

# Digital Empowerment: Construction of Visual Communication Design Major in Private Higher Education Institutions

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**Abstract:** In the wave of “Digital Empowerment,” this paper delves deeply into the evolution of Visual Communication Design specializations within private higher education institutions. By elucidating the impact of “Digital Empowerment” on Visual Communication Design specializations, the current curriculum design, teaching modes, and changes in student demands in private institutions are analyzed. Using Wuhan College of Bioengineering as a case study for empirical research, strategies such as innovative curriculum system design, optimization of teaching resources, and interdisciplinary cooperation and practice are proposed.

**Keywords:** digital empowerment; visual communication design; private higher education institutions; specialization construction; construction strategies

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## Introduction

The “Fourteenth Five-Year” plan and the 2035 vision proposal issued by our government clearly stipulate the promotion of deep integration among industries such as the internet, big data, and artificial intelligence, aiming at achieving industrial digital transformation, with the reliance on treating the digital economy as a strategic emerging industry<sup>[1]</sup>. How to drive the development and construction of the Visual Communication Design field amidst the wave of “digital empowerment,” and how to cultivate design talents who can adeptly handle technology and possess profound creativity in a digital environment, are propositions that require thorough contemplation and discussion.

## 1. Influence of Digital Empowerment on Visual Communication Design Specialization

From November 19 to 21, 2020, China held its first national-level conference on 5G and the Internet. The conference introduced the concept of “Digital Empowerment,” emphasizing the rejuvenation of various industries through digital means and using informatization as a driving force to achieve modernization. The rapid advancement of artificial intelligence technology is profoundly altering the landscape of education. The methods of acquiring and imparting knowledge, as well as the interaction between teachers and students, are undergoing a profound and magnificent transformation<sup>[2]</sup>. Additionally, digital empowerment has spurred the emergence of new design fields such as CV (Computer Vision), NLP (Natural Language Processing), and HCI (Human-Computer Interaction), providing a more flexible and diverse range of employment areas for specialization construction. Tongji University is the first domestic institution to complete an integrated “Bachelor-Master-Doctoral” chain in intelligent design talent cultivation. The “Visual Communication Design - Artificial Intelligence” program at the university enrolls students through a national examination selection followed by a secondary selection after admission. The admitted students come from three professional categories within Tongji University: Design, Information, and Architectural Planning, Landscape & Design. This admission method showcases the multidisciplinary nature of the intelligent design dual-degree program, encompassing not only artistic design and aesthetic concepts but also requiring students to grasp various technical knowledge and possess practical operational capabilities.

## 2. Current State of Visual Communication Design Specialization in Private Higher Education Institutions

### 2.1 Overview of Current Curriculum Settings and Teaching Models

Due to their historical background and distinctive nature of education provision, private higher education institutions face some common issues in the Visual Communication Design specialization, such as lack of distinctive features in curriculum settings, monotonous teaching methods, weak practical teaching links, insufficient comprehensive quality of students, and disconnection with market demands<sup>[3]</sup>. In the

context of “Digital Empowerment,” many private institutions have introduced digital courses like User Experience Design, Application of Virtual Reality Technology, etc., to adapt to the new requirements for designers in the digital era. Meanwhile, teaching models are evolving towards project-driven and practice-oriented directions, enabling students to cultivate comprehensive design abilities through real-world cases.

## 2.2 Characteristics and Demand Changes of Student Groups

Unlike before, today’s visual communication students are eager to apply their acquired knowledge and skills to real-world projects, craving for more opportunities to connect with the industry to enhance their competitiveness in the job market. They possess a higher level of digital literacy, enabling them to keenly grasp market trends. They are enthusiastic about cleverly integrating their design works into digital platforms such as mobile applications and interactive media, aiming for a deeper engagement with the audience.

## 3. Case Analysis and Empirical Study on the “Digital Empowerment” Construction at Wuhan University of Bioengineering

### 3.1 Case Analysis: Construction of Visual Communication Design Specialization

Wuhan University of Bioengineering has accurately captured the essence of digital empowerment in the construction of its Visual Communication Design specialization. Through proactive insight into societal needs, the institute fully explores the tripartite teaching model of “Topic-Teaching-Social Practice,” actively adjusting the curriculum to integrate digital technology into traditional design courses. Taking the “Mobile Media and User Experience Design” course as an example, students learn how to optimize user experiences from the angle of designing mobile applications, achieving more intuitive communication effects through digital empowerment. In the “New Media Communication” course, the institute introduces Virtual Reality technology, enabling students to experience firsthand the interactivity and immersive features of digital media. Moreover, the institute provides students with a diverse array of digital tools, ranging from 3D modeling to data visualization, and from image processing to animation production, thereby comprehensively enhancing students’ digital literacy and creative application abilities (Fig. 1).

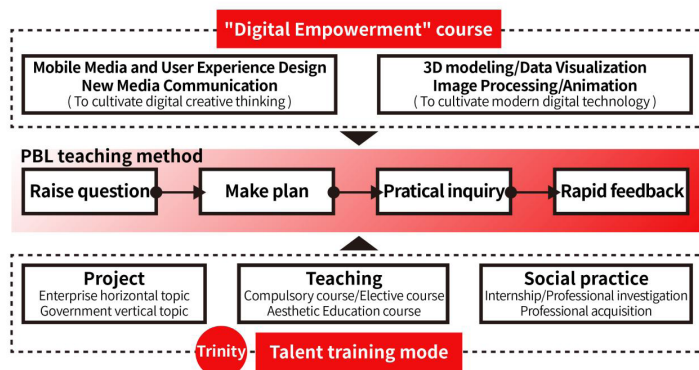


Figure 1. Cultivation model integrating digital courses in Visual Communication Design specialization (drawn by the author)

### 3.2 Empirical Study: Students’ Innovative Achievements in a Digitally Empowered Environment

In the classrooms of the School of Arts at Wuhan University of Bioengineering, digital empowerment is not merely a theoretical concept, but vividly manifested through students’ creations and practices. Over the past three years, faculty members have guided students of the Visual Communication Design specialization in winning a total of 452 awards in nationwide competitions such as the “Internet+” contest, Hua Can Award, and Jin Du Award. Among these, over 80 awards were secured in international competitions like the UK Eco Design Award, G CROSS Creative Award, and Hong Kong Contemporary Design Award, ranking the institution among the top of its kind in the province. Additionally, 9 national patents have been authorized, and 11 projects have been approved at the national and provincial levels under the

“Major Creation Project” initiative. In 2023, graduating students from the Visual Communication Design specialization focused their graduation projects on “Trans-field Digital Creativity,” orchestrating a “Offline + Online” dual exhibition. In the exhibition, numerous works integrated sound visualization videos, AR-enhanced posters, and installation spaces, enabling interaction through touch and voice control, thereby creating an immersive artistic environment for the audience.

#### 4. Strategies for Constructing Visual Communication Design Programs in Private Higher Education Institutions Based on “Digital Empowerment”

In the digital era, visual communication design programs in private higher education institutions need to formulate strategies, take “digital empowerment” as a guide, and implement the “4P” professional construction concept to ensure that the professional construction is in sync with the times, adapts to social needs, and cultivates excellent design talents with innovative capabilities and digital literacy (Fig. 2).

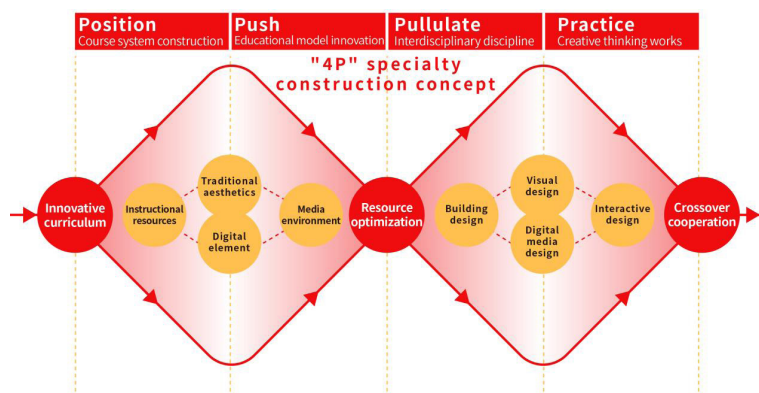


Figure 2. Strategies for constructing visual communication design programs in private higher education institutions based on “digital empowerment” (drawn by the author)

##### 4.1 Innovative Curriculum System Design: Integrating Traditional and Digital Elements

In an era advocating cultural confidence, the integration of new technologies, new thinking, and traditional elements is of great significance for promoting and inheriting excellent traditional culture [4]. In curriculum system design, traditional aesthetics and digital elements should be integrated to enable students to obtain digital creation capabilities based on traditional foundations. For different design fields such as graphic design, animation, and interaction design, tailor-made courses should be formulated so that students can master traditional design theories and proficiently use digital tools, achieving design diversity and innovation, and allowing students to explore the infinite possibilities of graphic works in the digital environment.

##### 4.2 Optimization of Teaching Resources: Integration of Digital Tools and Platforms

The cognitive theory of learning emphasizes that the processing of information can affect learners by altering behavioral patterns. This theory enlightens us to the fact that media serves as a crucial medium to facilitate communication between teachers and students. Traditionally, media was merely perceived as a “channel” for information transmission, but now, we are starting to acknowledge the role of educational resources and media environment [5]. Against this backdrop, it’s pivotal to actively establish digital platforms for showcasing works, introducing virtual laboratories, online collaborative platforms, etc., to provide students with opportunities to display their works. This, in turn, encourages cross-school and cross-regional collaboration, urging them to translate what they have learned into tangible creative outcomes.

##### 4.3 Cross-boundary Cooperation and Practice: Expanding the Realm of Cooperation in the Digital Era

A significant trend in future teaching will be interdisciplinary education, especially courses involving various artistic disciplines, characterized by their rich and diverse integrative features [6]. The latest 2022 version of the “Graduate Education Discipline Directory” positions

design as a first-level discipline of interdisciplinary categories, implying that the future of design students is closely connected to cross-specialty and interdisciplinary studies. The future world will be a world of interdisciplinary studies, and “Design + AI” is just one of the exciting combinations. Other combinations like “Architecture + Gaming,” “Visual Communication + Digital Media,” “Film and Television + Interaction,” etc., will also bring different sparks of collision, promoting the frontier development of the design field.

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