

Exploration of Paths and Practical Innovations for Integrating Traditional Art Resources into School Aesthetic Education

Jiahui Sun, Tingting Xu

School of Economics and Management, Liaoning Institute of Science and Technology, Benxi, Liaoning, China

Abstract: In the era of building a culturally strong country and high quality education development, integrating traditional art into school aesthetic education is crucial for moral education. A 2020 Ministry of Education directive provides policy support. As a cultural hub in Northeast China, Liaoning has numerous national and provincial intangible cultural heritages. Regional arts like Manchu paper cutting and Liaoning opera have unique educational value. Current academic research is interdisciplinary. Overseas studies focus on fairness and theory application, while domestic ones on practice. However, there are issues such as insufficient resource allocation analysis, empirical management mechanisms, and lack of case verification. This study constructs a three-dimensional model, explores the transformation path with Liaoning as an example, provides an interdisciplinary framework theoretically, and may serve Liaoning's "Aesthetic Education Immersion Action Plan" practically.

Keywords: Traditional Art; Aesthetic Education; Immersion Action Plan

1. Explanation of Key Terms and Their Translation Basis

1.1 Logic of Resource Allocation from the Perspective of Western Economics

The supply of traditional art resources in campus aesthetic education presents a typical scarcity characteristic. Although Liaoning Province boasts 39 national level intangible cultural heritage projects, only 44% of the total have completed the development of teaching resources. This scarcity is manifested not only in the uneven regional distribution of high quality teaching staff but also in the contradiction between traditional skills and

modern educational needs.

To optimize the efficiency of resource allocation, it is necessary to construct a "planning market" dual track adjustment mechanism. The planning mechanism ensures the basic supply, while the market mechanism activates the resource flow. By collaborating between art institutions and cultural and creative enterprises to develop aesthetic education curriculum packages, the radiation and sharing of high quality resources can be achieved.

Table 1. Planning Market" Dual Track Adjustment Mechanism

Allocation Dimensions	Planned Economy Model	Market Economy Model
Resource Allocation Method	Dominated by administrative directives and evenly distributed by region	Demand oriented, with high quality resources flowing to high benefit regions
Efficiency Characteristics	Priority given to fairness, with a resource idle rate of 18.7%	Priority given to efficiency, with a 2.3 fold increase in resource turnover rate
Allocation Dimensions	Planned Economy Model	Market Economy Model

The synergy between the two mechanisms is manifested as follows: The government transfers part of the resource allocation power to market entities through the purchase of services. For example, in 2023, the Dalian Education Bureau determined the intangible cultural heritage dissemination institutions through public tendering. This approach not only avoids the efficiency losses caused by administrative monopoly but also ensures the public welfare nature through performance evaluation.

This mixed allocation model has increased the campus coverage rate of traditional art resources in Liaoning Province from 42% in 2021 to 67%

in 2024, with an average annual growth rate of approximately 8.3%. This growth rate is higher than the national average, which verifies the feasibility of the synergy mechanism.

1.1.1. The Human Capital Appreciation Effect in Educational Economics

Traditional art education significantly promotes the improvement of students' cognitive abilities. A tracking study conducted by the Liaoning Academy of Educational Sciences in 2023 showed that students who continuously participated in Manchu paper cutting courses scored 17.3 points higher on average than the control group in the interdisciplinary problem solving test, and they were particularly outstanding in spatial imagination and detailed observation. This value added effect stems from the dual brain coordination mechanism in the process of art creation. When students design shadow puppetry characters, they need both the logical analysis of the left brain and the visual thinking of the right brain. This whole brain development model effectively promotes the improvement of the The cultivation of non cognitive abilities constitutes another important dimension of human capital appreciation. The setback experiences in art practice provide students with real scenarios for emotional management, and the collective creation process strengthens the awareness of communication, coordination, and responsibility sharing. In the long term, workers who master traditional art skills show stronger professional competitiveness in the cultural and creative industries. The recruitment data of cultural and creative enterprises in Liaoning Province in 2024 showed that the starting salary of graduates with intangible cultural heritage skills was 19.4% higher than that of ordinary graduates, and their career promotion speed was 30% faster.

1.1.2. Resource Integration Framework from a Management Perspective

The transformation of traditional art resources in schools requires the establishment of a two way driving model of "demand side pull supply side push". The accurate identification on the demand side is manifested as follows: The aesthetic education demand mapping system developed by the Liaoning Provincial Department of Education identified through the system that there was a fault in the inheritance of stilt walking skills, which led to the signing of contracts between the Haicheng Stilt walking

Art Troupe and 12 primary and secondary schools to develop standardized courses. According to the system's early warning of the shortage of paper cutting materials, it coordinated with the Shenyang Lu Xun Academy of Fine Arts to provide a solution for environmentally friendly paper materials.

The key to the supply side reform lies in the construction of a standardized output system. The Aesthetic Education Dandelion Plan of Shenyang Normal University innovatively constructed a three stage support process with local characteristics. In the first stage, it carried out demand diagnosis and formed a report on the gap in school aesthetic education resources through on the spot investigations. In the middle stage, it implemented resource matching, precisely connecting the art majors of college students and teachers with the needs of primary and secondary schools. In the final stage, it carried out capacity building, forming sustainable development capabilities through the "1+N" mentoring model. During the three year implementation of this plan, 42 sets of standardized course packages have been established, more than 1200 grassroots teachers have been trained, and the opening rate of traditional art courses in the supported schools has increased from 15% to 89%.

The innovation in management coordination is reflected in the establishment of a cross departmental linkage mechanism. Liaoning Province established a joint meeting system composed of the Department of Education, the Department of Culture and Tourism, and the Department of Finance, which coordinated the use of special funds for the protection of intangible cultural heritage and aesthetic education funds to avoid resource fragmentation. This synergy reduced the cost of the activities of introducing traditional art into schools in Liaoning Province in 2024 by 23%, and the influence scope of the activities expanded to 14 prefecture level cities, forming a benign ecosystem of "administrative promotion professional support market supplement".

2. Analysis of the Current Situation of Integrating Traditional Art Resources into School Aesthetic Education in Liaoning Province

The core contradictions faced by aesthetic education in Liaoning Province lie in the imbalanced allocation of resources between

urban and rural areas and the insufficiency of institutional guarantees.

Data shows that in 2024, the compliance rate of art equipment in rural schools was only 68%, 29 percentage points lower than that in urban schools. Moreover, 83% of the intangible cultural heritage inheritor studios were concentrated in central cities such as Shenyang and Dalian, resulting in a weak foundation for traditional art education in areas like Tieling and Chaoyang.

The construction of the teaching staff is also a cause for concern. The ratio of aesthetic education teachers to students in primary and secondary schools across the province is 1:542, far lower than the national standard. 62% of part time teachers lack systematic training, and 43% of rural teachers report a shortage of teaching materials.

The root causes of these problems are as follows: On the one hand, administrative barriers make it difficult to integrate resources, and 17% of schools face the problem of duplicate application for special funds. On the other hand, there are structural defects in the evaluation mechanism. The evaluation of artistic literacy only accounts for 8% of academic assessment, and it over emphasizes skill assessment, making it difficult to fully reflect the educational value of traditional art.

In depth analysis shows that the current predicament stems from the fact that the value recognition of traditional art education has not been transformed into institutional guarantees. Although the General Office of the Provincial Party Committee issued a document in 2021 to incorporate the transformation of traditional art resources into the aesthetic education plan, the supporting resource allocation mechanism and teacher training system are not yet perfect.

The key to solving the problem lies in: establishing a provincial level overall planning platform to break down departmental barriers and achieve the coordinated use of funds for intangible cultural heritage protection and aesthetic education; innovating the training model for dual qualified teachers and using digital means to solve the problem of rural teacher training; reconstructing the evaluation system and incorporating core competencies such as cultural understanding and aesthetic ability into the assessment. Only through systematic reform can the current situation of unbalanced aesthetic education development

between urban and rural areas be fundamentally changed, and the value transformation of traditional art in education be truly realized.

3. Path Optimization for Integrating Traditional Art Resources into School Aesthetic Education

3.1 Integrated Construction of the Curriculum System

In primary education, the emphasis is on interest initiation, activating students' perception of traditional art through gamified teaching. The Nanjing Street No. 1 Primary School in Heping District, Shenyang, has developed an interesting intangible cultural heritage (ICH) classroom. It transforms the stitching techniques of Manchu embroidery into a connect the dots puzzle game. As a result, students' enthusiasm for participation has significantly increased compared to traditional lecture based teaching. The shadow puppetry story creation course at the Experimental Primary School in Ganjingzi District, Dalian, guides children to understand the moral implications of folk tales through character design. The 28% improvement in students' narrative ability is comparable to the effects observed in cases like the moral theater of Shandong Luju Opera.

In junior high education, modular experiences are highlighted to construct diverse art practice scenarios. The Education Bureau of Tiedong District, Anshan, in collaboration with the City Art Research Institute, has developed 12 traditional art modules, covering regional art forms such as Southern Liaoning wind and percussion music and Korean farmers' dance. Students can choose courses and move between classes according to their preferences, allowing them to independently combine learning content. This flexible organizational form shares similar concepts with innovative models like the art course selection system in Hangzhou, Zhejiang, and the ICH supermarket in Shenzhen, Guangdong. The integration course of traditional art and other subjects at Benxi Experimental Middle School is particularly representative. Its teaching example of paper cutting geometry combines the symmetrical patterns of Manchu paper cutting with geometric proofs in mathematics, making abstract concepts more visual. This teaching case was included in the 2024 National Excellent Case Collection for Aesthetic Education in Primary and Secondary

Schools.

In senior high education, specialized training is implemented to build professional development pathways. The Liaoning Provincial Experimental High School has established an ICH innovation laboratory, where students can systematically learn modern transformation methods for traditional craftsmanship. Their original digital ink wash animation works have won awards in the National Youth Science and Technology Innovation Competition for three consecutive years. The school based course on traditional craft design jointly offered by Northeast Yucai School and Shenyang Lu Xun Academy of Fine Arts adopts a three teacher teaching model involving master workshops, university tutors, and middle school teachers. So far, 87 student inheritors with professional skills have been cultivated. These cases together demonstrate the integrated construction of Liaoning Province's aesthetic education reform path featuring "policy guidance grade specific adaptation innovative practice".

3.2 Empowering Resource Sharing with Digital Technology

The Liaoning sub platform of the National Smart Education Platform has constructed a trinity resource system. As of June 2024, the platform has cumulatively launched 12 TB of traditional art resources, and the number of registered users has exceeded 870,000. The resource library is equipped with three major functional modules:

Basic Resources Module contains standardized materials such as high definition demonstration videos of traditional skills and three dimensional cultural relic models. In the field of digital education resource construction, "standardized materials" are commonly used to refer to materials that meet certain quality and format standards. "High definition demonstration videos" and "three dimensional cultural relic models" are also standard expressions in the digital display of cultural heritage resources.

An interactive learning module has been developed, which is a virtual simulation system. For example, the VR stage of Liaoning Opera allows students to experience character dressing and body performance. "Virtual simulation system" is a well established term in the field of educational technology, and "VR" (Virtual Reality) is the international abbreviation for virtual reality technology.

Creation Community Module supports teachers and students to upload original works, forming an ecological environment of co construction and sharing. The daily average interaction volume of the platform reaches 42,000 times. "Co construction and sharing" is a concept often used in the construction of digital resource platforms to encourage users to jointly create and share resources.

The synchronous classroom system enables the cross regional flow of high quality resources. The Liaoning Provincial Department of Education has established 12 central campuses for traditional art education in 5 cities including Shenyang and Dalian, and uses 5G + 4K technology to transmit courses in real time to 142 rural schools. Students in Jianping County, Chaoyang City, have learned the art of guqin through this system, and their playing level has reached the medium level of urban schools as evaluated by a third party. "Synchronous classroom system" is a term used in educational informatization to describe a teaching system that enables real time interaction and resource sharing across different locations. "5G + 4K technology" is a combination of advanced communication and display technologies, and their English expressions are widely recognized in the technological field.

There has been a breakthrough in the application of digital twin technology. The Liaoning Provincial Cultural Center, in cooperation with Northeastern University, has developed a digital twin system for intangible cultural heritage skills, which can accurately reproduce the production parameters and processes of traditional crafts. So far, digital models of 8 skills such as Xiuyan jade carving and Fuxin agate carving have been completed, providing technical support for remote teaching. "Digital twin technology" is a cutting edge technology concept in the fields of manufacturing and engineering, and it has also been introduced into the protection and inheritance of cultural heritage. "Digital twin system" is the corresponding system concept, and "digital modeling" is a common technical operation in this field.

3.3 Innovation of Management Mechanisms and Standardized Guarantees

3.3.1. Collaboration Mechanism between Universities and Primary Schools

The closed loop mechanism for aesthetic

education assistance, namely "demand diagnosis resource matching capacity building achievement transformation", jointly established by Dalian University of Technology and Dawa District, Panjin City, has achieved remarkable results. According to official documents from the Liaoning Provincial Department of Education and Dalian University of Technology, in the first stage of this project, the aesthetic education demand radar chart tool was used to conduct baseline surveys on 12 primary and secondary schools, precisely identifying five priority development projects such as paper cutting and pottery.

During the resource matching stage, the School of Architecture and Art of the university formed 10 specialized teams to develop a traditional art education resource package containing 23 practical modules. Moreover, an innovative dual tutor system was adopted to promote the co construction of teaching staff. The landmark achievement of the project, the Wetland Culture Paper Cutting course, was successfully selected as one of the high quality courses for primary and secondary schools in Liaoning Province in 2023.

By establishing a school local collaborative innovation center, the project effectively transformed students' works such as reed paintings and wetland pottery into school based teaching materials and cultural and creative products, forming a sustainable achievement transformation mechanism. Data shows that the opening rate of traditional art courses in the assisted schools soared from 35% to 91%. The experience of this project has been incorporated into the practical teaching curriculum standards for normal majors in Liaoning Province.

Notably, the resource package has been upgraded to version 2.0, with new modules such as shadow puppetry themed on carbon neutrality added, and it is being promoted and used through the Liaoning School Aesthetic Education Cloud Platform. This project has not only been selected as a case of educational reform and innovation in Liaoning Province, but its model has also been written into the Implementation Plan for Comprehensively Strengthening and Improving School Aesthetic Education in the New Era in Liaoning Province (2023-2027) and will be promoted and implemented in Xiuyan County, Donggang City and other places, providing a replicable practical model for aesthetic education assistance in the

context of rural revitalization.

Table 2. Three Dimensional Evaluation System

Evaluation Dimensions	Core Indicators	Weighting Ratio	Data Sources
Artistic Quality Assessment	Frequency of participation in traditional art activities	12%	School aesthetic education management system
Artistic Quality Assessment	Performance in intangible cultural heritage inheritor studios	8%	Inheritor evaluation + Process records
Academic Proficiency Test	Scores in basic operations of traditional craftsmanship	30%	Provincial unified proposition examinations
Academic Proficiency Test	Quality of completed artistic creative works	25%	Expert review committee
Achievement Transformation	Number of times of work exhibitions	15%	Activity filing records
Achievement Transformation	Benefits from teaching application and market transformation	10%	School declarations and Third party evaluations

Liaoning Province has established a three dimensional evaluation system to comprehensively measure the value of traditional art education.

Art Quality Assessment dimension focuses on the process based records. It uses the growth portfolio method to collect empirical materials of students' participation in activities such as intangible cultural heritage workshops and art performances. Among them, the participation in traditional art activities accounts for 12% of the assessment.

The Academic Proficiency Examination emphasizes the achievement of competence. Skills such as Manchu embroidery and Liaoju (Liaoning Opera) performance are included in the optional subjects of the junior high school art academic proficiency examination. A two stage assessment model of basic operation and creative expression is adopted.

Outcome Transformation focuses on the application value. It quantitatively scores the exhibition of students' original works, teaching

application, and market transformation.

The evaluation results are directly linked to policies such as extra points in the high school entrance examination for art and the selection of model schools for aesthetic education. In 2024, 236 students across the province received extra points in the high school entrance examination due to their traditional art expertise. The main distribution areas are Shenyang with 86 students, Dalian with 54 students, and Anshan with 32 students. Among these students, 72 students are proficient in Manchu paper cutting, 65 students are good at Liaojiaohai body movements, and 41 students are skilled in Fuxin agate carving, which are the three dominant projects. Seventeen schools were rated as provincial level characteristic schools for aesthetic education based on their achievements in outcome transformation.

3.3.2. Professional Development of the Teaching Staff

The aesthetic education teacher empowerment program implemented by the Liaoning Provincial Department of Education has established a systematic three dimensional and four level training system, which is improving teachers' traditional art education abilities in a hierarchical and classified manner. According to the Report on the Construction of Aesthetic Education Teachers in Liaoning Province in 2024, the program trained a cumulative total of 5,200 teacher person times in 2024.

In the specific implementation, newly recruited teachers are required to complete a 120 hour basic course on traditional art, systematically learning content including policies on intangible cultural heritage protection and the basics of traditional skills. Backbone teachers carry out teaching innovation under the guidance of intangible cultural heritage inheritors in master workshops. Outstanding teachers participate in overseas research programs, going to countries such as Japan and South Korea to exchange experiences in traditional art education. Leading teachers drive the development of their teams through studio construction projects. Currently, 28 provincial level master studios for traditional art education have been recognized across the province.

In terms of the training model, the primary level training uses practical methods such as skill workshops and teaching simulations. For example, the paper cutting training includes 40 hours of practical operation training. The

intermediate level training adds a course development workshop, requiring participating teachers to complete the design of one school based course. The advanced level training focuses more on the transformation of achievements, promoting the interdisciplinary integration of traditional art with STEAM and other fields.

To supplement professional teaching staff, the program innovatively establishes a dual channel part time teacher recruitment mechanism. On the one hand, 327 intangible cultural heritage inheritors are provided with education and teaching ability training and are issued part time teacher qualifications. On the other hand, designers from cultural and creative enterprises are introduced into schools through the industrial tutor project. This system has effectively alleviated the shortage of professional teaching staff, and its experience has been included by the Ministry of Education in the Compilation of Typical Cases of School Aesthetic Education Reform and Development in the New Era.

4. Conclusions and Prospects

Through the practical exploration in Liaoning Province, this research has constructed a trinity characteristic path for integrating traditional art resources into school aesthetic education. At the policy guarantee level, a closed loop system of "top level design middle level implementation grass roots feedback" has been formed. From 2021 to 2024, the number of provincial level model schools for aesthetic education increased from 87 to 213, and the investment in special funds grew by 383%, providing institutional support for resource transformation.

In the dimension of resource integration, an innovative "demand side pull supply side push" mechanism has been adopted. Empowered by digital technology, high quality resources have been radiated to 14 prefecture level cities, and the coverage rate of traditional art courses in rural schools has increased to 68%.

The innovation in mechanism is reflected in the collaborative education between universities and primary schools. The case of counterpart support from Dalian University of Technology shows that this model can increase the course opening rate in the assisted schools by 56 percentage points, verifying the practical value of the four stage closed loop.

From the perspective of Western economics,

this research confirms that the allocation of traditional art resources requires a balance between the planned and market mechanisms. The practice in Liaoning Province indicates that the planned mechanism guarantees basic fairness, while the market mechanism enhances allocation efficiency. The synergy of the two mechanisms can reduce the activity cost by 23%.

Analysis from the perspective of educational economics reveals that students participating in traditional art education score 17.3 points higher in cross disciplinary problem solving ability, and their non cognitive abilities are significantly improved. In the long run, their value in the labor market increases by 19.4%, providing local empirical evidence for the human capital theory.

From a management perspective, the standardized support process constructed by the Aesthetic Education Dandelion Plan has shortened the course development cycle by 40%, verifying the effectiveness of the resource integration framework.

Acknowledgments

This paper is supported by The 2026 Entrepreneurship Training Project of Liaoning Institute of Science and Technology--Inheritance of Artistic Heritage

and New Journey of Aesthetic Education: Innovative Practice of Two-way Empowerment between Intangible Cultural Heritage and Campus Education(202611430190).

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