content, allowing students to practice and understand how to use AI tools for design innovation. The experimental base will also continuously support the development and upgrading of software tools, ensuring students always have access to the latest design technologies, thus preparing them for competitiveness in the future design industry.

### 4.1.3 Virtual Simulation Training Resource Construction

To provide students with an immersive learning and practical experience, the project will build a comprehensive virtual simulation resource library that covers various design fields, such as environmental design, product design, and visual communication design. Leveraging virtual reality (VR) and augmented reality (AR) technologies, students will be able to create, adjust, and optimize design concepts in virtual settings. This highly immersive learning experience will not only improve students' understanding of complex design issues but also enhance their creativity and problem-solving abilities. For example, in environmental design courses, students can use VR to experience how different spatial structures and design elements interact, thereby better understanding design principles. The virtual simulation training resources will also include numerous design case studies, enabling students to engage in simulated training and experience the workflow of real-world projects. This application of simulation technology will provide students with a more hands-on approach to learning, boosting their practical abilities.

## 4.2 Curriculum System Construction and Teaching Model Innovation

### 4.2.1 AIGC-Assisted Design Curriculum System

To fully leverage the potential of AIGC technology in design education, the project will construct a comprehensive curriculum system. This system will not only cover theoretical knowledge but also include modules on tool usage and real-world case analysis. The course syllabus will begin with foundational AI design knowledge and progressively delve into advanced applications, including specific operations of AI-generated content, algorithm principles, and studies of cutting-edge technology case studies. The curriculum system will combine theory and practice, ensuring that students not only acquire basic AI design skills but also become capable of completing complex design projects independently. In addition, the course will incorporate discussions on AI-related ethics, data privacy, and other topics to help students gain a holistic understanding

of the application and potential challenges of AI in design. The project will also adopt a hybrid teaching approach, combining in-class learning with online platforms, to promote diversified learning and improve students' independent learning capabilities.

#### 4.2.2 Multidisciplinary Integration and Cross-Field Learning

The AIGC-assisted design curriculum system will transcend traditional disciplinary boundaries by integrating knowledge from arts, technology, and management to foster interdisciplinary development. The project plans to establish a series of cross-disciplinary elective courses covering AI algorithms, digital media arts, and market management, aiming to develop students' interdisciplinary thinking and innovation skills. Through this cross-disciplinary course design, students will not only master design techniques but also broaden their perspectives by learning how to incorporate knowledge from other fields into their creative work. For example, students can learn about AI algorithm fundamentals and apply this knowledge in actual design projects, creating innovative works that reflect the integration of technology and art. Additionally, cross-disciplinary courses will encourage students to participate in team projects, combining knowledge from various disciplines to tackle design challenges, thereby enhancing their ability to collaborate and innovate in their future careers.

### 4.3 Industry-Academia Collaboration and Practical Project Development

#### 4.3.1 Enterprise Collaboration and Practical Projects

To strengthen students' practical skills and career competitiveness, the project will actively promote deep collaboration with various AI and design-related enterprises. Through this collaboration model, companies will provide students with real-world design projects, allowing them to practice and refine their skills while gaining industry experience. For example, students may participate in AI design projects within these companies, learning key steps in the design process, from needs analysis and conceptualization to implementation. This hands-on experience will help students bridge the gap between theoretical knowledge and real-world application, while also enhancing their awareness of market demands and industry trends. Additionally, the practical projects developed through enterprise collaboration will offer students a wealth of internship and employment opportunities, helping them better adapt to future work environments and enhancing their professional qualifications and marketability.

#### 4.3.2 Innovation and Entrepreneurship Support

The experimental base will provide a range of innovation and entrepreneurship support services, helping students turn their learning outcomes into real products and services. The project will establish innovation and entrepreneurship guidance courses to help students understand the process from design concept to commercialization. The school will also regularly organize design competitions and innovation project showcases, encouraging students to actively participate in national and international design competitions and entrepreneurship contests to showcase their

creativity and design capabilities. For example, students can submit the design projects developed in the experimental base to competitions, gaining valuable experience and industry recognition. This not only enhances students' innovation capabilities but also provides them with more market opportunities, driving their future career development. Through innovation and entrepreneurship support, the experimental base will serve as an incubator for students' creative ideas, helping them stand out in the design industry.

# 5 Project Implementation Path

## 5.1 Infrastructure Construction Plan

### 5.1.1 Hardware Configuration Plan

Procurement and Installation: Select and purchase necessary hardware equipment such as high-performance computing servers and GPU servers. Complete the installation and debugging process to ensure that the experimental base's technical capabilities meet the requirements for AIGC course teaching. Data Storage and Management: Deploy large-capacity, high-speed data storage systems equipped with data backup and security measures to ensure the safety and availability of experimental data.

### 5.1.2 Software Platform Integration Plan

AIGC Tool Configuration: Integrate advanced AI design tools such as MidJourney, Stable Diffusion, and DALLE to build a comprehensive design tool platform that supports the execution of various design tasks. Virtual Simulation System: Develop and deploy virtual reality and augmented reality applications to create an immersive learning environment, providing students with a highly realistic training experience.

## 5.2 Course Development and Teaching Resource Construction

### 5.2.1 Curriculum Design

Syllabus Development: Formulate the teaching syllabus for AIGC-assisted design courses, covering all levels from basic knowledge to advanced applications, ensuring the systematization and comprehensiveness of the course content. Multidisciplinary Integration: Incorporate knowledge from multiple disciplines such as art, technology, and management into the curriculum system to foster students' interdisciplinary thinking and innovation abilities.

### 5.2.2 Teaching Resource Development

Multimedia Teaching Resources: Develop multimedia teaching resources such as instructional videos, case studies, and online course materials to provide students with abundant learning materials. Virtual Simulation Cases: Design and develop a series of virtual simulation cases, covering

areas such as environmental design, product design, and visual communication design, to offer simulated environments for practical exercises.

## 5.3 Enterprise Collaboration and Practical Project Development

### 5.3.1 Industry-Academia Cooperation Platform

Expanding Corporate Partnerships: Establish cooperative relationships with leading companies in the AI and design industries to jointly develop practical projects, providing real industry cases and technical support. Joint Development of Practical Projects: Design and implement practical projects based on actual enterprise needs to help students apply classroom knowledge to solve real-world problems.

### 5.3.2 Innovation and Entrepreneurship Support

Student Project Incubation: Support student teams in developing innovation and entrepreneurship projects by providing technical guidance and resources to help turn their ideas into actual products. Competition and Exhibition Platform: Organize and support students in participating in various design competitions and exhibition activities to enhance their practical skills and market competitiveness.

## 5.4 Teaching and Project Evaluation

### 5.4.1 Process Monitoring and Feedback

Teaching Effect Monitoring: Regularly evaluate students' learning outcomes and feedback, adjusting and optimizing teaching content and methods to ensure continuous improvement in course quality. Project Progress Tracking: Regularly check the progress of project implementation to ensure that all tasks proceed according to plan, addressing potential issues promptly.

### 5.4.2 Achievement Display and Experience Sharing

Achievement Display Events: Organize achievement exhibitions to showcase students' design works and innovative results, sharing successful cases and experiences. Experience Summary and Dissemination: Write and publish project summary reports to document the lessons learned, providing references for future projects.

## 5.5 Continuous Improvement and Future Development

### 5.5.1 Long-Term Development Plan

Continuous Base Development: Based on feedback and evaluation results from the project implementation, continuously improve and refine the experimental base's facilities and resources to enhance the overall level of teaching and research. Course and Platform Expansion: Explore

the application of AIGC technology in other disciplines, expanding the curriculum system and platform coverage to provide more learning and practical opportunities for students.

#### 5.5.2 Expansion of Cooperation Network

Expanding Partnerships: Broaden cooperation with more universities and enterprises to jointly develop and promote AIGC-assisted design education, cultivating more high-quality AI design talents for society.

## 6 Expected Project Outcomes

### 6.1 Successfully Develop and Implement a Teaching Syllabus for AIGC-Assisted Design Courses

The project will result in the development and implementation of a comprehensive syllabus specifically tailored for AIGC-Assisted design courses. This syllabus will cover all necessary aspects of design education, from foundational principles of AI technology and design to more advanced applications. It will ensure that students are equipped with both theoretical knowledge and practical skills needed to excel in AI-generated content design. This structured syllabus will serve as a long-term guide for educators to consistently deliver high-quality, innovative, and comprehensive instruction. Additionally, the syllabus will include assessment methodologies and learning outcomes aligned with industry standards to prepare students for real-world challenges in AI-powered design fields.

### 6.2 Successfully Develop and Implement a Teaching Plan for AIGC-Assisted Design Courses

In addition to the syllabus, the project will produce a detailed teaching plan that outlines the specific instructional methods, tools, and resources to be used in AIGC-Assisted design courses. This plan will be designed to facilitate interactive and practical learning experiences, with a focus on project-based learning, where students can apply AIGC tools like MidJourney and Stable Diffusion in real-world design scenarios. The teaching plan will include lesson structures, case studies, multimedia materials, and hands-on exercises to foster deep understanding and engagement. The teaching plan will be continuously updated based on technological advancements and student feedback to ensure relevance and effectiveness.

### 6.3 Participation in At Least One AIGC-Related Competition

One of the project's key goals is to encourage students to participate in at least one national or international competition related to AIGC technology. Participation in these competitions will provide students with the opportunity to apply the skills and knowledge they have gained in a competitive, real-world environment. It will also help to enhance their creativity, critical thinking, and teamwork capabilities. Competing in such prestigious platforms will offer students

visibility, potential industry connections, and the opportunity to receive feedback from professionals in the field, further strengthening their design abilities and career prospects.

### 6.4 Write a Research Report on AI-Assisted Design Education

The project will generate a comprehensive research report that documents the processes, challenges, and successes encountered in integrating AIGC technology into design education. The report will cover topics such as the pedagogical approach to teaching AIGC-Assisted design, the impact of AI tools on students' creativity and learning outcomes, and best practices for incorporating advanced AI technologies into design curricula. This report will serve as a valuable resource for educators, policymakers, and industry professionals looking to adopt similar educational models in their institutions. The findings will also provide insights into the future of AI in creative industries and its potential to revolutionize design education.

### 6.5 Publish One Academic Paper on AIGC-Assisted Design Education

As part of the project' s focus on contributing to academic knowledge, at least one academic paper will be written and published in a peer-reviewed journal. This paper will explore the role of AI-generated content in modern design education, the integration of AIGC tools into classroom settings, and the potential these technologies hold for transforming traditional design practices. The paper will also discuss the implications of AI on creativity, innovation, and the evolving skill sets required by future designers. By sharing the project' s findings with the broader academic community, the paper will contribute to ongoing discussions about the future of AI in education and creative fields, helping to shape the next generation of AI-Assisted design courses worldwide.

## 7 Implementation Plan

The project implementation plan is shown in Table 1.

## 8 Conclusion

The construction of the AIGC-aided design course teaching and experiment base represents a transformative effort in bridging traditional design education with cutting-edge artificial intelligence (AI) technologies. This project not only aligns with national strategic goals to enhance digital education but also responds to the pressing need for high-quality AI talent. By integrating AI-generated content into design curricula, the project provides students with a unique learning environment that emphasizes both theoretical knowledge and practical skills, fostering creativity and technical expertise.

The base will play a pivotal role in enhancing teaching methods by introducing innovative tools such as AIGC (Artificial Intelligence Generated Content), virtual reality, and other emerging technologies. This new approach not only enriches the content of design courses but also

Table 1 Implementation Plan

| Stage | Duration | Construction Content |
|---|---|---|
| Phase 1: Preparation and Infrastructure Building | 3 months | 1. Hardware and Software Construction Plan: Finalize the procurement list for required hardware (e.g., high performance computing servers, GPU servers) and software tools.<br>2. Development of Curriculum Syllabus and Teaching Resources: Organize an expert team to develop the AIGC assisted design course syllabus. Create related teaching resources, including instructional videos, case studies, course materials, and training guides.<br>3. Virtual Simulation Training Resource Construction: Develop virtual reality and augmented reality applications, design relevant training courses and cases. |
| Phase 2: Course Development and Experimental Teaching | 4 months | 1. Integration and Release of Teaching Resources: Integrate developed teaching resources and release them on online education platforms. Promote course content and invite students to register for experimental courses.<br>2. Launching and Operating Experimental Courses: Offer AIGC assisted design courses and conduct the first round of experimental teaching. Collect feedback on students' learning experiences and suggestions, and optimize the course based on the feedback.<br>3. Launch of Enterprise Collaboration and Practical Projects: Partner with collaborating enterprises to initiate practical training projects, providing students with opportunities to participate in real world projects. |
| Phase 3: Evaluation and Improvement | 3 months | 1. Project Evaluation and Effectiveness Analysis: Conduct a midterm evaluation of course implementation, analyzing students' learning outcomes and feedback. Based on the evaluation results, adjust and improve the course content, teaching methods, and training resources.<br>2. Further Development and Expansion: Improve the experimental base's facilities and optimize teaching resources. Plan the next phase of course development and promotion strategies.<br>3. Innovation and Entrepreneurship Support: Organize student participation in national and international design competitions and innovation entrepreneurship projects, showcasing their learning outcomes. |
| Phase 4: Promotion and Sharing | 2 months | 1. Showcase Achievements and Share Experiences: Organize an exhibition to showcase teaching cases and student projects. Share successful experiences and research outcomes from the project to expand its influence.<br>2. Collaboration with More Universities and Enterprises: Actively promote project achievements and attract more universities and enterprises to collaborate. Plan future development directions and further expand the application of AIGC assisted design education.<br>3. Final Report and Future Planning: Write a final project report summarizing the implementation, results, and experiences. Develop future development plans and explore the application of AIGC technology in other disciplines. |

promotes cross-disciplinary learning, enabling students to think critically and innovatively. Additionally, the project emphasizes real-world application by engaging students in hands-on experiments and collaborative projects with industry partners, ensuring that they are well prepared for the demands of the job market.

Furthermore, this initiative is expected to serve as a model for AI integration in education, of-

fering valuable insights and experiences that can be replicated in other disciplines and institutions. The collaborative efforts between academia and industry, central to this project, will strengthen ties between higher education and the AI industry, ensuring that the curriculum remains relevant and future-oriented. Through these partnerships, students will gain direct exposure to industry trends and technologies, improving their employability and contributing to the development of the AI sector.

In the long term, the project aims to create a sustainable and expandable platform that will continue to evolve with advancements in AI and design technologies. By establishing a research center focused on AI and design education, the base will contribute to the academic discourse on AI's role in creative industries and generate new knowledge in the field. The dissemination of these findings will extend the project's influence beyond Anhui University of Finance and Economics, benefiting educational institutions and design professionals across China.

Ultimately, the AIGC-aided design course teaching and experiment base will significantly impact the quality of AI-related design education. It will provide a foundation for developing high-quality talent, contribute to educational reform, and enhance the university's reputation as a leader in innovative AI-assisted design education. Through this project, Anhui University of Finance and Economics is set to become a hub for AI-driven design innovation, fostering a new generation of professionals who are well-equipped to navigate the challenges and opportunities of the digital age.

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## Author Biography

Guofang ZHANG, Female, born in December 1974, native of Wuhe County, Anhui Province. Associate Professor at the School of Art, Anhui University of Finance and Economics, Ph.D., master's supervisor. Research interests: art theory, art design, art archaeology. Address: School of Art, Anhui University of Finance and Economics, 962 Caoshan Road, Bengbu City, Anhui Province, China, 233030, Email: zgf106@126.com, https://orcid.org/0000-0003-4197-5720.

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