

Research on the Training Mode of Visual Design Talents in Colleges and Universities based on AIGC Technology

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Abstract

The article focuses on the impact of AIGC technology on talent cultivation models in the field of visual design for university publicity, as well as the exploration of its application models. By analyzing the current situation of visual design for university publicity and the characteristics of AIGC technology, it discusses the reform needs for teaching content and methods driven by AIGC technology. An in-depth study of the existing talent cultivation models is conducted, and a series of talent cultivation strategies suitable for the development of AIGC technology are proposed. The article summarizes the talent cultivation model for visual design in university publicity under AIGC technology and validates it through application. The aim is to provide targeted reform suggestions for the talent cultivation model in university publicity visual design, in order to cultivate corresponding interdisciplinary design talents.

Keywords

AIGC Technology; Visual Design; Talent Development Model.

1. Introduction

In today's era of information explosion, visual design has become an indispensable and essential component across various industries. With the continuous development of the self-media era, the demand for visual design in educational institutions' promotional platforms is increasing, while the standards for visual design are also gradually rising. The advancement of AIGC technology further meets the multifaceted requirements of such platforms, which need to balance timeliness, innovation, and aesthetics, significantly enhancing the efficiency of platform designers. Through AIGC technology, various visual design works can be generated quickly and efficiently, greatly improving design efficiency and quality. ^[1-2] However, due to the novelty of this technology, the corresponding training models are still in the exploratory phase. In light of this situation, this paper aims to explore the training model for visual design talents in educational institutions' promotions through AIGC technology, providing new directions and ideas for the cultivation of visual design talents in educational institutions and offering a reference for the optimization and reform of training models in this field.

2. AIGC Technology and the Current Situation of Visual Design in University Publicity

2.1. AIGC Technical Overview

AIGC technology is a new technology that combines artificial intelligence and graphics computing, which can effectively assist visual designers in completing various design tasks. Through AIGC technology, designers can quickly get design inspiration, complete design drafts, and even make automated design adjustments. The emergence of this technology has greatly

promoted the development of the field of visual design. Currently, AIGC technology mainly manifests as multimodal generation, integrating various modalities such as text, image, audio, and video to generate richer and more diverse content; personalized generation, generating highly customized content based on user needs and preferences; real-time generation, improving generation speed to achieve real-time content generation and interaction. [3].

In AIGC technology, "A" stands for artificial intelligence. Artificial intelligence technology can analyze massive amounts of design data and information, helping designers make intelligent design decisions. Through automated data analysis, designers can better understand user needs and guide design directions based on big data. This will help designers work more efficiently, reduce blind design attempts, and improve design efficiency. "IGC" stands for image computing technology. Image computing technology can help designers quickly complete design drafts. Through image computing technology, designers can more easily realize design ideas and produce high-quality design works. The emergence of this technology allows designers to focus more on creative expression and inspiration exploration, rather than on complicated production processes. [4].

2.2. Visual Design for University Promotion

College propaganda visual design is a comprehensive task involving multiple aspects, with the goal of conveying the school's brand image, educational philosophy, and advantages through visual elements. It aims to attract potential students and parents, timely convey important information about the school in a visual format, highlight the school's history, achievements, and reputation, and effectively communicate the school's brand and value. [5] With the development of society, the demand for visual communication in college propaganda work is increasing. Propaganda visual design has become an important means of propaganda work and has become increasingly important.

Current university visual design plays a crucial role in campus promotion, academic exchanges, enrollment promotion, cultural construction, etc. With the diversification of information dissemination, universities need to pay more attention to the forms of visual promotion in order to attract more attention. Therefore, the demand for design talents becomes urgent. In this context, the positioning and development of university visual design has also become one of the focuses of attention. In the digital background, university visual design needs to focus more on interactivity and communication effects. This also poses higher requirements for design talents, requiring them to possess more technical and innovative capabilities. [6].

In addition, the visual design of university publicity has also shown new trends in international communication. With the acceleration of globalization, international exchanges between universities have become increasingly frequent. In this context, university publicity visual design also needs to pay more attention to cross-cultural expression and communication. This poses higher requirements for the cross-cultural literacy and creativity of design talents.

3. The Importance of AIGC Technology Applied to the Existing Talent Development Model

3.1. Application of AIGC Technology in Visual Design for University Publicity.

With the continuous maturation and popularization of AIGC technology, significant achievements have been made in the application of visual design in universities, ranging from automatically generating posters and promotional materials to customizing educational content, from augmented reality (AR) and virtual reality (VR) design to the updating of brand design and visual identity systems. AIGC technology has demonstrated its powerful potential and broad application prospects. [7].

(1) Automatically generate posters and promotional materials: Universities have frequent activities and require a large number of promotional materials such as posters, flyers, and social media images. Traditional design methods are time-consuming and labor-intensive, while AIGC technology can quickly generate these visual contents. Designers only need to input the basic information of the activity and design preferences, and AI tools can automatically generate multiple design options. Designers can make fine adjustments or choose the best option.

(2) AR and VR design: The application of AIGC technology in AR and VR can create realistic virtual campus, laboratory, and classroom environments. These virtual environments are not only used for teaching, but also for new student orientation, campus tours, and alumni interactions.

(3) Image and video content generation: AIGC technology can generate high-quality educational videos, animations, and images for course teaching and promotion. AI tools analyze text scripts and course outlines to generate video content with images, animations, and sound effects, enriching teaching materials.

(4) Brand design and visual identity: When universities update their brand design and visual identity systems, using AIGC technology can generate multiple design options quickly to find the best way to express the brand visually. AI tools analyze the school's history, culture, and design needs to generate a variety of design options for selection.

3.2. Research on the Talent Cultivation Mode of Visual Communication Design in Existing Universities

In the research on the cultivation mode of visual communication design talents in colleges and universities, the existing cultivation mode is a key research direction. Through in-depth study of the existing cultivation mode, we can better understand the current situation and existing problems of talent cultivation, thus providing references and references for the improvement and perfection of future talent cultivation mode. [8].

Through literature review, some universities abroad have begun to explore the integration of AIGC technology into teaching practices, such as utilizing artificial intelligence to assist in generating and implementing creative designs, or using big data analysis to reveal user needs and behavioral patterns. However, these practices often lack systematic theoretical foundations and in-depth case studies, leading to less-than-satisfactory application effects. [9] In China, preliminary discussions have also been conducted on the application of AIGC technology in visual communication design education. Some scholars and educators have attempted to apply related technologies in curriculum design, teaching implementation, and practical activities in order to enhance teaching effectiveness and student learning experiences. Nevertheless, due to uneven levels of technological application and uneven distribution of educational resources, these practices are often limited to small-scale scopes, making it difficult to have a widespread impact. [10].

Therefore, existing efforts to cultivate talents in the field of university publicity visual design should actively introduce cutting-edge propaganda design concepts and technologies, enhance the practicality and pertinence of courses, strengthen the two-way combination of theory and practice, and establish a broader and closer relationship.

3.3. The Importance of AIGC Technology Applied to Visual Communication Design in Universities

The application demand of AIGC technology in the talent cultivation model of university publicity visual design has become an important link that cannot be ignored. With the rapid development of society and the continuous progress of technology, universities need to cultivate publicity visual design talents with more innovation and practical capabilities, and the application demand of AIGC technology has become an inevitable trend.

The application demand of AIGC technology in the talent cultivation mode of visual design in universities is reflected in improving students' design and practical capabilities. Through the application of AIGC technology, students can more conveniently carry out various visual design practical operations, while also gaining a deeper understanding of design principles and technical specifications, thereby enhancing the quality and level of design works. Secondly, it is also reflected in cultivating students' innovation and teamwork capabilities. It can stimulate students' innovative thinking, guide students to constantly experiment and explore during the design process, and enhance students' innovation and creativity. Therefore, universities should pay attention to the application demand of AIGC technology in the talent cultivation mode of visual design, strengthen the teaching and practical application of this technology, and lay a solid foundation for students' career development.

4. AIGC Technology University Publicity Visual Design Talent Training Mode

4.1. Reform of Teaching Content and Methods

The reform of teaching content is an important means to improve students' overall quality. Under the AIGC technology, universities should focus on updating teaching content, incorporating the latest design concepts and technological applications. For example, adding relevant practical training courses to allow students to master the application skills of AIGC technology in actual operations. At the same time, interdisciplinary knowledge can be introduced to broaden students' horizons and stimulate their innovative potential.

Reforming teaching methods is the key to improving teaching effectiveness. To cultivate talents in visual communication design, traditional teaching methods alone are no longer sufficient to meet the demands. Therefore, universities need to innovate in teaching methods by adopting project-driven teaching methods, allowing students to participate in actual project designs to develop their design capabilities in real-life scenarios. Additionally, introducing case studies can enable students to learn from more successful cases and experiences, stimulating their creativity and innovative thinking. Through diversified teaching methods, students' practical operational skills and teamwork abilities can be better cultivated, laying a solid foundation for them to become comprehensive talents in visual communication design.

4.2. Talent Cultivation Mode Architecture

Based on the AIGC technology, the talent development mode of university publicity visual design is composed of "three stages, five modules, and multiple content indicators".

4.2.1. Development of Training Programs.

Talent cultivation program: The student learning is organized in the form of a specialized group project. By setting project themes, establishing platforms, and encouraging students to engage in innovative design within a limited scope, the program aims to showcase and publish successful outcomes. The development of the program should focus on interdisciplinary integration and innovative practical teaching, nurturing students' comprehensive qualities and innovative abilities. By organizing academic seminars and discussions, students' ability to analyze and solve problems will be enhanced. Additionally, through internships, practical training, and project collaborations, students' practical skills and professional qualities will be strengthened.

4.2.2. Teaching Practice Segment.

(1) Overview of AIGC Technology: It consists of theoretical courses introducing technology history, technology software, technological application achievements display, and design

generation logic, as well as practical courses on learning technology software and innovative design generation.

(2) Basic Visual Design: design principles in traditional courses (including basic composition, color design, layout design, etc.), cultural elements design based on universities, and the use of traditional design tools.

(3) University publicity strategy: It consists of basic courses that allow students to learn about the school's VI visual system, school culture, rules and norms related to new media platforms, as well as practical courses that lead to the formation of results through project grading and standardizing.

(4) Output of Practice: By using artificial intelligence to assist in the generation and implementation of creativity, employing big data analysis to reveal user needs and behavioral patterns, and utilizing cloud computing to provide powerful computing power and resource sharing capabilities, creating visual design works that conform to regional characteristics and university cultural features.

4.2.3. Results Application and Presentation Phase.

Challenges and Opportunities: The results of students can be widely promoted through various platforms of the school, actively submitting contributions to social media platforms to expand the visibility of students' achievements; outstanding works can be submitted to corresponding competitions to enhance students' sense of honor and promote learning through competition.

4.3. Application of Talent Cultivation Mode - A Case Study of Chengdu Neusoft University

Chengdu Neusoft University takes the school's official media platforms (including WeChat official account, Douyin short video platform, video platform, Weibo platform) as the practice center, with a team of teachers from the Party Committee Propaganda Department forming a team of professors and guides, carrying out courses and practices in a project-based form. In the preliminary stage, students need to have a certain understanding of traditional media work. After the media propaganda foundation and AIGC foundation theory courses, they can basically master the design basics and creation basics, new media techniques and platform rules for publication, basic school culture and VI visual norms, AIGC software and operation techniques; after passing the assessment, they form specialized project groups based on multiple new media platforms for task publishing, with each project being collaborated on by 1-4 students and guided by a teacher throughout the brainstorming and practice exploration, as well as the control of visual design direction.

Through the offering and cultivation of this course, after completing the first round of teaching and practice, several college visual design talents with AIGC technology and thinking have been fostered. While accumulating material libraries, the exclusive LoRA model is further trained to lay the foundation for subsequent design iterations. Some of the practical results are shown below.

4.3.1. Creative Illustrations based on the School IP Image.

The tweet series of "Neu" Comics is one of the themed tweets on the platform of the WeChat public account of Chengdu Neusoft University, using the image of "Neu" to visually convey the corresponding theme content. The humorous and humorous expression is deeply loved by teachers and students. Each issue includes 12 or more illustrations, and it takes about a week to complete the individual drawings. Now, through AIGC technology, the existing school IP image is used as the basis to quickly search and generate multiple illustration design schemes. Through iterative optimization, the visual effect is maximized in the shortest time, as shown in Figure 1.



Figure 1. Creative Illustration of the School IP “Neu” Official Account

4.3.2. School Regional Cultural-based WeChat Official Account Graphics.

Regional culture serves as a postcard for schools to promote themselves externally, and the surrounding environment is the area most familiar to the school's faculty and students, making it an important entry point for publicity efforts. In previous articles published on the Chengdu Neusoft University WeChat official account, corresponding landscape photos have been included, often organizing faculty and students to conduct thematic photography of local scenery or procuring copyrighted images for use. This process requires a significant amount of human and financial resources. However, with AIGC technology, it is now possible to quickly obtain images that meet the requirements for promotional articles by inputting regional names and describing related image needs, as shown in Figure2.



Figure 2. School Surroundings Scenery Official Account Illustration

4.3.3. Creative Cartoon Videos based on the Characteristic Features of School Environment.

Hot creative videos have always been an important way for new media promotion platforms to maintain traffic and fans. In previous videos, the production time is often too long, leading to the dissipation of hot topics. At the same time, temporarily produced videos may have insufficient quality. Clay style is a hot topic. In a short period of time, through AIGC technology

for algorithmic generation, high-quality images are obtained, significantly reducing the time for video editing and reducing the trial and error process in the creative design process, as shown in Figure 3.



Figure 3. School Scenery Claymation Creative Video

4.3.4. Creative Videos based on School Emblem Identification.

The school logo is the most recognizable, cohesive, and identifiable symbol of the school, and its creative design is also the most difficult to create. Due to the standardized norms, designers are often limited in their creativity, and they often have to constantly experiment and try different approaches during the design process, leading to a considerable amount of time being spent on revisions for the overall project. Using AIGC technology, the school emblem can be used as the base image, integrating various cultural elements and generative special effects to complete the creative video in the shortest time, as shown in Figure 4.



Figure 4. The creative video based on the school emblem.

5. Summary

Based on the AIGC technology, the talent cultivation mode of university publicity visual design is worth exploring and promoting, as it helps to cultivate outstanding talents more in line with market demand. The article hopes to provide some reference and reference for teaching practices in related fields through research. It is believed that with the continuous development and improvement of AIGC technology, the talent cultivation mode of university publicity visual design will continue to move towards a more diversified and innovative direction.

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