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Visual Communication Design Education Reform for the Development of Digital Creative Industries

Yijie Li

University of Leeds, Leeds, LS2 9JT, UK

Abstract: *In recent years, digital technologies such as 5G, VR, artificial intelligence, cloud computing, Internet of Things and more have been developing at an extremely rapid pace and are seeing widescale use worldwide. The rise and development of digital technologies have opened up new paths for the creation, dissemination, consumption and sharing of cultural and creative products, and have also allowed the global cultural and creative industries to enter a new channel of high-speed development of digitization, and the dissemination channels of cultural and creative works have been transformed from physical entities to virtual data. Visual communication design as a key element of creative industry presents new characteristics and new challenges in the digital era. This paper analyzes the development trend of visual communication design education in the context of digital creative industries and puts forward new ideas for visual communication design education reform.*

Keywords: *Visual communication design; Digital creative industries; Education reform*

1. Introduction

The concept of creative industries was first put forward in the *Creative Industries Mapping Documents*[1] issued by the British government in 1998: industries that create employment and wealth through the use of individual creativity, skills and talents in the production and use of intellectual property. The iterative updating of information technology has given new vitality to the creative industries. With the change of digital technology, the creative industries have integrated information technology and continuously derived new industrial classifications such as digital media industry, digital art creative industry and digital content industry, which can be collectively called digital creative industries (as shown in figure 1).

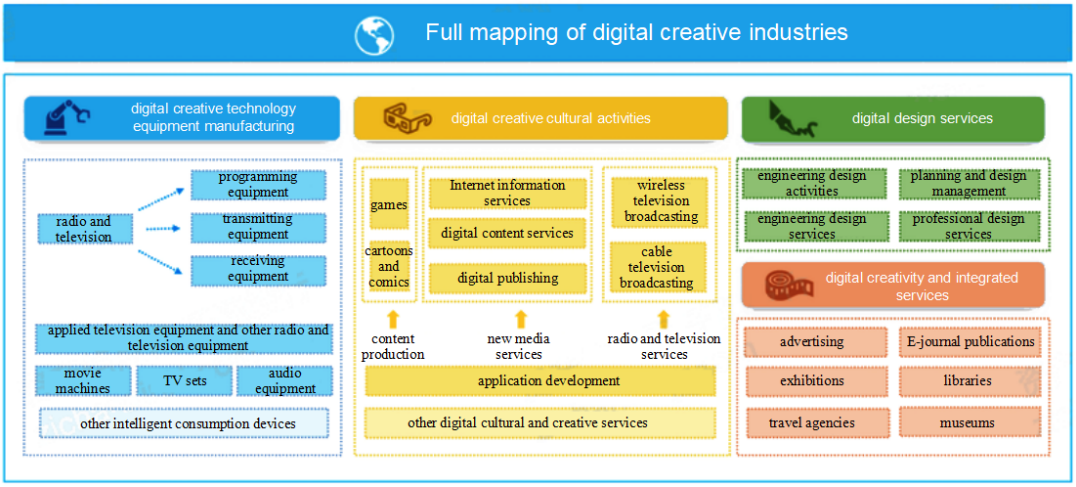

Figure 1. Digital Creative Industries Mapping[2]

Digital creative industry is a new economic form resulting from the gradual integration of modern information technology and industrial cultural creativity, characterized by the combination of digital technology and design creativity, whose output includes both hardware and software entities, as well as specific cultural content[3]. The new features of visual communication design in the digital creative era make visual communication design more attractive and effective in information dissemination and brand promotion. The development of digital creative industry needs a constant injection of high-quality visual communication design talents, therefore, it is necessary to reform the teaching mode of visual

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communication design education to cultivate inter-disciplinary talents integrating creative design and digital technology, so as to satisfy the industry's demand for talents and to continuously improve the teaching level and innovation ability of this specialty.

2. New Features of Visual Communication Design in the Age of Digital Creativity

2.1 Interactivity

In the era of digital creativity, interactivity has become one of the most important features of visual communication design. It emphasizes the audience's participation and interaction so that the audience can directly engage in a certain part of the design work, thus obtaining a richer and more personalized experience. For example, interactive posters can be engaged with by the audience through touch, gestures and so on, making the posters more interesting and attractive.[4]

2.2 Dynamization

Dynamization is another significant feature of visual communication design in the digital creative era. In traditional media, visual communication design is usually static and unidirectional, while digital technology enables design works to be presented in a dynamic form. Animation, video and interactive games and other forms of works can better attract the attention of the audience and convey richer information[5].

2.3 Cross-media

Cross-media is another important feature of visual communication design in the digital creative era. In the era of traditional media, design works are often limited to specific communication channels, while in the era of digital creativity, because the digital entrepreneurship industry contains a wide range of contents and diverse communication channels, the designed works can be disseminated in various media forms. For example, an interactive novel can be presented on different devices such as cell phones, tablets and computers to meet the needs of different audiences.

2.4 Virtual Reality and Augmented Reality

VR and AR technologies play an increasingly important role in visual communication design in the digital creative era. These technologies can provide viewers with an immersive experience, enabling them to understand and feel the information conveyed by the design works in a deeper way. For example, through VR technology, viewers can experience advertisements in an immersive way; through AR technology, viewers can see virtual elements in a real environment, thus enhancing their knowledge of and interest in the product[6].

2.5 Transformations of Design Aesthetics in the Age of Artificial Intelligence

Artificial Intelligence Generated Content (AIGC) has already permeated every aspect of various design fields. The creativity-centered teaching model of design schools is quietly changing, and traditional creative principles and steps are gradually being replaced by creative communication and creative management. Even some engineers engaged in AIGC algorithms have become new-age creative professionals. Although traditional artificial design still has not been and cannot be completely replaced by AIGC, with the popularization of AIGC-generated design and the establishment of discourse hegemony, its aesthetic paradigm will gradually evolve from imitating existing designs to forming its own unique language rules and laws, and gradually affecting the aesthetic changes in the public domain.

3. The Impact of Digital Creative Industry Development on Visual Communication Design Education

3.1 Visual Communication Moves from Traditional Design Education to Interdisciplinary Integration of Digital Art

It is an inevitable trend for visual communication design education to move from traditional to digital art, in which interdisciplinary integration plays an important role. In traditional design education, visual

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communication design mainly focuses on the mastery of basic drawing skills and design principles, which includes design drawing, design color, Chinese and foreign design history, two-dimensional composition, three-dimensional composition, as well as other courses. The study of these courses can lay a solid foundation for students' design fundamentals and emphasize the innovation and integration of traditional art and contemporary visual art. However, with the sustained development of digital technology, the field of visual communication design is expanding. The development of digital creative industries need more talents with innovative thinking and teamwork abilities, therefore, nowadays visual communication design education pays more attention to the application of digital technology and the cultivation of innovative thinking (as shown in figure 2), which includes the emerging fields of interactive design, information art and design, digital image and media, and cross-media visual information communication.

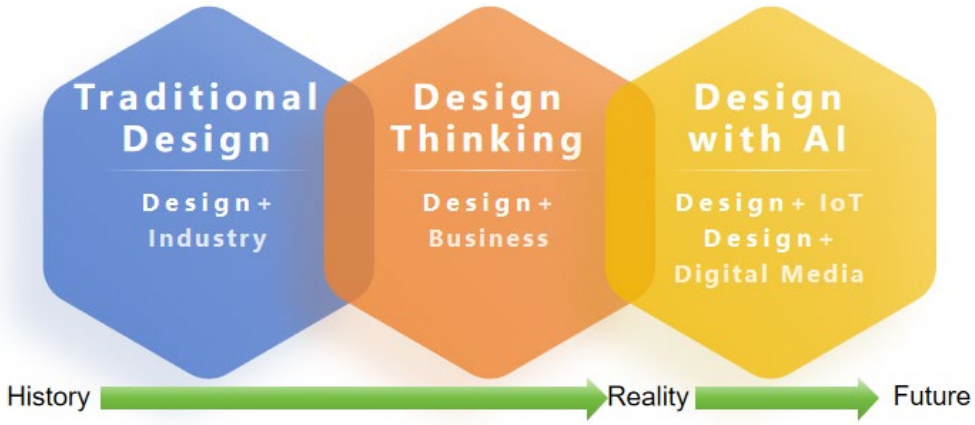

Figure 2. The Changes of Innovative Thinking in Digital Media Art Theory[7]

In terms of interdisciplinary integration, visual communication design education can be integrated with a number of disciplines, such as computer science, media art and interactive design. This interdisciplinary integration can not only broaden students' knowledge, but also cultivate their comprehensive qualities and their ability to innovate. For example, students can learn how to use computer software and hardware for design, how to utilize digital media technology for information dissemination, and how to use interactive technology for user experience design. In addition, visual communication design education can be integrated with cultural and creative industries. The cultural creative industry is a highly comprehensive industry, including film and television production, game development, art creation and other fields. As an important part of the cultural creative industry, visual communication design can be deeply integrated with these fields, so as to cultivate more talents with the ability to innovate and that work well in a team. In conclusion, it is an inevitable trend for visual communication design education to move from traditional to digital art, in which interdisciplinary integration plays an important role. Through the deep integration with multiple disciplines and cultural and creative industries, we can cultivate more high-quality talents who can adapt to the market demand.

3.2 Onefold Visual Communication Design Works to Diversified ones

Graphic design is one of the more important aspects of visual communication design, and includes poster design, packaging design, book binding design and so on. These design works are often presented in static form, with text, graphics, color, and other elements as the main means of expression. With the continuous development of digital technology, visual communication design is no longer limited to traditional graphic design. The development of the digital creative industry provides more possibilities for visual communication design, which helps to gradually diversify the various means of visual communication design. For one thing, the different forms of design can be dynamic and interactive with the help of digital technology. For example, animation design, interactive design and other works can be dynamic and interactive with the help of computer software and hardware, so that the audience can participate in the designs more intensely. For another, the form of design can also be virtualized and immersed with the help of digital technology. For example, virtual reality (VR) and augmented reality (AR) and other technologies can provide the audience with an immersive experience, enabling the audience to deeply feel the atmosphere and emotion behind the design. In addition, the form of the work can also realize cross-border integration with the help of digital technology. Visual communication design can be integrated with other art forms, such as the integration with film and television production, game

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development and other fields, so as to create a more diversified work form.

3.3 Interactive Aesthetics Becomes an Important Part of Visual Communication Design Education

With the rapid development of the digital creative industry, interactive aesthetics has become an important part of visual communication design education. For example, it has been applied in user experience design, dynamic graphics and multimedia design, interactive installation design, interaction design theory, interactive brand promotion and interdisciplinary practice. First of all, UX design is an important part of visual communication design, emphasizing the concept of user-centered design. In visual communication design education, students are guided to gain a deeper understanding of the concepts and principles of UX design, and to master the skills of user research, interaction design, and evaluation, which will help to enhance the utility of the designs and user satisfaction. Cultivating students' UX design skills through practical case studies, simulation projects and teamwork is of great significance in cultivating talents with market competitiveness[8].

Secondly, dynamic graphics and multimedia design is one of the core technologies in the era of digital creativity, which is widely used in the fields of film and television, advertising, games and so on. In visual communication design education, guiding students to master the basic principles and skills of dynamic graphics and multimedia design can enhance the visual effect and interactivity of the designs. Through the curriculum and practical operation, students can understand the creative process, technical application and market trend of dynamic graphics and multimedia design, which will provide them with more opportunities and development room in their future career. Finally, interactive device design is an emerging design field that realizes the interactive experience between human and the environment through the use of sensors, interactive technology and multimedia means. In visual communication design education, guiding students to understand the basic concepts and design principles of interactive device design, and mastering related techniques and tools can lay the foundation for them to design more creative and attractive works in the future. Through the curriculum and practical operation, students can engage in the project of interactive installation design to develop their innovative thinking and practical ability[9].

In conclusion, it is of great significance to integrate interactive aesthetics into visual communication design education. By cultivating students' qualities in user experience design ability, dynamic graphics and multimedia design skills, interactive device design thinking, interactive design theory literacy, interactive brand promotion awareness and interdisciplinary practice ability, we can enhance their market competitiveness and creativity and cultivate more excellent visual communication design talents for society.

4. New Ideas for Reforming Visual Communication Design Education

4.1 Building an Immersive Classroom Based on New Technologies

The new idea of visual communication design education reform is to build an immersive classroom based on new technologies. This classroom mode can break the limitations of traditional teaching content, and it focuses on in-depth practical teaching, promotes local culture, develops professional characteristics, strengthen intercollegiate differentiation, enhance students' cultural depth, and boosts the development of humanistic quality education. In terms of new technologies, information-based teaching methods can be introduced, such as Moodle and Zoom to share course materials with students through the cloud platform, which will guide the students to carry out independent learning with the materials provided by the teacher, enhance the students' ability to organize all kinds of data and boost their all-round development (As show in figure 3). Additionally, the online learning method is proving to be more popular among students. In addition, online platforms can be used to better understand their learning results and the application of online learning platforms through the analysis of big data technology, so as to optimize the classroom teaching methods, and implement targeted guidance for students. In terms of immersive classrooms, technical environments such as VR and AR can be built so that students can immerse themselves in virtual environments and experience the practical application of visual communication design. By simulating real design scenes and cases, students can have a deeper understanding of the principles and methods of visual communication design and improve their practical ability and design level. At the same time, the immersive classroom can also enhance students' interest and participation, and improve the learning efficiency and teaching quality.

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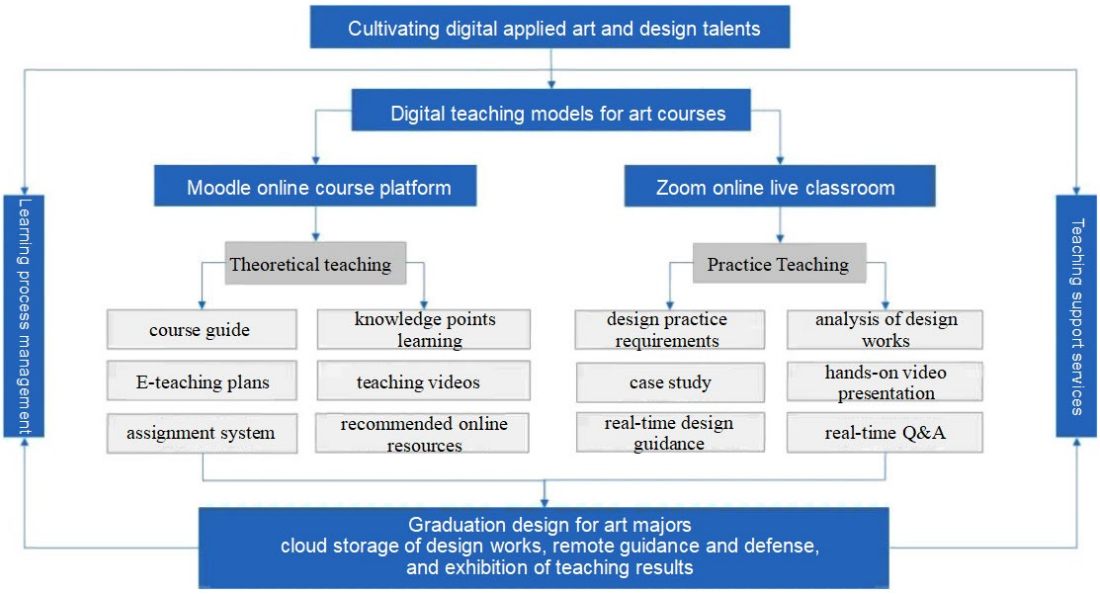

Figure 3. Digital teaching model for visual communication design education

4.2 Innovative Teaching Model to Meet the Needs of Industry Development

The new idea of visual communication design education reform is to innovate the teaching mode to meet the needs of the industry development. Specifically, it can start from the following aspects. The first is the introduction of a project-based teaching method. In the teaching of visual communication design majors, teachers can introduce the project-based teaching method by guiding students to participate in actual projects, so that they can learn and master professional knowledge in practice[10]. This will enable students to better understand the trends and needs of the industry development and improve their practical ability and comprehensive quality. The second is to teach by combining industry cases. Teachers can teach by combining industry cases, so that students can understand the practical application of visual communication design and the dynamics of industry development by analyzing actual cases. This will enable students to better understand the operation mode of the industry and market demand, and improve their market awareness and competitiveness. The third is to strengthen relationships with enterprises. Schools can improve their cooperation with enterprises, so that students can better understand the trend and demand of the industry development through school-enterprise cooperation, and at the same time, they can also provide enterprises with talent support and intellectual guarantee, which will enable students to better integrate into the industry and lay a solid foundation for their future career development.

The fourth is the introduction of new teaching tools and technologies. Teachers can introduce new teaching tools and technologies, such as artificial intelligence and big data analysis, to assist teaching and learning. This will enable students to better adapt to the changes in the development of the industry and improve their innovative ability and comprehensive quality. The fifth is to focus on students' personality development. Teachers can focus on students' personality development and provide them with personalized teaching programs and guidance according to their characteristics and interests. This will allow students to better leverage their advantages and potentials, and improve their learning efficiency and comprehensive quality. In conclusion, the new idea of visual communication design education reform is to innovate the teaching mode to meet the needs of industry development. By introducing a project-based teaching method, teaching with industry cases, strengthening cooperation with enterprises, introducing new teaching tools and technologies and focusing on students' personality development, we can better meet the needs of industry development and improve the quality and competitiveness of visual communication design talents.(As shown in figure 4)

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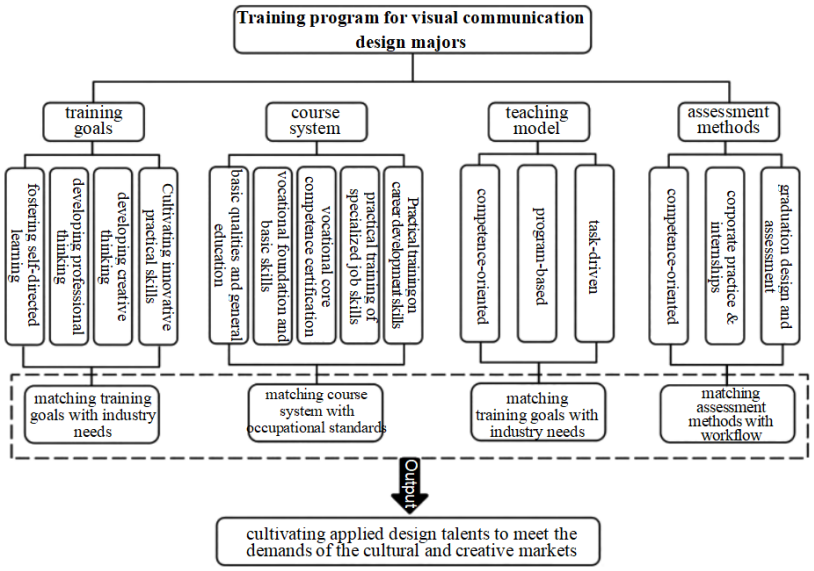

Figure 4. Training program for visual communication design majors

4.3 Integrating Disciplinary Resources to Promote Visual Communication STEAM Education

The new idea of visual communication design education reform is to integrate disciplinary resources to promote visual communication STEAM education. STEAM education is an interdisciplinary education concept that aims to cultivate students' science, technology, engineering, art and mathematics. Integrating STEAM education in visual communication design can help students better understand the nature and value of design, and improve their innovative ability and comprehensive quality. Specifically, the visual communication design program can be integrated with several disciplines, such as computer science, media arts, and interaction design. Through the integration with these disciplines, it can promote the innovation and development of visual communication design, and at the same time, it can provide students with a richer learning experience. In addition, the visual communication design program can be integrated with humanities, social and other art disciplines in order to cultivate students' literacy and aesthetic ability.[11] For one thing, schools can offer interdisciplinary courses to integrate the knowledge and skills of different disciplines into the teaching of visual communication design. This will enable students to better understand the diversity and complexity of design and cultivate their interdisciplinary thinking and creative ability. For another, it can strengthen the cooperation with the industry, and through school-enterprise cooperation, students can better understand the trend and demand of the industry development, and at the same time, it can provide talent support and intellectual guarantee for the enterprises. This will enable students to better integrate into the industry and lay a solid foundation for their future career development. In conclusion, the new idea of visual communication design education reform is to integrate disciplinary resources and promote visual communication STEAM education. By offering interdisciplinary courses, organizing interdisciplinary projects, introducing diversified teaching methods and strengthening cooperation with the industry, we can better meet the needs of the industry's development and improve the quality and competitiveness of visual communication design talents.

4.4 Interdisciplinary Teacher Team Building

In the context of the widespread application of digital technology, artificial intelligence is quietly changing the way many artists create. The introduction of artificial intelligence technology in the creative process can bring artists unique perception and experience, providing more possibilities for artistic creation. Therefore, the curriculum reform needs to adapt to the changes of the times and build a interdisciplinary teacher team.

The construction of digitalized majors of art design requires us to expand the disciplinary boundaries of this profession, conduct interdisciplinary research among different majors in design, and integrate the technical strengths of different majors to enhance the quality of works created by students in this major. Students will be trained to innovate, create, and start businesses from an interdisciplinary macro perspective. The professional "digital" faculty team is composed of faculty members with "digital" research expertise in various design disciplines, thus initially realizing inter-disciplinary teaching and

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research in terms of course selection, resources sharing, interactive teaching and mutual assistance in projects within the disciplines.

4.5 Developing a T-shaped Teaching Model

The T-shaped teaching mode, in which a single topic runs through all the subject panels, with each panel having its own independent knowledge training, and the panels being integrated and linked together to form a rigorous and open logic system. The adoption of a multi-angle analysis of the curriculum design program cultivates students' ability to observe things comprehensively. From "seeing" to "thinking", from "thinking" to "expressing", it opens up horizons and broadens their minds. It also incorporates a series of lectures to enhance students' professional quality and aesthetic ability, so that students will be passionate about their profession and think more actively. In terms of practical assignments, a multi-dimensional and flexible training method is adopted, such as drawing diaries, to help students use various means to record the thinking process within or outside the course, thus forming a complete thinking mind.

5. Summary

Digital technology has gradually infiltrated into various art categories, which not only expands the field of art, but also realizes the situation of cross-integration between traditional art and modern art. The continuous development and innovation of digital technology has brought new possibilities and challenges to art education. For the education of visual communication design, digital technology brings both challenges and opportunities. With the powerful functions of digital technology, almost all design works can be presented through digital technology. This can not only improve the efficiency of the classroom, but also deepen students' understanding of digital art and influence modern art education to change from the idea of quantity over quality to quality over quantity. The traditional goal of visual communication design education is mainly to cultivate talents with basic design skills, while the development of digital creative industries needs more talents with innovative thinking and digital collaboration ability. Therefore, the future visual communication design education should pay more attention to cultivating students' comprehensive quality and innovation ability, and constantly explore new methods and ideas in the teaching process in order to cultivate more high-quality talents in line with the market demand.

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