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Critical Thinking Education in Visual Communication Design in China: Current Status and Key Challenges

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Abstract: ***This study explores the current status and challenges of integrating critical thinking education into visual communication design programs in Chinese universities. It analyzes three key dimensions: policy direction, instructional practice, and implementation constraints. Although national policies emphasize innovation and critical thinking, the study finds that these goals are insufficiently realized in practice due to teacher-centered pedagogies, rigid curricula, and limited faculty preparedness. Drawing on international models from institutions such as Parsons School of Design and the Royal College of Art, the paper highlights global strategies that embed critical inquiry into seminars, interdisciplinary projects, and reflective assessment. It also examines emerging domestic practices in China, including AI-assisted coursework and project-based collaboration, which demonstrate initial success but remain uneven across institutions. The study argues that critical thinking should be a core component of design education, not an ancillary objective. Systemic alignment across curriculum design, teacher training, and assessment frameworks is essential to foster analytical, creative, and socially responsible design professionals. This research offers theoretical insight and practical recommendations for advancing critical thinking education within China's evolving design education landscape.***

Keywords: Visual communication design, Critical thinking, design education, Instructional Practice, Educational Policy.

1. Introduction

Critical thinking is recognized as a fundamental competency for talent in the 21st century and serves as a cognitive foundation for cultivating creativity and innovation. The World Declaration on Higher Education for the Twenty-First Century: Vision and Action (UNESCO, 1998) explicitly identifies the development of students' critical and creative thinking as a core goal of higher education reform. In the field of art and design education, critical thinking is widely regarded as an essential capability. It enables students to understand and analyze complex issues, make informed design decisions during the creative process, and critically reflect on their ideas and outcomes (Shively, Stith, & Rubenstein, 2018).

As the role of design in society shifts from "form-making" to "problem-solving," designers are no longer merely creators of visual aesthetics, but are increasingly expected to engage with social issues, integrate complex systems, and evaluate ethical implications (Fu & Lee, 2017). Within this context, critical thinking, encompassing judgment, analysis, and reflection, has become an indispensable element of design education. Ericson (2021) emphasized that while design thinking has been widely adopted in both education and practice, without the integration of critical thinking, it risks falling into instrumental rationality and formalism when confronted with complex societal challenges. Similarly, Loewe (2005) argued that in addressing "wicked problems," designers must possess critical analytical skills and systems thinking in order to develop solutions that offer genuine social value.

However, compared to international trends, the educational system for visual communication design in China is facing significant and complex pressures for transformation. On one hand, the rapid development of technologies such as AI-generated graphics and digital communication media, combined with structural changes in industry, calls for a stronger emphasis in higher education on interdisciplinary integration, strategic design capabilities, and a focus on social value (Yang & Tang, 2024). On the other hand, traditional skill-oriented teaching models still dominate in many institutions, where students are trained primarily as visual executors rather than critical problem-solvers (Ceppi, 2021). This reality has created a disconnect between design education and the needs of a rapidly evolving society. Current curricula tend to place excessive emphasis on technical proficiency, while failing to promote deeper understanding of the social context, cultural significance, and user psychology behind design decisions. As a discipline that intersects media, communication, and aesthetics, visual communication design is expected to help students explore key issues such as effective expression and the phenomenon of information overload. However, the instructional content in many programs remains confined to technical training and stylistic imitation, with limited attention to social critique. This gap makes it difficult for critical thinking to be effectively integrated into the curriculum and classroom practices (Wang, 2018).

Building on this context, the present study conducts a systematic analysis of the current status and key challenges associated with critical thinking education in visual communication design programs at Chinese universities, focusing on three dimensions: policy orientation, instructional practice, and institutional constraints. At the policy level, the study examines national education reform documents to assess their expectations regarding design education and cognitive skill development. At the practical level, it investigates course structures, teaching strategies, and faculty perceptions across institutions. At the challenge level, it identifies key barriers such as limited teacher training, underdeveloped assessment mechanisms, and student learning attitudes that hinder the integration of critical

thinking into the curriculum. The aim of this research is to uncover the structural obstacles that impede the effective implementation of critical thinking education in visual communication design, and to propose feasible pathways for improvement. Ultimately, the study seeks to offer both theoretical insight and practical guidance to support the innovation and transformation of design education in China.

2. Theoretical Background

2.1 Critical Thinking

Critical thinking (CT) has long been regarded as one of the core goals of higher education. Paul and Elder (2002) defined critical thinking as "a process of evaluation and reasoning based on sound judgment, using appropriate standards to determine the value of information." In design education, critical thinking is no longer viewed as a single cognitive skill but rather as a comprehensive competence that permeates the entire process of idea generation, concept development, form realization, and social response.

Nelson and Stolterman (2003) argued that design decision-making essentially involves judgment and value negotiation, a process that requires a deep understanding of context, objectives, and audience. In the teaching practices of visual communication design and related disciplines, instructional methods such as design critique and reflective writing are frequently used to help students evaluate design work from multiple perspectives and engage in self-reflection (Trumbo, 1997; von Mengersen, 2017).

2.2 International Pedagogical Practices for Critical Thinking in Design Education

Across the globe, many countries and universities have systematically integrated critical thinking into design education, resulting in a diverse range of pedagogical models.

For example, at Parsons School of Design, critical thinking has been systematically integrated into classroom instruction. Teaching is primarily delivered through small-group seminars, where instructors guide students to pose questions based on assigned readings, share perspectives, engage in discussions, and articulate critical arguments. These courses emphasize starting with questions of “what” and “why” to cultivate students’ abilities in explanation, reasoning, analysis, and evaluation. In terms of curriculum design, the Product Design program includes a paired structure of “Integrative Studio” and “Integrative Seminar.” The studio courses focus on developing practical design skills, while the seminar courses emphasize critical inquiry into the theoretical, social, and cultural dimensions of design themes. Oral and written forms of communication are used in tandem to train students in expressing critical thinking effectively. Additionally, a structured review mechanism is implemented at the end of each course through a “Final Review.” This review involves not only faculty members but also invited external experts, alumni, and industry professionals. Students are required to present their work publicly and respond to real-time feedback and questions, which strengthens their abilities in logical organization, argument construction, and responding to challenges—thus fostering the application of critical thinking in practice (Zeng, 2020).

At the Royal College of Art, critical thinking in visual communication design is systematically cultivated through a pedagogical approach that emphasizes continuous questioning, interdisciplinary curriculum design, experimental exploration, and individualized faculty mentoring. The core of this teaching model lies in guiding students to raise questions from multiple perspectives—social, cultural, and technological—conduct in-depth research, and reconstruct design concepts. This process fosters design expressions that are both personally distinctive and socially responsible, ultimately cultivating highly qualified designers with strong critical awareness and innovative capacity (Zhu, 2021).

These international practices demonstrate that critical thinking has become a central component of design education, aligning with a triadic model that integrates knowledge, skills, and values. The success of this integration relies heavily on sustained teacher training, the embedding of critical thinking into instructional systems, and alignment with real-world problem contexts.

2.3 Research Developments and Gaps in the Chinese Context

In recent years, with the rapid development of higher art and design education in China, scholarly interest in critical thinking within design education has been steadily increasing. Several researchers have explored the need for transformation at a macro level, pointing out that current curricula tend to overemphasize technical skills while neglecting critical cognitive development (Wang, 2018). Much of this research has focused on conceptual advocacy and curriculum recommendations, calling for the integration of critical thinking into instructional objectives and curriculum standards (Kang & Wen, 2022). A number of studies have begun to examine specific teaching strategies, such as classroom debates, design critique workshops, and interdisciplinary projects, as methods to enhance students’ critical thinking skills (Cai & Tai, 2025). However, many of these investigations remain at the level of case description and subjective evaluation, lacking systematic empirical evidence.

It is also worth noting that most of the existing studies take "design-related disciplines" as their primary focus and have not explored visual communication design in depth. This field uniquely combines communication, aesthetics, and social awareness, yet remains underrepresented in the literature. Furthermore, there is a shortage of structural investigations into areas such as faculty development, curriculum design, and student learning culture. As a result, it is necessary to conduct more targeted and systematic research that addresses the specific needs of visual communication design education in the Chinese context. Such efforts are essential to bridge existing disciplinary limitations and practical implementation gaps in domestic design education research.

3. Policy Support for Critical Thinking Development in Design Education

At the policy level, the Chinese government has in recent

years placed increasing emphasis on cultivating innovation in higher education. In 2018, the Ministry of Education released the National Standards for Teaching Quality in Undergraduate Programs: Design Disciplines, which serves as a guideline for talent cultivation in design-related undergraduate majors. These standards clearly define the training objectives, curriculum structure, and instructional requirements for visual communication design programs. According to the document, the goal is to develop professionals with a solid foundation in design, strong creativity, and practical competence. The curriculum framework emphasizes the integration of theory and practice and is composed of foundational courses, core courses, and elective courses. The teaching requirements highlight students' understanding and application of design theory, with a strong focus on fostering innovation, critical thinking, and hands-on skills (Ministry of Education of the People's Republic of China, 2018). Although "design critique" is not listed as an independent course, the standards promote diverse pedagogical approaches such as discussion, case analysis, and project-based learning. These methods are closely aligned with the pedagogical goals of design critique.

That same year, the Ministry also issued the Opinions on Accelerating the Construction of High-Quality Undergraduate Education and Improving Talent Cultivation Capacity. This policy document outlines general requirements for improving the quality of undergraduate education, emphasizing the development of creativity and critical thinking (Ministry of Education of the People's Republic of China, 2018). It encourages universities to deepen pedagogical reform and adopt heuristic, discussion-based, and participatory teaching methods to enhance student engagement and analytical thinking. Although these documents do not provide detailed guidelines specifically focused on critical thinking instruction, they offer a clear institutional foundation for embedding critical discussion and cognitive training into curriculum reform in higher education.

In summary, the Chinese government is gradually guiding universities to strengthen the cultivation of critical thinking in visual communication design education through strategic policy planning. However, due to institutional disparities in resources, faculty structure, and teaching culture, there remains a significant gap between policy expectations and the actual development of students' critical thinking skills. Therefore, meaningful progress requires coordinated efforts across institutional frameworks, curricular design, and instructional practices.

4. Barriers and Challenges in Instructional Implementation

Although policy documents have clearly emphasized the importance of critical thinking and incorporated it into curriculum standards, the practical implementation of critical thinking education in visual communication design remains challenged on multiple fronts. These challenges are not limited to course content and teaching methods but are deeply rooted in structural factors such as teacher capacity, instructional culture, and student learning habits.

First, art and design education in China has historically placed greater emphasis on the development of technical skills, with limited attention to the systematic cultivation of critical thinking (Ceppi, 2021). Curricula often prioritize the accurate execution of given skills over creative thinking or critical engagement with social context. This tendency reinforces the replication of model answers rather than encouraging diverse interpretations and perspectives. As a result, critical thinking becomes marginalized in both learning objectives and classroom structures.

Second, teaching in many institutions remains dominated by teacher-centered, one-way delivery models, which limit students' active cognitive engagement. Traditional lecture-based classes and outcome-driven assessment systems are still widespread, leading students to passively receive predetermined information rather than engage in independent thinking or discussion (Liu & Chen, 2024). Additionally, art and design education in China has long favored results over process and standard answers over open exploration. This tendency has led to teaching approaches that emphasize repetition and conformity rather than nurturing process-oriented thinking, problem awareness, and expressive diversity. Such form- and result-oriented models hinder students' abilities to identify and analyze real-world problems, restrict creative thinking, and result in homogeneity in design outcomes. Consequently, the lack of support for individualized development and interdisciplinary integration has constrained the deeper transformation of innovation-oriented design education (Zhang, 2020).

Third, the lack of teacher preparedness and implementation capacity continues to hinder the effective delivery of critical thinking education. While policies repeatedly emphasize its importance, many instructors do not have the training or commitment to translate these expectations into practice. Wang (2018) noted that many teachers focus solely on technical perfection without critically analyzing or discussing students' work. Chen and Lu (2019) also found that teachers often follow fixed standards for teaching and assessment, rather than prioritizing the development of students' thinking skills. Without strong pedagogical capacity among instructors, institutional reforms may fail to produce substantive change, and critical thinking risks remaining an empty slogan in education.

In summary, the barriers to promoting critical thinking at the instructional level are not caused by a single factor but arise from a combination of curriculum orientation, teaching methodology, and faculty capability. Addressing these issues requires structural and cultural efforts, including curriculum restructuring, teacher professional development, and institutional reform, in order to reestablish the role of cognitive training at the heart of design education.

5. Exploratory Practices of Critical Thinking in Chinese Visual Communication Design Curricula

In recent years, as higher education reforms have increasingly emphasized innovation in design disciplines, the cultivation of critical thinking has gained growing attention and has begun to manifest in curriculum optimization and pedagogical innovation. Although most visual communication design curricula in China continue to focus on design fundamentals,

software skills, and project execution, a number of universities have started integrating elements of design thinking and critical analysis into their teaching, experimenting with more systematic instructional approaches.

At the classroom level, several institutions have adopted strategies such as case studies, project-based learning, and interdisciplinary integration to enhance students' abilities in logical reasoning, reflection, and creativity. For instance, in the restructured course "Typography and Layout Design," one teaching team introduced AI-generated content (AIGC) tools and required students to use large language models to generate copywriting, images, and layout proposals. Students were then expected to critically evaluate and refine the AI outputs. The course placed strong emphasis on understanding design logic and the principles of visual communication, encouraging students to assess the quality of AI-generated content and propose targeted improvements to enhance clarity, accuracy, and aesthetics (Yang & Tang, 2024). The study further noted that through project-based and collaborative work, students not only developed a deeper understanding of the strengths and limitations of AI, but also improved their critical thinking and independent decision-making through iterative discussion and reflection.

Similarly, Wu and Huang (2025) implemented hands-on training in workshop settings. For example, in a "Brand Identity Upgrade" project, students were asked to engage in rational analysis and critical judgment throughout the phases of idea generation, selection, and refinement. The study demonstrated that a teaching model combining AI generation with human intervention effectively highlighted the importance of critical thinking in visual communication design. It helped students refine conceptual directions, deepen creative thinking, correct design inconsistencies, and maintain brand coherence.

In terms of curricular structure, Ju (2021) proposed an "embedded and staged teaching method," which was applied to a course on "Socially Oriented Public Poster Design." Critical thinking training was integrated throughout the entire process, from concept development and social issue analysis to visual representation. Students were asked to extract design topics from real social problems, question underlying issues, and form independent judgments. The course emphasized a clear progression from issue recognition to conceptual framing to visual communication. Ju's study highlighted that the combination of open-ended questioning, debate, and self-evaluation—alongside early-stage creative guidance, mid-stage problem dissection, and later-stage visual logic training—effectively supported the development of critical thinking and independent judgment among visual communication design students.

Despite these promising efforts, there remain considerable disparities across regions and institutions. According to research by Sun and Zhang (2022), top-tier design schools in China, such as the Academy of Arts and Design at Tsinghua University, have largely aligned with international trends in design education. However, many applied undergraduate institutions continue to rely heavily on didactic, lecture-based teaching, with limited emphasis on cultivating students' critical thinking and insufficient support for applied design practice.

In conclusion, while some progress has been made in integrating critical thinking into visual communication design curricula, development remains uneven across institutions and regions. Moving forward, there is a pressing need to advance this integration through supportive education policies, renewed teaching philosophies, and improved evaluation systems. These efforts are essential to systematically embed critical thinking into design education and to enhance students' cognitive quality and professional competence.

6. Discussion and Implications

Although critical thinking has gained increasing attention in China's design education in recent years, its systematic integration into the visual communication design curriculum still faces numerous challenges. These difficulties stem not only from the disconnect between educational philosophy and classroom practice but also from intertwined structural constraints related to curriculum design, teaching culture, faculty capacity, and resource allocation.

First, teacher-centered instructional models remain dominant. Traditional visual communication instruction emphasizes technical demonstration and stylistic imitation, with limited space for open-ended, problem-driven pedagogies. Such a unidirectional classroom structure discourages students from questioning assumptions, reflecting on design decisions, and engaging in critical reasoning. Moreover, evaluation systems tend to prioritize the visual completion of student work and aesthetic output, while neglecting the cognitive processes of justification, judgment, and iterative improvement. This has led to the marginalization of critical thinking within design learning.

Second, the existing curriculum structure lacks mechanisms that meaningfully support the development of critical thinking. Although some institutions have introduced elements such as project-based learning and reflective writing, most curricula continue to focus on skill-based modules, software tools, and procedural training. Instructional content rarely includes sustained engagement with design logic, social context, or cultural meaning. In both foundational and core courses, critical thinking is often inserted in fragmented ways rather than embedded systematically, making it difficult to build a coherent progression of cognitive skills.

Third, regional and institutional disparities significantly limit the broader implementation of critical thinking education. Leading institutions such as the Academy of Arts and Design at Tsinghua University and the China Academy of Art have made strides in establishing interdisciplinary, reflective, and problem-oriented curricula. These institutions have introduced structured assessment frameworks and collaborative teaching practices aligned with international standards. However, in most regional universities and application-oriented undergraduate programs, instructional content remains focused on software demonstration and stylistic replication. Curriculum reform has been slow, faculty capacity is limited, and there is a lack of infrastructure for sharing teaching resources or building collaborative platforms.

Addressing these challenges requires coordinated efforts across policy design, instructional practice, and institutional support. First, universities should invest in faculty development programs that focus on critical pedagogy, including case-based teaching, guided questioning, and structured assessment. These initiatives can help shift the teacher's role from a transmitter of knowledge to a facilitator of thinking. Second, curriculum design should deliberately incorporate critical thinking tasks across different stages of learning, such as logical analysis, social issue inquiry, design reflection, and peer critique. This would make critical inquiry a routine part of the educational experience. Third, national education authorities should develop concrete instructional guidelines that define course models and evaluation criteria for critical thinking education. Resource-rich universities should be encouraged to establish partnerships with less-resourced institutions to share teaching materials, faculty training opportunities, and online courses, thereby helping to reduce disparities in educational capacity.

7. Conclusion

This study examined the current status and key challenges of critical thinking education in visual communication design programs at Chinese universities, focusing on three dimensions: policy orientation, instructional practice, and curriculum reform. The findings indicate that, although national policies have clearly emphasized the importance of innovation and critical thinking, significant structural barriers remain in practice. These include insufficient teacher preparation, overly rigid curriculum frameworks, and disparities in resource distribution across institutions.

At the same time, exploratory teaching practices in some universities offer promising directions for localizing critical thinking education. These include the introduction of artificial intelligence tools, the adoption of project-based learning and reflective writing, and the implementation of structured evaluation procedures. Such efforts have shown positive effects in strengthening logical reasoning, interdisciplinary collaboration, and problem sensitivity within the design process.

Looking ahead, critical thinking should not be treated as a supplementary skill, but rather as an integral component of curriculum objectives, faculty development, and assessment systems. A meaningful transformation requires a coordinated effort across instructional mechanisms, resource support, and educational culture. Only through such systemic alignment can students' analytical abilities, creativity, and sense of social responsibility be effectively enhanced. Ultimately, this will contribute to the development of well-rounded design professionals who combine critical awareness with strong design thinking.

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