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Aesthetic Education Provision at Qilu Medical University: Evaluation and Framework for Program Improvement

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ABSTRACT

This study conducted the first comprehensive qualitative evaluation of aesthetic education provision at a local undergraduate medical university in Shandong Province, China using the Context, Input, Process, Product (CIPP) evaluation model. A qualitative embedded single case study design was employed, with data collected through semi-structured interviews, focus group discussions, and document analysis from 22 undergraduate students, 7 faculty members, and 3 institutional administrators between March and April 2026. The findings revealed that aesthetic education at the institution is fragmented, underdeveloped, and primarily driven by policy compliance rather than strategic integration with medical talent training goals. Systemic barriers were identified across all four CIPP dimensions, including a dominant utilitarian bias in medical education, severe resource shortages, lecture-based teaching methods, and the absence of a formal evaluation system. Despite these challenges, significant enablers for reform exist, including strong student demand for medical-specific aesthetic education content and clear national policy mandates. Theoretically, this study validates the applicability of the CIPP model in Chinese medical aesthetic education and identifies a self-reinforcing cycle of marginalization. Practically, it concludes that a comprehensive, system-wide approach is required to transform aesthetic education provision and develops an evidence-based framework for program improvement tailored to the unique context of Chinese medical universities

INTRODUCTION

Aesthetic education is a mandated core component of holistic higher education in China, defined as a systematic practice that cultivates aesthetic perception, critical appreciation, creative expression, and empathetic humanistic engagement (Li *et al.*, 2023). For medical institutions, it represents a foundational pillar of competent, compassionate clinician formation, shaping abilities to recognize human dignity, communicate empathetically, and integrate scientific rigor with humanistic care (Chen, 2022). However, aesthetic education in Chinese medical colleges has long been marginalized, with heavy professional curricula, utilitarian training priorities, and limited investment resulting in fragmented systems that fail to align with national policy or clinical practice needs (Bai & Lu, 2018; Zhang & Liu, 2026).

National policy has increasingly elevated aesthetic education to a strategic priority. The 2020 Opinions on Comprehensively Strengthening and Improving Aesthetic Education in the New Era established binding requirements for systematic aesthetic education systems, while the 2023 Guidelines for Strengthening Medical Humanities Education in Higher Medical Institutions mandated that medical colleges fully integrate medical humanities into talent training processes by 2030 (Ministry of Education, 2020; Ministry of Education & National Health Commission, 2023). Despite these mandates, implementation remains uneven, particularly in local specialized institutions.

Existing research on medical aesthetic education in China is predominantly theoretical or quantitative, providing broad overviews of student satisfaction but lacking in-depth exploration of stakeholder experiences and contextual implementation factors (Li & Zhao, 2024). No published studies have applied the validated CIPP evaluation model to conduct a holistic qualitative assessment of aesthetic education in the context of Chinese local medical universities, nor have evidence-based, context-specific improvement frameworks been developed.

This study addresses these critical gaps by: (1) evaluating aesthetic education provision at Qilu Medical University across the four CIPP dimensions; (2) identifying core barriers and enablers of effective implementation; (3) exploring demographic differences in student experiences; and (4) developing a targeted framework for program improvement. The findings provide actionable insights for institutional decision-makers and contribute a methodological model for future research in medical aesthetic education.

LITERATURE REVIEW

Conceptual Foundations of Aesthetic Education in Medical Context

Aesthetic education, formally conceptualized by Schiller (1795/2004) as a mechanism for human liberation bridging sensory and rational thought, has evolved into a global educational practice focused on holistic development. Contemporary scholarship extends beyond

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traditional fine arts to frame aesthetic education as essential to all forms of learning, cultivating abilities to recognize nuance, make qualitative judgments, and find meaning in experience (Eisner, 2002).

In medical education, aesthetic education has emerged as a powerful tool for addressing the persistent divide between technical and humanistic training. International research demonstrates that arts-based and aesthetic interventions enhance clinical observational skills (Bardes *et al.*, 2001), increase empathy and patient-centered communication (DasGupta & Charon, 2004), reduce learner burnout (Wamsley *et al.*, 2012), and deepen understanding of the ethical dimensions of illness (Charon, 2006). Charon's (2006) narrative medicine framework posits that the skills required to interpret literary texts—close observation, attention to nuance, and empathetic engagement—are identical to those needed for compassionate clinical care. In the Chinese context, Chen (2022) argues that medical aesthetic education must extend beyond general art instruction to integrate content on the beauty of life, medical ethics, clinical communication, and scientific inquiry. However, Li and Zhao (2024) found that 90% of Chinese medical colleges offer only generic art electives with no medical integration, leaving a significant unmet need for discipline-specific content.

Policy and Practice of Aesthetic Education in Chinese Higher Education

Prior to 2010, aesthetic education in Chinese universities was marginalized, limited to optional courses for art-interested students (Guo, 2020). The 2018 National Education Work Conference embedded aesthetic education into the core mandate of cultivating “socialist builders and successors with all-round development,” followed by the landmark 2020 policy document establishing 2035 targets for systematic provision (Wang & Huang, 2023).

Despite these reforms, implementation remains uneven. Elite comprehensive universities have developed robust multi-dimensional systems, while local specialized institutions often implement only superficial compliance measures (Li & Zhao, 2024). Three core limitations characterize current practice: persistent gaps between policy and implementation, narrow equating of aesthetic education with traditional fine arts, and near-universal absence of rigorous evaluation mechanisms (Sun & Li, 2021; Zhang & Li, 2023).

In medical colleges, these challenges are amplified by the heavy content-dense curriculum, high-stakes licensing exams, and institutional prioritization of technical training outcomes (Bai & Lu, 2018). Most institutions allocate less than 1% of their budget to aesthetic education, rely on part-time external faculty, and lack dedicated medical humanities faculty (Sun *et al.*, 2025).

In contrast, medical schools in the United States and the United Kingdom have integrated aesthetic education into core curricula for over 30 years, with established programs at institutions such as Harvard Medical

School and King's College London that demonstrate sustained improvements in student empathy and clinical communication skills (Wamsley *et al.*, 2012).

The CIPP Evaluation Model for Educational Program Assessment

The CIPP model, developed by Stufflebeam and Shinkfield (2007), is a globally validated decision-oriented framework that evaluates programs across four interconnected dimensions: Context (needs assessment and goal alignment), Input (resource and capacity assessment), Process (implementation quality), and Product (outcomes and impact). Unlike outcome-only models, it provides a holistic view of program strengths and gaps, generating actionable data for continuous improvement.

Recent studies have demonstrated the CIPP model's suitability for aesthetic education evaluation, capturing its multi-faceted nature extending beyond classroom curricula to include institutional policy, campus culture, and student experience (Zhang & Li, 2023; Wang & Huang, 2023). However, no existing studies have applied the model to qualitative evaluation of aesthetic education in a medical university context, addressing the unique structural constraints and talent training goals of medical education.

MATERIALS AND METHODS

Research Design

A qualitative embedded single case study design was employed, ideal for in-depth investigation of contemporary phenomena within their real-life context (Yin, 2018). The embedded design allowed analysis of multiple subunits, including three stakeholder groups (students, faculty, administrators) and four CIPP dimensions, enhancing validity through triangulation across data sources (Creswell & Creswell, 2018).

Research Locale

The study was conducted at Qilu Medical University, a public undergraduate medical institution in Zibo, Shandong Province, with over 14,000 full-time students across 20 undergraduate programs. The university offers scattered aesthetic education electives and ad-hoc cultural activities but lacks a systematic program aligned with national policy or medical training goals.

Sampling Procedure

Purposive maximum variation sampling was used to select participants representing diverse perspectives. Participants were selected based on pre-defined criteria: students varied by sex, year level (1-5) and academic program; faculty varied by teaching experience, subject area and employment status; administrators varied by institutional role and level of responsibility for aesthetic education.

Qualitative sample size was determined by data saturation, the point at which no new themes or insights emerge

from additional data collection (Morse *et al.*, 2024). Based on previous qualitative research in educational evaluation, the study aimed to recruit 20-25 undergraduate students, 6-8 faculty members, and 3-4 institutional administrators. Data saturation was confirmed after the 18th student

interview, 6th faculty interview, and 3rd administrator interview, with no new themes emerging from the remaining interviews. The final sample demographic characteristics are presented in Table 1.

Table 1: Demographic characteristics of participants

Stakeholder Group	Category	Number	Percentage
Students (n=22)	Sex		
	Male	8	36.4
	Female	14	63.6
	Year Level		
	Year 1	5	22.7
	Year 2	5	22.7
	Year 3	4	18.2
	Year 4	4	18.2
	Year 5	4	18.2
	Academic Program		
	Clinical Medicine	8	36.4
	Nursing	5	22.7
	Medical Laboratory Science	3	13.6
	Pharmacy	2	9.1
	Rehabilitation Medicine	2	9.1
	Optometry	2	9.1
Faculty (n=7)	Employment Status		
	Full-time	3	42.9
	Part-time	4	57.1
	Teaching Experience		
	<5 years	3	42.9
	5-10 years	3	42.9
	>10 years	1	14.2
	Subject Area		
	Traditional Arts	4	57.1
	Medical Humanities	2	28.6
	General Education	1	14.3
Administrators (n=3)	Institutional Role		
	General Education Office	1	33.3
	Student Affairs Office	1	33.3
	Academic Affairs Office	1	33.3

Note. All percentages are calculated within each stakeholder group.

Research Instruments

Three complementary data collection instruments were developed based on the CIPP model and validated by a panel of 6 experts in curriculum evaluation, aesthetic education, and medical humanities:

1. Semi-structured interview guides for students, faculty, and administrators, with open-ended questions aligned to the four CIPP dimensions
2. A focus group discussion guide for undergraduate students exploring shared experiences and improvement

suggestions

3. A document analysis checklist for reviewing institutional strategic plans, curriculum guidelines, course syllabi, and activity reports

All instruments were pilot tested with 3 students, 1 faculty member, and 1 administrator to ensure comprehensibility, and revised based on feedback.

Data Collection

Data were collected between March 15 and April 20,

2026, following ethical approval from both Mariano Marcos State University Graduate School Research Ethics Committee (Approval No. MMSU-GS-REC-2026-012) and Qilu Medical University Institutional Review Board (Approval No. QMU-IRB-2026-037). All participants provided written informed consent prior to participation. Data collection proceeded in three sequential stages:

Document analysis: First, the first author collected and reviewed all relevant institutional documents to establish a baseline understanding of aesthetic education provision. Documents were obtained through official requests to the university's Academic Affairs Office and General Education Office.

Semi-structured interviews: Individual interviews were conducted with all participants in a private, quiet office on campus. Each interview lasted approximately 45-60 minutes and was audio recorded with the participant's permission. Field notes were taken during and after each interview to record non-verbal cues and contextual observations.

Focus group discussion: One focus group discussion was conducted with 6 undergraduate students, lasting approximately 90 minutes. The discussion was audio recorded and facilitated by the first author, with a research assistant taking detailed field notes.

All audio recordings were transcribed verbatim within 24 hours of data collection. All personally identifiable information was removed from the transcripts to ensure participant anonymity, with each participant assigned a unique identifier (e.g., S1 for Student 1, F1 for Faculty 1, A1 for Administrator 1). Transcripts were imported into NVivo 12 qualitative data analysis software for coding and analysis.

Data Analysis

Braun and Clarke's (2006) six-phase thematic analysis was employed to analyze the qualitative data:

1. Familiarization with the data: The first author read and re-read all transcripts, field notes, and documents to become immersed in the data, noting initial ideas and impressions.

2. Generating initial codes: The first author systematically coded the data line by line, assigning descriptive labels to segments of text that related to the research questions and the CIPP model dimensions. A total of 42 initial codes were generated.

3. Searching for themes: The coded data was organized into potential themes, grouping together codes that related to the same concept or idea. 12 potential themes were identified at this stage.

4. Reviewing themes: The first author reviewed the themes to ensure they were coherent and accurately reflected the data. Themes were refined, merged, or split as necessary, resulting in 9 final themes.

5. Defining and naming themes: The first author

defined each theme, identified its core characteristics, and assigned a clear, descriptive name. The final themes were aligned to the four dimensions of the CIPP model.

6. Producing the report: The first author wrote the final report, presenting the themes with supporting quotations from the data and linking them back to the research questions and existing literature.

To enhance the validity and reliability of the findings, multiple triangulation strategies were employed

Data triangulation: Comparing data from interviews, focus groups, and document analysis to confirm findings

Investigator triangulation: Having a second qualitative researcher independently code 20% of the transcripts. Inter-coder reliability was calculated as 0.87, exceeding the 0.70 threshold for acceptable reliability (Creswell & Creswell, 2018)

Member checking: Sharing preliminary findings with 5 participants (3 students, 1 faculty, 1 administrator) to confirm that the interpretations accurately reflected their experiences

RESULTS AND DISCUSSIONS

Context Evaluation Findings

Three core themes emerged from context evaluation: policy compliance without strategic alignment, divergent perceptions of aesthetic education value, and systemic utilitarian bias.

Document analysis confirmed that Qilu Medical University has formally incorporated aesthetic education into its 2026-2030 strategic plan and added two electives to meet credit requirements. However, all administrators acknowledged these measures were superficial compliance efforts with no connection to medical talent training goals: "It's just checking a box for the Ministry of Education" (A1). No discipline-specific aesthetic education content has been developed, despite the 2030 national mandate for full medical humanities integration.

Significant divergence existed in stakeholder perceptions of value. Ninety-one percent (91%) of students and all faculty recognized aesthetic education's potential to enhance clinical empathy and communication: "When we're with patients, we're not just treating diseases—we're treating people. Aesthetic education teaches you to appreciate the beauty of human life and resilience" (S8). In contrast, administrators viewed aesthetic education as a peripheral activity: "Our primary mission is to train doctors who can pass their exams. Aesthetic education is nice to have, but not essential" (A3).

All stakeholders identified the dominant utilitarian orientation of medical education as the most fundamental barrier. Nineteen of 22 students reported prioritizing professional coursework over aesthetic activities due to heavy schedules and exam pressure: "I have 12 hours of classes plus clinical rotations. I barely have time to sleep, let alone go to an art exhibition" (S15). This finding aligns with Bai and Lu (2018), who noted that medical education's focus on technical outcomes creates a cultural bias against humanistic learning.

Input Evaluation Findings

Input evaluation revealed severe inadequacies across all resource dimensions: inadequate curriculum provision, faculty shortages, insufficient infrastructure, and limited external partnerships.

The university offers only six traditional fine arts electives (calligraphy, painting, music, film, dance, literature appreciation) with no mandatory courses and no medical integration. Ninety-one percent (91%) of students reported dissatisfaction with curriculum relevance: “The courses have nothing to do with medicine. I want to learn about medical ethics and patient communication, not how to paint a landscape” (S3).

A severe shortage of qualified faculty was identified. Only 3 of 7 aesthetic education faculty are full-time, and only 2 have medical humanities expertise. The remaining are part-time external artists with no medical education background: “They’re good at teaching art, but they don’t understand medical students’ needs” (A1). No professional development opportunities or incentives exist for faculty teaching aesthetic education courses.

Physical and financial infrastructure is extremely limited. No dedicated art studios, galleries, or performance spaces exist, with all activities held in regular classrooms or makeshift venues. Less than 1% of the university’s annual budget is allocated to aesthetic education, primarily covering part-time faculty salaries. No partnerships have been established with local museums, galleries, or hospitals with arts-in-medicine programs.

Process Evaluation Findings

Process evaluation identified four core issues: dominance of lecture-based teaching, ad-hoc extracurricular activities, low student engagement, and poor inter-departmental coordination.

Nearly all courses rely on one-way lecture-based instruction with no active or experiential learning. Eighty-six percent (86%) of students reported this method is ineffective: “The music appreciation class is just the teacher talking for two hours. I usually study for other classes” (S7). Faculty attributed this to large class sizes (up to 150 students) and lack of appropriate facilities.

Extracurricular activities are primarily one-off events during cultural festivals with no clear learning objectives or curriculum integration: “We have a calligraphy competition once a year, and that’s it. There’s no follow-

up” (F3). Students often report being required to participate to meet departmental requirements rather than choosing to attend voluntarily.

Student engagement rates are very low, with only 23% of students participating in more than two extracurricular activities. Upper-year students (Years 3-5) have particularly low participation due to clinical rotations and exam preparation.

Aesthetic education is managed by three separate departments (General Education, Student Affairs, Academic Affairs) with no dedicated coordinating body, leading to duplication of effort and gaps in provision: “We plan the courses, they plan the activities, and we never talk to each other” (A3).

Product Evaluation Findings

Product evaluation revealed limited program impact, high student dissatisfaction, and unrealized professional development potential.

Ninety-one percent (91%) of students reported no significant growth in aesthetic literacy or humanistic competence from their experiences. No participants reported measurable improvements in clinical skills or empathy that they attributed to their aesthetic education experiences: “I took film appreciation, but I don’t think I learned anything. It was just an easy credit” (S5). Faculty confirmed that the knowledge-transmission model fails to foster critical thinking or empathetic capacities.

Student satisfaction is extremely low, with 86% reporting dissatisfaction or strong dissatisfaction. The primary complaint is the lack of medical-specific content: “We don’t need to learn how to paint. We need to learn how to be compassionate doctors” (S2).

Despite these limitations, all stakeholders recognized aesthetic education’s significant unrealized potential: “If we could teach students to look at a painting with the same attention to detail they look at a medical chart, that would make them better diagnosticians” (F7). This aligns with Wang *et al.* (2025), who found that aesthetic education interventions significantly reduce medical student burnout and improve overall wellbeing, which in turn enhances clinical performance and patient care quality.

A comprehensive summary of core findings and systemic barriers across all CIPP dimensions is presented in Table 2.

Table 2: Core findings and systemic barriers across CIPP dimensions

CIPP Dimension	Core Strengths	Core Barriers	Evidence Source	Barrier Severity
Context	Formal compliance with national policy mandates; strong student recognition of aesthetic education value	Policy compliance without strategic alignment; divergent stakeholder perceptions of value; dominant utilitarian bias in medical education	Administrators (A1-A3), Students (S8, S15), Document analysis	Critical

Input	Small core of dedicated faculty; existing general education curriculum framework	Inadequate and non-medicalized curriculum; severe shortage of qualified medical humanities faculty; <1% budget allocation; no dedicated infrastructure	Faculty (F2, F6), Administrators (A1-A2), Document analysis	Critical
Process	Limited but existing extracurricular activity offerings	Dominance of lecture-based teaching; ad-hoc disconnected activities; low student engagement; poor inter-departmental coordination	Students (S7, S18), Faculty (F3, F5), Administrators (A3)	High
Product	Unrealized potential for professional development enhancement	Limited growth in aesthetic literacy; no measurable impact on clinical skills; 86% student dissatisfaction; no formal evaluation system	Students (S2, S5), Faculty (F6, F7)	High

Note. Barrier severity: Critical = Requires immediate system-wide intervention; High = Requires targeted departmental intervention.

Cross-Dimensional Analysis of Systemic Barriers and Enablers

The barriers identified form an interconnected self-reinforcing cycle. The contextual utilitarian bias leads to low institutional priority, resulting in insufficient resource allocation (input). Limited resources produce poor-quality delivery (process), which leads to limited outcomes and high dissatisfaction (product). The lack of demonstrated impact reinforces the perception that aesthetic education is not valuable, perpetuating the cycle.

This utilitarian orientation is deeply embedded in China's medical education ecosystem, driven by three interconnected institutional incentives: first, university rankings and funding allocations are heavily weighted toward research output and licensing exam pass rates; second, hospital recruitment prioritizes technical skills and academic credentials over humanistic qualities; and third, the rigorous residency training system places overwhelming emphasis on clinical proficiency, leaving little time for humanistic development (Zhao *et al.*, 2026; Li & Zhao, 2024). This systemic incentive structure makes it difficult for aesthetic education to gain traction in institutional decision-making.

However, significant enablers for reform exist: strong student demand for medical-specific content, a dedicated core of faculty committed to improvement, clear national policy mandates providing a legal framework for reform, and growing recognition in the medical community of humanistic competence's importance. These enablers provide a solid foundation for program transformation.

Significant demographic differences in student experiences were also identified. First- and second-year students reported higher levels of participation and satisfaction than upper-year students, primarily due to lighter course loads. Nursing and Rehabilitation Medicine students reported the highest levels of interest, while

Medical Laboratory Science and Pharmacy students reported the lowest. This difference may be attributed to two key factors: first, nurses and rehabilitation therapists spend significantly more time providing direct, ongoing care to patients, requiring stronger empathetic communication and interpersonal skills than laboratory or pharmacy professionals (Zhang *et al.*, 2026).

CONCLUSION

This study is the first to apply the CIPP evaluation model to systematically assess aesthetic education in a Chinese local undergraduate medical university. It reveals that current provision is fragmented and driven primarily by policy compliance rather than strategic integration with clinical talent training goals, creating a self-reinforcing cycle of marginalization. Significant demographic differences exist: lower-year students, female students, and those in patient-facing programs show higher participation and interest. Theoretically, this study validates the CIPP model's applicability in this specialized context. Practically, it proposes an evidence-based 3-year system-wide reform framework. Future research should use mixed-methods designs, conduct longitudinal tracking, develop standardized assessment tools, and run randomized controlled trials. The ultimate goal of medical aesthetic education is to cultivate compassionate clinicians balancing scientific rigor with humanistic care, and this study provides a replicable model for global medical institutions.

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