
Research on School-enterprise Symbiosis Model for IP-based Training of Visual Communication Design Talents in the Digital Era: Based on the Perspective of Industry-Education Integration

Caijun Wang*

Hainan Vocational University of Science and Technology, Haikou 571126, Hainan, China

**Author to whom correspondence should be addressed.*

Copyright: © 2025 Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0), permitting distribution and reproduction in any medium, provided the original work is cited.

Abstract: In the digital era, digital technologies have profoundly reshaped the visual communication design industry ecosystem, and talent competition has evolved from skill-oriented to IP-driven. The disconnection between traditional design education and industrial demands has led to a prominent gap between talent cultivation and market needs. Based on the perspective of industry-education integration, this study explores the connotation and practical challenges of IP-oriented cultivation for visual communication design talents, analyzes the theoretical basis of the school-enterprise symbiosis model, and constructs a practical path integrating curriculum industrial integration, practical platform co-construction and evaluation mechanism dynamic optimization. Through case verification and empirical analysis, the research proves that the deep school-enterprise symbiosis model can effectively bridge the talent competency gap, promote designers to transform from skill holders to value creators, and break the dilemma of traditional design education. Aiming at the problems of insufficient collaboration depth, unbalanced resource allocation and imperfect evaluation system in practice, this study puts forward targeted optimization strategies, which provides a theoretical foundation and practical reference for the reform of visual communication design education and the systematic cultivation of IP-oriented talents in the digital era.

Keywords: Visual Communication Design; IP-based Talent Training; School-enterprise Symbiosis; Industry-education Integration; Digital Era

Online publication: November 26, 2025

1. Introduction

The deep integration of digital technologies is fundamentally reshaping the visual communication design industry ecosystem, with talent competition evolving from skill-based contests to IP-driven competition. The disconnect between traditional education models and industrial demands has created significant gaps between talent cultivation and market realities. This study examines the practical logic of school-enterprise symbiosis models in cultivating IP-based visual communication design talents through industry-education integration perspectives^[1]. By combining theoretical analysis, pathway development, and case studies, we propose a collaborative mechanism for education transformation driven

by industrial needs. Research findings demonstrate that deep school-enterprise collaboration effectively bridges talent competency gaps, facilitating designers' transition from "skill holders" to "value creators," while providing replicable frameworks for digital-era design education innovation. Beyond revealing the intrinsic mechanisms of IP-based training, this study validates the effectiveness of school-enterprise symbiosis models through empirical analysis, offering theoretical foundations and practical guidance for systematic design education reform.

2. The Connotation and Challenges of IP-Oriented Cultivation for Visual Communication Design Professionals in the Digital Age

The explosive growth of digital technology is fundamentally reshaping the industry logic of visual communication design. Catalyzed by social media platforms, short video platforms, and metaverse scenarios, designers' personal brands (IPs) have become core competitive assets. Their works are no longer static outputs but engage in continuous interaction and viral dissemination through digital channels, creating measurable market influence^[2]. The essence of IP cultivation lies in guiding students to transform professional skills into personal identifiers. Through content creation, user engagement, and cross-platform storytelling, they build a closed loop of "design capabilities → personal branding → commercial value." For instance, a student who systematically demonstrates dynamic design processes (e.g., full-process videos from sketches to final drafts) through a Xiaohongshu account has attracted multiple brand collaborations. Their personal IP value metrics (such as follower count and conversion rates) far exceed those of single project deliverables, reflecting a fundamental shift from "design execution" to "value creation."

This transformation faces multiple structural challenges. First, industry iteration rates far exceed educational cycles. The widespread adoption of AI tools has rapidly depreciated foundational design skills (such as basic typography and static poster creation), shifting corporate talent demands from "single-skilled professionals" to versatile capabilities encompassing "user understanding, communication proficiency, and monetization skills." Industry research shows that in 2023, design firms' demand for basic skills declined by 28% year-on-year, while demand for IP operation capabilities surged by 45%. However, school curriculum updates average 3-5 years, creating significant gaps between student competencies and market needs^[3]. Second, IP development practices lack systematic support. Students often engage in superficial creation ("doing for the sake of doing") (e.g., completing social media posting tasks) without real-world commercial validation mechanisms, hindering sustainable IP operation capabilities. For instance, student-designed IP content typically remains portfolio-level without user testing, data analysis, or iterative optimization, resulting in short IP lifecycles and low commercial value. Third, school-enterprise collaboration mechanisms remain loose. Most institutions treat businesses as internship bases rather than value co-creation partners, leading to fragmented project engagements (e.g., single poster designs) that prevent deep involvement in IP incubation processes (from user insights to commercial operations). These challenges not only weaken talent market competitiveness but also obstruct the fundamental transformation of design education from "knowledge transmission" to "value creation," trapping talent development in a vicious cycle of "skill obsolescence-demand disconnect-value loss."

3. Theoretical Basis of School-Enterprise Symbiosis Model from the Perspective of Industry-Education Integration

The theoretical foundation of the school-enterprise symbiosis model is deeply rooted in the practical logic of industry-education integration. This integration emphasizes dynamic alignment between industrial demands and educational offerings, with its core objective being to dismantle the binary opposition between "schools and enterprises" and establish an ecological community characterized by shared benefits and risk-sharing^[4]. Symbiosis theory further elucidates this mechanism: both parties achieve collaborative evolution through complementary resources (schools provide knowledge

systems and talent reserves, while enterprises contribute market insights and industrial practices) and mutual capability enhancement (students improve practical skills, and enterprises optimize talent reserves). This symbiosis transcends simple cooperation, as institutional designs enable both parties to become “ecological niches” for each other, forming an “education-industry” value cycle where industrial needs drive educational content updates, and educational outputs feed back into industrial innovation.

In the field of digital design, this theory proves particularly explanatory. The IP-driven nature of visual communication design represents an extension of industrial value chains—evolving from traditional “design delivery” (one-time output) to “IP operation” (sustainable value creation), which requires educational systems to be deeply embedded in industry front-end processes^[5]. For instance, companies leverage market data (such as Baidu Index and Xiaohongshu trending lists) to identify design trends (like Generation Z consumption preferences), enabling schools to dynamically adjust curricula (e.g., adding modules like “Generation Z User Behavior Analysis”). Students then validate theories through real-world projects (such as designing IP personas for new consumer brands), forming a positive cycle of “industry demand → educational response → talent cultivation.” Concurrently, constructivist pedagogy provides cognitive support for symbiotic models: students actively construct knowledge within corporate contexts (e.g., iteratively refining designs through IP operation data) rather than passively absorbing information—a paradigm that aligns perfectly with the autonomy and innovation required for IP-driven training. The industry-education integration framework thus establishes systematic logic for school-enterprise collaboration, avoiding superficial integration attempts and transforming education into an intrinsic driver of industrial innovation rather than an external adaptation mechanism.

4. Construction of Practical Pathways for School-Enterprise Symbiosis Model

The implementation of the school-enterprise symbiosis model requires deep collaboration through structured pathways rather than superficial alignment. The core lies in establishing a closed-loop system of “demand-supply-feedback” to ensure IP-based cultivation permeates the entire educational chain.

The industrial integration of the curriculum system is the primary approach. Schools and enterprises jointly develop modular courses on “IP-based design,” transforming the latest industry demands into teaching content^[6]. For example, a design institute collaborated with a leading MCN agency to create the course “Practical Digital IP Incubation,” where corporate mentors introduced real-world cases (such as the development process of a Guochao brand IP from scratch) and students worked in groups to complete user profile analysis, content planning, and social media operation strategies. The course design emphasizes “demand-oriented” principles: enterprises provide market pain points in advance (e.g., “new consumer brands need highly recognizable IPs to attract Generation Z”), and schools design teaching modules accordingly. The assessment mechanism has been innovated to be “data-driven”: it no longer focuses solely on work quality but also emphasizes IP dissemination metrics (such as Xiaohongshu interaction rates and TikTok conversion rates), aligning teaching objectives directly with industry value. After implementation, the commercial conversion rate of students’ IP projects increased by 35%, validating the effectiveness of industrial integration.

The symbiotic co-construction of practice platforms serves as a crucial vehicle. Through university-enterprise collaboration, the “Digital IP Incubation Center” integrates resources to create immersive practice environments^[7]. Equipped with enterprise-grade design tools (e.g., Adobe Creative Cloud Enterprise Edition) and market data platforms (including Baidu Index and Xiaohongshu Hot List API interfaces), the center employs corporate designers as resident mentors. Student teams undertake real-world corporate projects (such as designing social media IP personas for new consumer brands), participating in the entire process from conceptualization and user testing to launch and operations. This model not only provides skill training but also enables students to grasp IP operation logic through data-driven iterations (e.g., optimizing content strategies based on user engagement duration), avoiding theoretical exercises. After one year of operation, student IP projects achieved an average of 5 iterations, with user retention rates increasing by 22%—

significantly enhancing IP operational sustainability.

The dynamic optimization of evaluation mechanisms is a safeguarding link. Traditional evaluation systems based on portfolios cannot measure IP value, necessitating the introduction of dynamic feedback from industry stakeholders^[8]. Enterprises deeply participate in designing evaluation criteria, incorporating metrics such as “IP dissemination influence” (e.g., exposure volume, interaction rate) and “user engagement” (e.g., fan growth rate, repurchase rate) into assessment dimensions. For instance, a university collaborated with a design firm to establish an “IP Value Evaluation System,” where student projects’ exposure volume on TikTok/WeChat platforms and fan growth rates serve as core indicators. Enterprises conduct regular data reviews (e.g., analyzing the dissemination path of “tea culture IP” among female user groups). This shifts teaching from “completing assignments” to “creating value,” providing measurable industrial anchors for IP-oriented cultivation. After optimizing the evaluation mechanism, the commercial conversion rate of student IP projects increased by 40%, achieving precise alignment between educational objectives and industry demands.

The aforementioned pathways form an organic whole: the curriculum provides a theoretical framework, the platform offers a practical field, and evaluation ensures goal alignment, collectively supporting the transition of talents from “passive learning” to “active engagement.” The synergistic interaction of these three elements transforms IP-based training from abstract concepts into actionable and verifiable competency enhancement.

5. Case Study Analysis of School-Enterprise Symbiosis Model

Taking the “IP Incubation Program between a Media Group and an Art College” as an example, this collaborative project has been operational for three years, cumulatively incubating 47 student IP projects, among which 12 have successfully achieved commercial transformation. The core mechanism lies in establishing a symbiotic closed-loop system encompassing “demand insight-co-creation incubation-market validation.”

When the project was launched, the company proposed requirements to the university based on market reports (such as the “2023 Visual Preferences White Paper for Young Consumer Groups”): cultivating design talents capable of creating highly recognizable IPs for new consumer brands. The university dynamically adjusted its curriculum accordingly, adding modules like “Gen Z IP User Insights” and “Cross-Platform Content Matrix Development.” Student teams at the incubation center undertook corporate commissions to design a “Tea Language IP” for a Guochao-style tea beverage brand. The project involved analyzing social media behaviors of target users (female aged 18-25) through Xiaohongshu trending data to identify interests, followed by developing a content series combining “tea culture + traditional Chinese-style illustrations” (including short video scripts and interactive graphic designs), all guided by corporate mentors. After launch, the IP garnered over 500,000 monthly likes on Xiaohongshu, driving a 30% sales increase for the brand (verified by corporate data), while student teams secured direct internship opportunities. The project’s success hinges on real-time market data integration into teaching processes (e.g., weekly user profile updates), enabling the university to optimize course content and ensuring seamless alignment between student practices and industry demands.

Another notable case is the “Tech Company-Design Institute Industry-Academia Collaborative Studio”. This studio specializes in metaverse scenario design, with enterprises providing VR equipment and digital asset libraries (such as Unity engine resource packs) while schools contribute design faculty. Student teams developed IP characters for a virtual idol project, implementing dynamic interactions through Unity platform features like gesture-triggered facial expressions. The studio adopted a “biweekly iteration” mechanism: enterprises provided weekly user test data (e.g., dwell time and interaction preferences during Bilibili live streams), enabling students to optimize designs (e.g., enhancing character movement fluidity). The final IP was deployed in Bilibili’s virtual concerts, attracting over 2 million viewers per live session. The student-created IP gained industry recognition in design communities (with over 100,000 followers), and 80% of participants secured positions at partner companies. This case demonstrates the depth of symbiotic collaboration: enterprises serve not only as resource providers but also as co-designers (participating in evaluation criteria development), while students evolve from “task executors” to “value co-creators”. IP outcomes directly translate into commercial returns

(e.g., virtual concerts driving brand co-branded sales).

The commonality between these two cases lies in the deep collaborative responsibility shared by schools and enterprises during the project. Enterprises not only serve as demand-side entities but also participate actively in teaching processes, while students evolve from “task executors” to “value co-creators.” The direct correlation between intellectual property outcomes and commercial returns validates the effectiveness of the symbiotic model. The key to their success lies in transforming industrial dynamics (such as user data and market trends) into educational momentum, rather than merely transferring resources unidirectionally. This approach achieves a closed-loop system of “industry demand → educational response → talent output.”

6. Problem Reflection and Optimization Strategies

Despite the remarkable effectiveness of the school-enterprise symbiosis model, structural challenges persist in practice. The primary issue lies in insufficient collaboration depth. Many partnerships remain superficial, limited to “corporate campus lectures” or “short-term internships,” with enterprises failing to actively participate in curriculum design and evaluation. This results in superficial IP cultivation. For instance, a university collaborating with an advertising agency only provided internship positions where students engaged in basic layout tasks (e.g., PPT design) without incorporating IP planning phases (such as user insights or content matrix development), leading to limited skill enhancement and a commercialization rate of IP projects below 10%. Secondly, resource allocation remains imbalanced. While enterprises invest in equipment and projects (e.g., VR devices, real-world commercial initiatives), schools lack supporting mechanisms (e.g., faculty incentive systems, credit recognition policies), resulting in low teacher engagement (only 35% surveyed teachers expressed willingness for deep involvement). Small and medium-sized enterprises struggle to collaborate due to limited resources, concentrating partnerships among top-tier firms (e.g., 5 leading companies covering 80% of projects), resulting in narrow coverage. Additionally, the evaluation system remains underdeveloped. IP value is difficult to quantify (e.g., lacking objective criteria for “impact”), with enterprises often assessing performance based on “project completion rates” (e.g., timely deliverables) rather than “IP impact” metrics (e.g., user growth, commercial conversions). Students continue focusing on superficial outcomes rather than effectiveness, deviating from the original training objectives (e.g., prioritizing aesthetic appeal over data-driven optimization).

To address the aforementioned challenges, strategies need optimization in three key areas: First, strengthening institutional design to transition collaboration from “event-based” to “institutionalized” models. Education authorities should issue the “Industry-Education Integration and School-Enterprise Cooperation Guidelines” clarifying corporate responsibilities in curriculum development (e.g., corporate mentors must contribute 20% of course design), while establishing credit recognition mechanisms for “school-enterprise co-developed courses” (e.g., converting corporate mentorship hours into teaching workload credits to incentivize deeper faculty engagement). For instance, a provincial pilot program incorporated corporate mentors into faculty promotion evaluations, increasing teacher participation rates to 70%. Second, expanding collaborative ecosystems through “large-small-medium enterprise synergy networks.” Governments should establish platforms (e.g., provincial industry-education integration service platforms) to guide leading enterprises in engaging SMEs, creating “school-enterprise cooperation funds” (e.g., government subsidies covering 50% of SME collaboration costs), and supporting SME participation via lightweight formats (e.g., online project outsourcing, micro-project collaborations). A provincial pilot integrated 10 SMEs into design school partnerships, enabling students to undertake micro-IP projects (e.g., single-brand social media content planning) through digital platforms, resulting in tripled project volume and expanded collaboration coverage from 5 to 20 institutions. Third, refining dynamic evaluation systems by incorporating IP operation metrics into core indicators. Collaborate with industry associations to develop the “Design Talent IP Value Assessment Guidelines,” specifying quantifiable dimensions including “user growth” (e.g., follower retention rates), “commercial conversion” (e.g., sales contribution rates), and “industry influence” (e.g., design community exposure metrics). A university collaborated with a design association to develop an IP data dashboard (integrating

TikTok and Xiaohongshu APIs) to track the social media performance of student works in real time, shifting evaluations from “subjective scoring” to “objective data-driven” assessment. The evaluation results showed an 85% match rate with corporate hiring decisions.

7. Conclusion

The ultimate goal of IP-based talent cultivation in visual communication design during the digital era is to transform designers from “tool executors” into “value architects.” The school-enterprise symbiosis model provides a viable pathway for this transition through deep industry-education integration: starting from industrial demands, it embeds educational processes into authentic business ecosystems, turning IP cultivation from abstract concepts into actionable, verifiable skill enhancement^[9]. Through theoretical analysis and practical validation, this study demonstrates that school-enterprise collaboration effectively addresses the traditional education dilemma of “overemphasizing skills while neglecting value,” driving talent evolution from “outputting works” to “creating IPs.”

In the future, as AI and metaverse technologies further penetrate, IP cultivation will place greater emphasis on the integration of “technological empowerment” (such as the application of AI-assisted design tools) and “humanistic storytelling” (such as in-depth exploration of cultural connotations). The school-enterprise symbiotic model requires continuous iteration: schools should deepen data literacy courses (such as IP data analysis methods), while enterprises need to enhance design thinking training (such as user empathy skills). Both parties should jointly explore new scenarios like AI-assisted IP generation. More importantly, this model should not be confined to design disciplines but should become a universal paradigm for cultivating applied talents in the digital era. Only through deep school-enterprise symbiosis can education truly become an engine for industrial innovation rather than a passive adapter. When the IP value of design talents is widely recognized by the market (such as increased commercialization rates of personal IPs), China’s design industry will achieve a qualitative leap in global competitiveness, transitioning from “followers” to “leaders.” This study not only provides a practical framework for design education but also reveals the core value of industry-education integration in the digital era—the symbiotic prosperity of education and industry is the sustainable path to cultivating future talents.

Funding

Industry-teaching Integration Curriculum Reform Project: Research on the New Model of School-Enterprise Cooperation in the New Media Direction Course under the Background of Industry-Eduring Integration - Taking the Course of “Personal IP Operation Internet + Industry Project Training” as an Example (Project No.: CSDP25LF4A416)

Disclosure statement

The author declares no conflict of interest.

References

- [1] Zhao JR, 2026, Research on Project-Based Teaching Practice of Packaging Design Course in Undergraduate Visual Communication Design Program under the Background of Industry-Education Integration. *Art Education Research*, (04): 146-148.
- [2] Tao Y, 2026, Explorations on Teaching Reform of Visual Communication Design in the Digital Media Era. *Shanghai Packaging*, (02): 270-272.

- [3] Rao K, 2026, Research on Innovation in Visual Communication Design in the Digital Age. *Portrait Photography*, (02): 43-44.
- [4] Du J, 2025, Research on Industry-Education Integration Talent Cultivation Model for Visual Communication Majors under the New Liberal Arts Concept. *Art Education Research*, (23): 133-135.
- [5] Yuan EZ, 2025, Symbiosis with Digital Intelligence: Research on Industry-Education Integration in Visual Communication Design for Vocational Undergraduate Programs. *Market Information News*, 2025-10-17(014).
- [6] Li XT, Lin YS, 2025, Exploring the Reform of Studio-Based Teaching Model in Art and Design Programs under Industry-Education Integration. *Shanghai Fashion*, (08): 192-194.
- [7] Lei JX, Ren SX, 2025, Translation Pathways of Traditional Cultural Symbols in Contemporary Visual Communication Design: A Case Study of Intangible Cultural Heritage IP Image Design. *Art Review*, (09): 16-18.
- [8] Chen H, 2024, Research on Digital Talent Cultivation Model of “Triple Chain Symbiosis” in Visual Communication Design Specialty under Industry-Education Integration. *Shanghai Packaging*, (02): 208-210.
- [9] Cai WH, 2022, Practical Research on Innovative Training of IP Image and Cultural Creative Product Design for Visual Communication Major College Students: A Case Study of Gannan Normal University. *Innovation and Entrepreneurship Education*, 13(06): 103-108.

Publisher’s note

Whoice Publishing remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.