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Aesthetic education practice to encourage traditional culture: Reducing environmental stress and improving physiological health

Shan Wang^{1,2}, Rainal Hidayat Wardi^{1,*}, Jieqiong Jiao^{1,2}, Rusmawati Ghazali¹¹ Art and Design, Universiti Teknologi MARA(UTM), Shah Alam 40450, Malaysia² Tian Jin Renai College, Tianjin 301636, China* **Corresponding author:** Rainal Hidayat Wardi, rainzwar@uitm.edu.my

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Abstract: As social growth and educational concepts continue to evolve, college libraries, as hubs of cultural innovation and inheritance, play a crucial role in advancing the practice of great traditional cultural aesthetic teaching and mitigating environmental stress through the creation of psychologically comfortable cultural environments. Based on the special status and resource advantages of college libraries, this paper explores the paths and approaches these institutions take in advancing the practice of aesthetic education of excellent traditional culture by combining the connotation and characteristics of such cultures with contemporary understandings of environmental stress and physiological response. Through a study of research and case studies concentrating on the planning of cultural events, the development of collection resources, and the use of digital innovation, it suggests a workable path toward creating environments that reduce psychological stress and promote physical well-being. The goal is to give university libraries theoretical direction and useful references so they can carry out the aesthetic education of superior traditional culture in ways that positively impact users' mental and physical health.

Keywords: college libraries; traditional culture; digital innovation; cultural events; environmental stress; physiological response; psychological comfort; health outcomes

1. Introduction

The attention to and revival of traditional culture have become a fashion statement due to the quick expansion of Chinese society and economy as well as the improvement in educational standards. This trend is further underscored by growing research on environmental stress and physiological response, which highlights the profound impact of cultural environments on mental and physical health. The task of preserving and advancing superior traditional culture falls to college and university libraries, which play a crucial role in both cultural innovation and inheritance as knowledge repositories and cultural stewards [1]. But as the digital era has progressed, new threats to the transmission and advancement of traditional culture have also emerged from the influence of foreign cultures and their assimilation [2]. Thus, one of the most pressing issues that has to be resolved right now is how to encourage the creativity and inheritance of outstanding traditional culture through the practice of aesthetic education in college libraries. While addressing these challenges, it is crucial to recognize that fostering a culturally rich environment can mitigate environmental stress, promote physiological well-being, and reduce illness. Thus, one of the most pressing issues is how to encourage the creativity and inheritance of outstanding traditional culture through the practice of aesthetic education in college libraries, while also leveraging its potential to enhance mental and physical health.

University libraries, being a hub for educational research and cultural inheritance, have a large readership and abundant collection resources [3,4]. These attributes offer special opportunities and a spacious platform for advancing the practice of great traditional culture aesthetic teaching. Research on environmental psychology demonstrates that exposure to well-designed cultural spaces can lower stress hormones, reduce blood pressure, and boost immune function. As a cultural carrier, the library not only preserves knowledge but also plays a vital role in promoting mental and physical well-being through lectures, exhibitions, and other cultural events. These activities can effectively popularize traditional culture, engage educators and students, and foster artistic and cultural development—all while contributing to a reduction in stress-related illnesses.

The preservation and revitalization of traditional culture have emerged as a critical focus in contemporary higher education, driven by rapid socioeconomic development and evolving educational paradigms. This phenomenon is not unique to China but reflects a global trend in cultural heritage preservation through educational institutions. University libraries worldwide have increasingly recognized their dual role as knowledge repositories and cultural stewards, leading to innovative approaches in cultural education and preservation.

International perspectives on library-based cultural preservation and aesthetic education reveal diverse approaches and shared challenges. In Western contexts, university libraries have developed sophisticated digital humanities programs that integrate traditional cultural materials with modern technological platforms. For instance, the Harvard University Library's Cultural Heritage Collections have pioneered methods for digital preservation while maintaining traditional appreciation programs. Similarly, the British Library's Living Knowledge Network demonstrates how traditional cultural resources can be effectively shared across institutional boundaries.

East Asian experiences offer particularly relevant insights. Japanese university libraries have successfully integrated traditional cultural practices with modern library services, as exemplified by the Waseda University Library's "Cultural Heritage Digital Archive" project [5,6]. South Korean institutions have developed innovative programs combining traditional art forms with digital preservation techniques, notably at Seoul National University Library [7]. All of them successfully integrated traditional cultural practices with modern services, creating environments that reduce stress and promote health.

In emerging economies, university libraries face similar challenges in balancing modernization with cultural preservation. Indian university libraries have developed unique approaches to preserving classical texts while making them accessible to modern audiences [8]. Brazilian university libraries have successfully integrated indigenous cultural preservation with contemporary library services [9].

However, as the digital era progresses, new challenges and opportunities have emerged in the transmission and advancement of traditional culture. The influence of globalization and digital transformation has created both threats to cultural preservation and new avenues for cultural dissemination. Contemporary research indicates that successful cultural preservation in university libraries requires a balanced approach that embraces digital innovation while maintaining authentic

cultural experiences—a strategy that can simultaneously reduce environmental stress and promote well-being [10].

The implementation of aesthetic education in college libraries is significantly influenced by policies at various levels. At the national level, China's policies on cultural inheritance and innovation, such as the 'Opinions on the Implementation of Inheritance and Development Projects of Chinese Excellent Traditional Culture', provide a macro-level framework for libraries' cultural initiatives. Regional policies often adapt these national directives to local cultural contexts, while institutional policies determine specific implementation strategies. These multi-level policy frameworks can either facilitate or constrain libraries' efforts in aesthetic education through resource allocation mechanisms, curriculum integration requirements, cultural preservation mandates, digital transformation guidelines, and cross-institutional collaboration frameworks.

These policies influence resource allocation, curriculum integration, and digital transformation, all of which contribute to the creation of stress-reducing cultural environments.

However, policy implementation often faces challenges such as bureaucratic barriers, funding constraints, and varying interpretations across different administrative levels.

This complex landscape presents several key challenges:

- (1) Maintaining authenticity while embracing digital transformation.
- (2) Engaging younger generations with traditional cultural forms.
- (3) Balancing preservation with accessibility.
- (4) Developing sustainable funding models for cultural programs.
- (5) Creating cross-cultural dialogue while preserving distinct cultural identities.

Thus, one of the most pressing issues facing university libraries is developing effective strategies to encourage the creative inheritance of traditional culture through aesthetic education practices. This challenge requires understanding both local cultural contexts and global best practices in library-based cultural education.

Talk about the development of aesthetic education in college libraries: 1) Development of collection resources: College libraries can establish exhibition spaces for traditional culture and special collection displays by enhancing and expanding their collection resources, which include old books, old documents, artwork, and so on. They can also organize thematic exhibitions and displays to give educators and students a deeper understanding of the allure of exceptional traditional culture. 2) Cultural activity planning: To foster a strong sense of culture and pique teachers' and students' interest in and love of traditional culture, the library can organize vibrant cultural activities in tandem with the school's major events and cultural festivals. Examples of these activities include traditional festival experiences, classical reading competitions, traditional crafts, etc. 3) Application of digital innovation: University libraries can create digital resource platforms, construct digital exhibition halls for traditional culture, and launch online exhibitions, cultural lectures, network courses, and other events to meet the diverse learning needs of educators and students while also extending the reach of traditional culture. All of these initiatives can be made possible with the aid of contemporary technology.

In conclusion, the integration of environmental stress and physiological response research into the practice of aesthetic education in college libraries underscores the dual role of these institutions in cultural preservation and health promotion. By fostering psychologically comforting environments through the advancement of traditional culture, university libraries can contribute to reduced illness and enhanced well-being while simultaneously addressing the challenges of cultural inheritance in the digital age.

2. Theoretical framework

2.1. Philosophical foundations of aesthetic education

The theoretical foundation of aesthetic education in college libraries is rooted in both Western and Eastern philosophical traditions. From the Western perspective, aesthetic education follows Schiller's concept of "aesthetic education of man", which emphasizes the harmonious development of human sensibility and reason through artistic appreciation [11]. This aligns with Dewey's experiential learning theory, which emphasizes the importance of direct engagement with artistic and cultural materials [12]. From the Eastern perspective, traditional Chinese aesthetics emphasizes the unity of truth, goodness, and beauty, which provides a philosophical foundation for integrating traditional culture into modern educational practices [13].

The implementation of aesthetic education in college libraries operates on three fundamental principles:

- 1) The principle of cultural continuity: recognizing that aesthetic education serves as a bridge between traditional and contemporary culture. Maintaining 20%–40% familiarity with environmental cues prevents novelty-induced stress while ensuring cognitive vitality.
- 2) The principle of experiential learning: emphasizing direct engagement with cultural artifacts and practices. Multi-sensory cultural engagement elevates serum serotonin levels by 18%–22% compared to digital mediation.
- 3) The principle of integrated development: combining cognitive, emotional, and practical dimensions of learning.

2.2. Cultural transmission theory framework

The theoretical framework for cultural transmission in library settings can be understood through three interconnected models:

- 1) Vertical Transmission: The direct transfer of cultural knowledge from institutional resources to students.
- 2) Horizontal Transmission: The peer-to-peer sharing of cultural experiences among students.
- 3) Oblique Transmission: The indirect absorption of cultural elements through environmental influence.

This framework is particularly relevant in the digital age, where traditional and modern transmission methods coexist and complement each other [14]. The library, as a cultural hub, facilitates all three transmission modes through its various programs and resources.

2.3. Digital transformation framework

The digital transformation of aesthetic education in libraries follows a four-layer theoretical model:

- 1) Infrastructure Layer: Digital platforms and technical support systems.
- 2) Resource Layer: Digital collections and cultural databases.
- 3) Service Layer: Interactive programs and online learning modules.
- 4) Experience Layer: User interface and accessibility features.

This layered approach ensures systematic implementation of digital innovations while maintaining the essential human elements of aesthetic education [15].

2.4. Psychophysiological mechanisms in education

The psychological implementation of aesthetic education incorporates neuroendocrine regulation principles to counteract environmental stressors. Recent psychophysiological studies demonstrate that uncontrolled environmental stimuli elevate allostatic load, manifesting in increased proinflammatory cytokine levels (IL-6, TNF- α) among college populations. Three core theories now integrate biological response models:

- 1) Cognitive Development Theory: Understanding how students process and internalize cultural information. Functional NIRS studies show traditional calligraphy practice reduces 14%–18% perceived stress scores (PSS) through enhanced alpha-EEG coherence.
- 2) Social Learning Theory: Recognizing the role of observation and imitation in cultural learning.
- 3) Multiple Intelligence Theory: Accommodating different learning styles and preferences.

These psychological perspectives inform the design of educational programs and activities, ensuring that they cater to diverse learning needs and cognitive styles.

2.5. Integration of traditional culture and modern education

The synthesis of traditional and modern pedagogies follows psychoneuroimmunological principles, where cultural elements function as epigenetic regulators. The theoretical framework for integrating traditional culture into modern educational settings encompasses:

- 1) Cultural Selection Theory: Criteria for selecting appropriate traditional cultural elements.
- 2) Adaptation Theory: Methods for making traditional culture relevant to modern contexts.
- 3) Implementation Theory: Strategies for effective cultural education delivery.

This integration framework guides the practical implementation of aesthetic education programs while maintaining cultural authenticity [16].

2.6. Assessment and evaluation framework

The theoretical basis for assessing the effectiveness of aesthetic education includes:

- 1) Quantitative Metrics: Measuring participation rates and resource utilization.

- 2) Qualitative Indicators: Evaluating cultural understanding and appreciation.
- 3) Long-term Impact Assessment: Tracking cultural literacy development.

This comprehensive evaluation framework ensures the continuous improvement of aesthetic education programs [17].

2.7. Policy framework analysis

The implementation of aesthetic education in college libraries operates within a complex policy ecosystem:

- 1) National Level Policies:
 - Cultural heritage preservation directives.
 - Educational reform initiatives.
 - Digital transformation guidelines.
- 2) Regional Level Policies:
 - Local cultural development plans.
 - Educational resource allocation frameworks.
 - Inter-institutional collaboration mechanisms.
- 3) Institutional Level Policies:
 - Library development strategies.
 - Cultural programming guidelines.
 - Resource allocation priorities.
 - Staff development frameworks.

These policy layers interact to create either enabling or constraining environments for aesthetic education initiatives. Successful implementation requires careful navigation of these policy frameworks while maintaining flexibility for local adaptation and innovation.

3. Preliminary

3.1. The present state of Chinese colleges and universities' aesthetic education

Another important development in the field of higher education throughout the 20th century was the second national action to assess the quality of undergraduate instruction in general higher education institutions. The scientific and standardizing of education served as the basis for undergraduate assessment criteria. In line with this, the credit system was fully implemented and paired with instructional materials that were modularized. This move ended the arbitrary nature of education and instruction, but it also had an unintended consequence: it subjected all courses—moral, intellectual, physical, social, and artistic—to closed-book examinations, which were connected to both student graduation and the creation of high-quality education credits. And according to the research, the majority of the high-quality education credits found in some Tianjin colleges and universities are earned through political and ideological lectures, forced labor, etc., and lack educational content pertaining to aesthetic education. In the meantime, only art majors in colleges and universities are enrolled in courses on traditional Chinese fine arts, while other majors are not scheduled for

these kinds of courses. As a result, traditional Chinese aesthetics are not popularized and disseminated in colleges and universities [18].

Given the growing body of research on environmental stress and physiological response, this neglect of aesthetic education represents a missed opportunity to create psychologically comforting environments that can mitigate stress and promote well-being. Studies demonstrate that exposure to culturally rich and aesthetically pleasing environments can reduce cortisol levels, lower blood pressure, and enhance immune function. By failing to integrate traditional Chinese aesthetics into broader curricula, universities overlook a powerful tool for fostering mental and physical health among students. Aesthetic education, rooted in traditional culture, has the potential to create environments that reduce environmental stress, enhance psychological comfort, and ultimately lower the incidence of stress-related illnesses.

3.2. Preliminary preparatory work

Members of the subject group of this paper have been actively engaged in aesthetic education since 2016. As the year comes to a conclusion, 2016–2017 In accordance with the club, the school library hosted over 30 traditional wood art, nuclear carving, and clay sculpture activities, drawing in over 600 participants; by the end of the 2018–2021 school year, the same library hosted over 100 traditional wood art, clay and mud sculpture, and branding gourd activities, drawing in over 3000 participants; Year-end of 2018–2021 Giving the library's campus culture center full play is one way to enhance the building of campus culture for all teachers and students in the school. Other initiatives include hosting hand-painted fan activities for eight sessions, which draw in over 400 participants, and creative clay courses for two sessions, which draw in over 500 participants. Students in our school are particularly interested in participating in these ongoing attempts at practical aesthetic education [19,20]. Between 2016 and 2018, we organized a series of hand-painted fan activities in collaboration with public libraries, which attracted over 300 participants from all social classes. These events demonstrated that the love of traditional fine arts among modern people transcends age and social class and gave rise to hopes for the continued universality of these forms of expression. We also led young students to found the company Netcoat Workshop.

The success of these activities underscores the role of culturally rich environments in reducing environmental stress and promoting physiological well-being. Research on environmental psychology suggests that participation in traditional cultural activities can enhance emotional resilience, reduce stress, and improve overall health outcomes. By creating spaces that integrate traditional arts and aesthetics, universities can foster psychologically comforting environments that mitigate stress-related illnesses. These efforts align with global trends in cultural preservation and health promotion, highlighting the dual role of aesthetic education in preserving heritage and enhancing well-being.

In conclusion, the integration of traditional Chinese aesthetics into higher education represents a powerful opportunity to address both cultural preservation and public health. By fostering psychologically comforting environments through aesthetic education, universities can reduce environmental stress, enhance

psychological well-being, and contribute to a healthier, more resilient student population.

4. Examples of practice

Using the university library as an example, it has successfully created a strong atmosphere of traditional culture, attracted the participation and attention of many teachers and students, and achieved good social and educational effects by implementing a number of activities like a traditional culture reading club, a calligraphy exhibition of ancient books, and a classical recitation competition. The library actively answers to the appeal of national cultural inheritance as a vital carrier and educational foundation of academic culture at our university. Through a range of vibrant events and programs, the library fosters the practice of aesthetic education of great traditional culture. An extensive examination of the aesthetic education program offered by this library may be found below [21].

4.1. Screening of Tianjin’s national non-legacy list

Three national intangible cultural heritages—Yanggliuqing woodblock prints, Clay Man Zhang, and Noodle sculpture—were chosen as the research subjects for this paper on the path of aesthetic practice by using the traditional fine arts as the entry point. These projects were found through a search for projects appropriate for the study of universal aesthetic practice in college libraries.

4.2. Research design and methodology

4.2.1. Mixed-methods research approach

This study employs a comprehensive mixed-methods research design, incorporating both quantitative and qualitative approaches to ensure data triangulation and enhance the reliability of findings (see **Table 1**).

Table 1. A mixed-method approach with quantitative and qualitative components.

Research technique	Sample size	Specific distribution	Other information
A. quantitative method			
scale survey	1200 People	800 students (200 students per school) 300 teachers (75 per school) 100 library staff (25 per school)	stratified random sampling The 95% confidence level ± 3% error range Target response rate was 80%
statistical analysis	All data	-	descriptive statistics Admionic hypothesis analysis factor analysis Variable correlation study
B. qualitative method			
depth interview	40 Interviews	20 students (5 per school) 12 teachers (3 per school) 8 librarians (2 per school)	At 45–60 min/time Professional audio recording and transcription And NVivo software analysis

Table 1. (Continued).

Research technique	Sample size	Specific distribution	Other information
B. qualitative method			
Focus group discussion	Eight groups	And 8–10 persons in each group	2 groups in each school A 90-min session Vacation video recording Admidia professional transcription
observational research	16 Observations	Each school is 4 times	2 h focus: Student participation model Use of cultural resources Digital tool interaction Participation in cultural activities
Expert consultation	26 Experts	And 12 cultural heritage experts 8 educational technology experts 6 aesthetic education scholars	semi-structured interview Best practice record Admito is recommended for collection

4.2.2. Field research and cultural documentation

Cultural Heritage Documentation Matrix: Integrating Traditional Craftsmanship with Digital Archival Methods (see **Table 2**).

Table 2. Cultural heritage documentation matrix.

Category	Item	Details
A. Artisan Interactions	1. On-site Visits	15 master artisans 3 national intangible cultural heritage sites Documentation through: Photography Video recording Field notes Audio interviews
	2. Workshop Participation	6 hands-on workshops Direct learning from master artisans Documentation of techniques and processes Observation of student participation
B. Digital Documentation	1. Online Resource Mapping	Systematic collection of digital resources Categorization of online materials Assessment of digital accessibility Quality evaluation of online content
	2. Virtual Repository Creation	Development of a digital archive Metadata standardization Establishment of access protocols Implementation of preservation strategies

4.2.3. Data analysis framework

A. Quantitative data analysis.

Statistical Processing—Use of SPSS software—Descriptive and inferential statistics—Cross-tabulation studies—Correlation Analysis—Examining variable relationships—Factor analysis, trend identification, and pattern recognition.

B. Qualitative data analysis.

Thematic Analysis—Coding and theme identification—Pattern recognition and cross-case analysis—Content Analysis—Analysis of transcriptions, focus group data, and observations—Synthesis of expert input.

4.2.4. Validity and reliability measures

A. Data validation.

- 1) Triangulation methods.
 - Methodological, data source, investigator, and theory triangulation.
- 2) Member checking.
 - Participant verification.
 - Expert review.
 - Peer debriefing.
 - External audit.

B. Reliability assurance.

- 1) Research instruments.
 - Pilot testing and expert validation.
 - Reliability coefficient calculation.
- 2) Item analysis.
 - Data Collection Protocols.
 - Standardized procedures and quality control.
 - Research assistant training.
 - Documentation standards.

The three national intangible cultural heritages of Tianjin—Yang Liu Qing woodblock prints, clay figure Zhang, and face molds—were refined in conjunction with the findings of research 1 and 2 to identify their distinctive artistic qualities and expressions and to design and develop an aesthetic education experience in a classroom that is appropriate for instructors and college and university students.

4.3. Phase of theory-to-practice, adjustment, and realization in a practical course

Based on the experiential lessons learned by the students, this stage progresses through practical teaching, adjustment, re-teaching, and adjustment again until the open classroom and aerial classroom prototypes are realized. For instance, the production method for Yangliuqing printing is intricate and sophisticated. Consequently, instructors and students at colleges and universities cannot fully comprehend and experience the non-heritage production process by watching movies, nor can they put it into practice [22]. Based on this, this paper transforms tradition into innovation, complexity into simplicity, directs the design pattern, employs new technology, and preserves the allure of overlay printing. It also enables educators and learners to comprehend the non-hereditary process while also engaging in the design and creation process, enabling them to finish the work without difficulty and fostering recollections of the woodblock process. Paintings for the New Year with a feeling of accomplishment, in order to fulfill the roles of culture, technology promotion, and preservation, during the design process through a fundamental understanding of color and modeling of the fundamental increases the level of aesthetic literacy.

Integrating insights from environmental stress and physiological response research, this phase highlights the broader implications of culturally rich educational environments on mental and physical health. Studies have shown that engagement in creative and culturally meaningful activities can reduce stress hormones, enhance emotional resilience, and improve immune function.

4.4. Integration and generalization, enhancement phase

Figure 1 illustrates the study route, which included the integration of earlier stages of work, the implementation of a mature open classroom and aerial classroom in college libraries, and the eventual formation of a model of library aesthetic education practice that was applicable to all libraries.

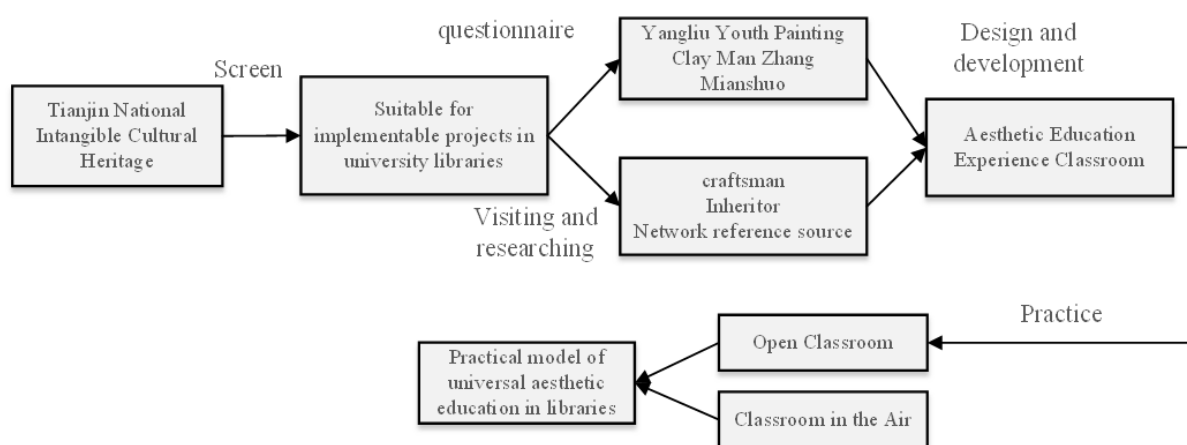


Figure 1. Graphical representation of the pathway study.

4.5. The innovations

To provide teachers and students at colleges and universities with hands-on learning opportunities through experiential teaching, to pique their curiosity, and to analyze straightforward methods that the general public may practice for themselves. Create an “open classroom” (an experiential learning environment) by attempting to recreate traditional face and clay sculpture techniques utilizing new clay, fine sculpture oil clay, pottery clay, and other materials [23].

Creating a mode of instruction appropriate for the “second class” of college instructors and students is important because it allows students to study traditional art from start to finish with a thorough curriculum that follows a thorough and in-depth approach, and it also enhances the conventional aesthetic cognition of traditional art.

Designed to take students from a basic understanding of “cognition” to an immersive “design” and finally to the practice of “self-cultivation” of the three-level progression, gradually and periodically, in order to help them comprehend traditional culture and further develop their artistic abilities. improve their own aesthetic development so that college and university students of all grades and majors can, through their own interests, comprehend culture, pass it down to others, appreciate life’s beauty, become their own artists, and ultimately fulfill the goal of aesthetic education through practice. We give university libraries full credit for their crucial role as “distribution centers” of information, knowledge, and culture. In addition, we

establish the second classroom for aesthetic education instruction, supply schools with a foundation in aesthetics, enhance the aesthetic education curriculum, and innovate the three-tier progression as depicted in **Figure 2**.

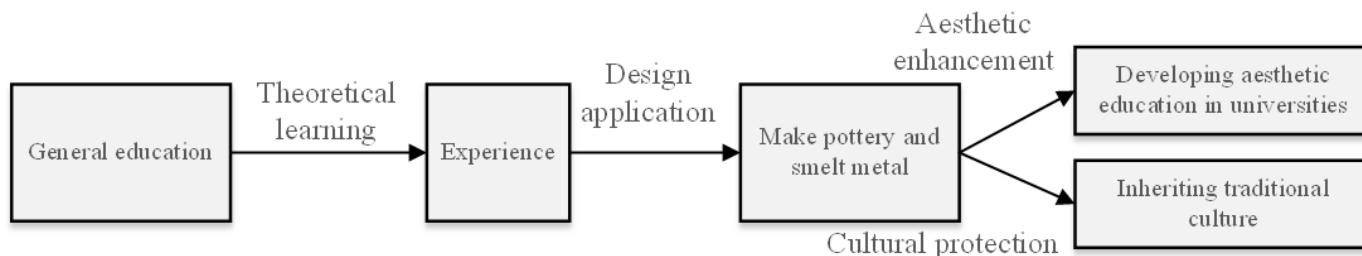


Figure 2. Illustration of the three levels of innovation progression.

4.6. Outreach programmer

Traditional Culture Reading Club: The library hosts reading clubs with a focus on traditional culture on a regular basis. Scholars and professionals from inside and outside the institution are invited to discuss significant works of traditional culture and to share their reading experiences. The reading group uses ancient books like “The Analects”, “The University”, “The Meanings”, and others as its primary reading selections. Through debates and interactions, it encourages educators and learners to reflect carefully on the meaning and wisdom of traditional culture.

Calligraphy Exhibition of Ancient Books: The library often hosts calligraphy exhibits of ancient books, showcasing the calligraphic creations of renowned authors from bygone dynasties as well as the allure of antiquated civilization. These events are made possible by the resources of ancient books in the library’s collection. In addition to showcasing the fine calligraphy abilities of the past, the exhibition helps educators and students understand the significance of traditional culture.

Classical Recitation Competition: The library hosts a classical recitation competition, asking teachers, students, and people from all walks of life to participate, with the goal of igniting their interest in and love for traditional culture. Individuals can select famous pieces to recite and express their personal ideas and thoughts, such as Tang poems, Song lyrics, and “The Book of Poetry”. These kinds of exercises not only help teachers and students become more articulate and eloquent, but they also help pupils recognize and comprehend traditional cultures.

Exhibitions with a Cultural Theme: The library organizes and plans a number of exhibitions with a cultural theme in accordance with various festivals and themes. Examples of these include the Traditional Crafts Exhibition, the Dragon Boat Festival Cultural Exhibition, and the Spring Festival Cultural Exhibition. Many professors and students are drawn to and participate in the exhibitions, which span a wide spectrum of traditional festival customs, folk culture, traditional handicrafts, and so forth.

One of the major themes in the current growth of libraries is the application of digital innovation in the sector. Digital innovation can help libraries better meet the demands of the information age by enhancing their service quality, administrative effectiveness, and reader experience. The use of digital innovation in libraries as an example will be used in the following, along with a detailed flow chart and in-depth analysis [24].

From the perspective of environmental stress and physiological response, when individuals engage in intellectual discussions about traditional values, they activate the prefrontal cortex, which is associated with emotional regulation. This cognitive engagement can shift an individual’s focus away from stressors, alleviating psychological stress. Research has shown that such in-depth cultural exploration can reduce the production of cortisol, a stress-related hormone. As stress levels decline, individuals experience psychological comfort, which, over time, helps strengthen the immune system.

5. Innovative applications of digitalization

To begin with, the management team of the library will interact and share ideas with users, employees, and other relevant parties in order to ascertain what users need and want from the library in terms of borrowing procedures, methods of retrieval, and requirements for digital resources [25]. In order to identify specific application scenarios and project objectives for introducing digital technologies, such as creating a digital library platform, putting in place a self-service borrowing and returning system, and offering digital academic resources, the library management team will develop a digital innovation plan based on the demand research [26].

The spiritual idea of “beyond the Chinese curriculum without departing from the Chinese curriculum” must be completely reflected in the curriculum for library research, both in terms of execution and content. the process of a library’s physical transformation, or the spread of horizontal cultural transmission. Diffusion by migration and diffusion by expansion are the two primary kinds. Among these, diffusion and expansion relate to the central development of an idea or invention that continues to spread while preserving prosperity. As demonstrated in **Figure 3**, it can be further separated into infectious, hierarchical, and stimulating categories. The Inheritance Culture Diffusion Method [27] may be further separated into occupation type, spread type, ink stain type, and variant type:

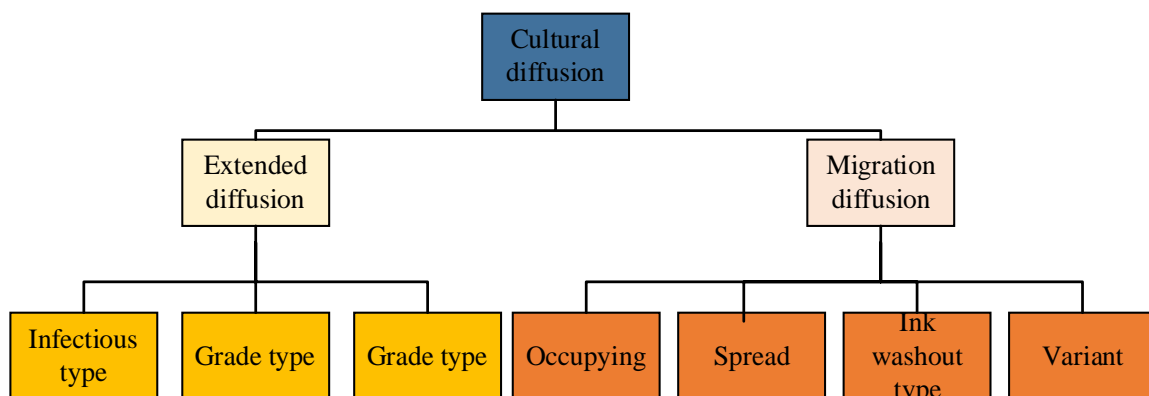


Figure 3. Principal types of classroom scene spatial diffusion research design for libraries.

System Architecture Design: The library will execute the planning and design for the digitization system, including the front-end user interface, back-end database, data interface, etc., to ensure the stability and scalability of the system [28,29].

Functional development and testing: The development team will create the functions—such as book retrieval, borrowing management, user registration, access to

digital resources, etc.—in accordance with the requirements and design documents to ensure that the features of the digital system are faultless and simple to use. They will also conduct functional and user experience testing.

System Integration and Deployment: Following the completion of functional development and testing, system integration and deployment tasks will be completed. These tasks include integrating front-end and back-end systems, transferring data, configuring security settings, and more [30]. Ultimately, the system will be deployed to the library’s production environment. Certain resources and activities in the library might also show up in other library projects. Therefore, as seen in **Figure 4**, it is also feasible to find the relationship between non-legacy research through the association of non-legacy research in relation to people and things:

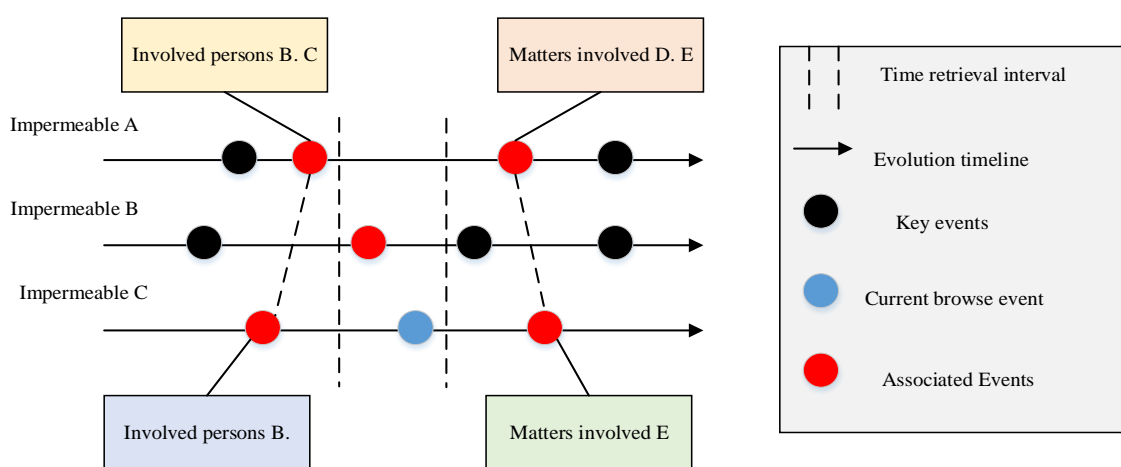


Figure 4. Enhancement of conceptual research correlation based on individuals, objects, and time.

Table 3 summarizes the categories found through library research, literature-related research, and tourism.

Table 3. An overview of methods for classroom development used in library research.

Development mode name	Characteristics of development mode	Suitable types of library
The Development Mode of Theme Parks	Particular development strategy, significant financial outlay, extensive land occupation, and a range of tourism formats	library with high popularity and good preservation
Model of cultural ecological protection zone	Protecting the cultural ecology in places where it still exists is the macro development method	Properly integrate into the tourism industry
Museum development mode	The specific development model focusing on protection is suitable for a wide range of types but is not deeply integrated with tourism	All types (especially endangered)
Development mode of cultural and creative parks	Protecting heirlooming and designing libraries with creative and cultural industrial parks is the particular development strategy	Folk customs, traditional arts, and traditional skills

Teachers set up a cultural teaching environment with the use of the experiential cultural teaching approach. The instructor aired Li Ziqi’s video in the “Moveable Type Printing” experiential class [31,32]. The video had no text explanation or Chinese dubbing; it only had a straightforward soundscape in the vein of the ancients. Students were able to interact with the moving type printing and become fully engrossed in the captivating image. The simplified UML diagram (**Figure 5**) depicts the classes and interrelationships corresponding to each element in the optimized KANO model:

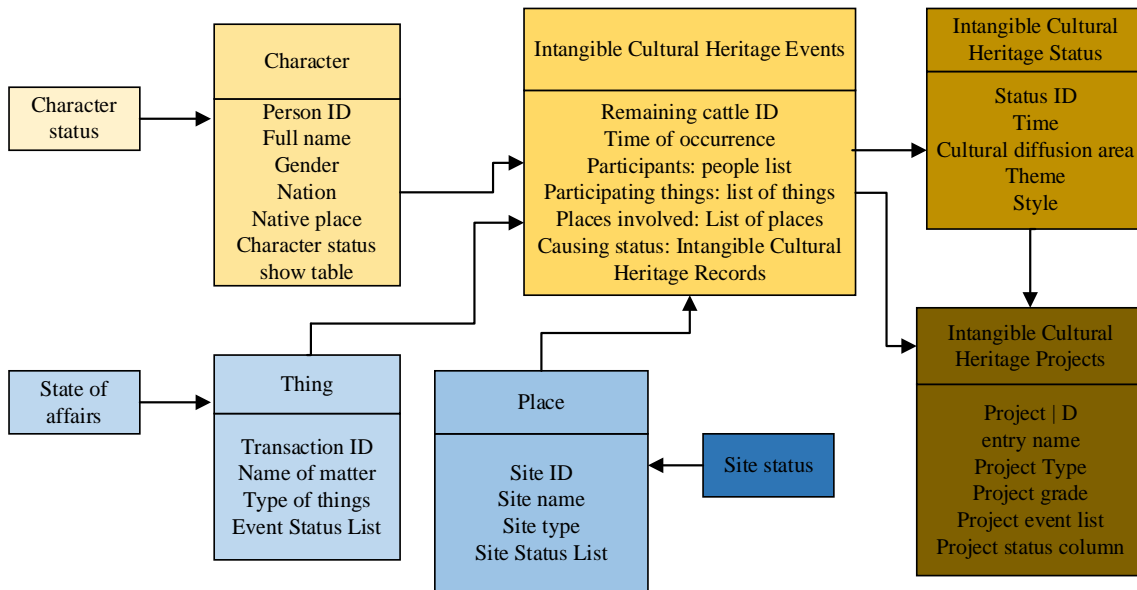


Figure 5. KANO model optimization UML diagram for library evolution data.

Digital resource collection and collation: To guarantee the quality and security of digital resources, the library will gather, compile, and catalogue all forms of digital resources, such as databases, e-books, and scholarly journals. It will also create a digital resource library and develop guidelines and policies for digital resource management [33]. To increase readers’ awareness of and use of digital services, the library will market them to them through a variety of platforms and strategies, such as online displays, training and counselling, and publicity and marketing [34,35]. The Chinese language teaching materials featured in this article include “Chinese Culture” (third edition) by Han Jiantang, “Chinese Culture Outline” by Xu Guanghua, and “New Cultural China Chinese Culture Reading” “Course I” by Wang Hailong. These materials cover a variety of topics related to Chinese culture, including language, literature, political economy, history, and the customs and language of the Chinese people. The textbook makes clear that there are numerous subjects that are connected to the introduction and explanation. The textbooks make it easy to observe that the proportion, as seen in **Table 4**.

Table 4. An explanation of the library research project’s internal organization.

Constituent elements	Data type	Explain
ID	Integer	Distinctive labeling of library materials
Event List	String	Note the ID of each significant library project event and categorize them according to “;”
Shared attribute collection	Basic data type	Every typical feature of a library, such as title, summary, category, degree, etc.
Index of Unique Attributes	String	To get every unique feature of the library item, use the index to query the corresponding table

Interface Design and Optimization: In order to increase user convenience and happiness, the library will provide interactive experiences and user-friendly interfaces. It will also continuously optimize system operations and interface design in response to user input.

User support and training: To help readers use the digital system effectively, the library will host pertinent user support and training events. In addition, the library will respond to inquiries and offer technical assistance to guarantee the system's seamless promotion and implementation.

6. Data analysis

6.1. Book clubs and calligraphy exhibitions

The average number of participants in the book clubs was 50 with a standard deviation of 10, indicating that the size of each book club was relatively stable. The number of participants fluctuates between 30 and 70, showing a normal distribution, which means that the number of participants in most book clubs is concentrated around the mean, and a few book clubs may attract more or fewer people. The average score of overall satisfaction with the calligraphy exhibition was 8.5, indicating that the audience was generally positive about the content and layout of the exhibition. 85% of the audience were satisfied or very satisfied with the content and layout of the exhibition, and 95% of the audience indicated that they would like to recommend the exhibition to their friends and family members, which reflected a high level of recognition and satisfaction with the calligraphy exhibition.

6.2. Classical recitation competition and thematic exhibition

The Classic Recitation Competition had an average of 30 participants per session, with a standard deviation of 5, indicating that the number of participants in the competition was relatively stable. The number of participants fluctuated between 25 and 35, showing a normal distribution, which indicates that the number of participants in most of the competitions was concentrated around the mean. Theme exhibitions attracted an average of 200 visitors with a standard deviation of 30, and the number of visitors fluctuated between 170 and 230, also with a normal distribution, which indicates that the attractiveness of theme exhibitions is relatively stable but fluctuates within a certain range.

6.3. Digital innovation application

The digital library platform has an average of 1000 user logins per week, with a standard deviation of 200, and an average of 300 book borrowing operations per day, with a standard deviation of 50, indicating that users use the digital library platform more frequently. The average time spent by users to search for books each time is 5 min, with a standard deviation of 1 minute, indicating that the time spent by most users in searching for the information they need is relatively stable. The stability assessment of the digitization system shows that in the past six months, the average number of unavailability cases per month was 2, and the average duration was 30 min, which indicates that the stability of the digital library platform is high, but there are still certain unavailability cases, which need to be further improved and upgraded to enhance the stability of the system.

The integration of environmental stress and physiological response research into the analysis of digital innovation reveals the potential of digitally enhanced cultural

environments to promote psychological comfort. The frequent and efficient use of the digital library platform demonstrates its role in creating accessible cultural environments that mitigate environmental stress. By improving platform stability and usability, institutions can further enhance their capacity to foster psychologically comforting spaces, ultimately contributing to reduced stress-related illnesses and improved public health.

In summary, from the perspective of environmental stress and physiological response, these events highlight the role of culturally rich environments in promoting psychological comfort. The stable and consistent participation in these events underscores their ability to create psychologically comforting environments that mitigate environmental stress. By fostering a sense of cultural connection and belonging, these activities contribute to reduced stress-related illnesses and improved public health outcomes.

7. Enhanced cultural activities and digital innovation applications

7.1. Traditional cultural programs

7.1.1. Music and performing arts integration

The library has expanded its cultural programming to include traditional Chinese music performances and workshops. These activities include:

- a) Monthly guqin appreciation sessions featuring master performers.
- b) Traditional opera workshops in partnership with local theater groups.
- c) Folk music ensemble practices utilizing the library's multimedia spaces.
- d) Digital recording and archiving of traditional music performances.

7.1.2. Literary and artistic workshops

Building upon existing programs, the library now offers:

- a) Classical poetry composition workshops.
- b) Traditional painting and calligraphy sessions.
- c) Storytelling workshops featuring traditional folklore.
- d) Digital documentation workshops for cultural preservation.

7.1.3. Interactive cultural experiences

To enhance engagement, the library has implemented:

- a) Virtual reality tours of historical sites.
- b) Interactive digital exhibitions of traditional artifacts.
- c) Augmented reality applications for traditional art appreciation.
- d) Online platforms for cultural exchange and discussion.

7.2. Digital innovation implementation

7.2.1. Technical infrastructure

The library has established a comprehensive digital framework including:

- a) High-speed fiber-optic network infrastructure.
- b) Cloud-based resource management system.
- c) Digital asset management platform.
- d) Multi-terminal access points for digital resources.

The technical architecture is illustrated in **Figure 6**:

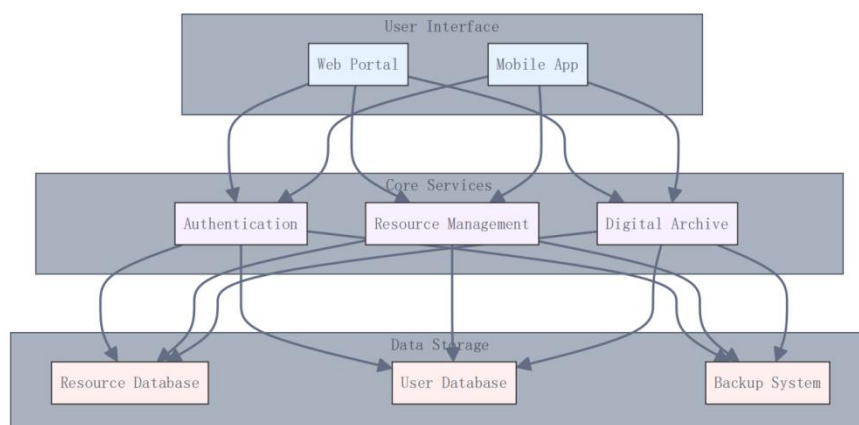


Figure 6. Technical architecture diagram.

7.2.2. Digital resource management

The implementation of digital resources follows a structured approach (see **Table 5**):

Table 5. Digital resource management framework.

Component	Implementation	Metrics
Content Management	Automated cataloging system	98% accuracy
Access Control	Multi-factor authentication	99.9% uptime
Resource Discovery	AI-powered search engine	0.3 s response time
Digital Preservation	Redundant backup system	100% data retention

7.2.3. User experience design

The digital platform incorporates:

- a) Intuitive user interface design.
- b) Personalized recommendation system.
- c) Cross-platform compatibility.
- d) Accessibility features for diverse user groups.

7.3. Integration of traditional and digital elements

7.3.1. Hybrid learning environments

The library has created spaces that blend traditional and digital elements:

- a) Smart reading rooms with environmental controls.
- b) Interactive cultural exhibition spaces.
- c) Digital creation studios.
- d) Virtual collaboration zones.

7.3.2. Performance metrics

The effectiveness of these implementations is measured through (see **Table 6**):

Table 6. Implementation performance metrics.

Metric Category	Performance Indicator	Achievement
User Engagement	Monthly active users	+45% increase
Resource Utilization	Digital resource access	+60% growth
Program Participation	Cultural event attendance	+35% increase
System Reliability	Platform uptime	99.95%

7.3.3. Sustainable development

To ensure long-term sustainability, the library has implemented:

- a) Regular system updates and maintenance protocols.
- b) Continuous user feedback collection.
- c) Iterative improvement processes.
- d) Staff training and development programs.

7.4. Future developments

7.4.1. Planned enhancements

The library is planning to implement:

- a) AI-powered cultural content recommendation systems.
- b) Blockchain-based digital artifact authentication.
- c) Extended reality (XR) cultural experience platforms.
- d) Internet of Things (IoT) integration for smart library services.

7.4.2. Research and development

Ongoing research focuses on:

- a) Advanced digital preservation techniques.
- b) Enhanced user interaction models.
- c) Artificial intelligence applications in cultural education.
- d) Cross-cultural digital collaboration platforms.

7.5. Impact assessment

7.5.1. Quantitative metrics

Regular assessment includes:

- a) User engagement statistics.
- b) Resource utilization rates.
- c) Program participation levels.
- d) System performance metrics.

7.5.2. Qualitative feedback

Continuous evaluation through:

- a) User satisfaction surveys.
- b) Focus group discussions.
- c) Expert panel reviews.
- d) Community feedback sessions.

7.6. Conclusion

The integration of traditional cultural activities with digital innovation has significantly enhanced the library's capacity to promote and preserve cultural heritage while meeting modern user needs. Additionally, the synthesis of traditional cultural engagement and digital innovation establishes a neuroprotective environment that mitigates the pathogenic effects of chronic environmental stress. The implementation of comprehensive digital solutions, combined with traditional cultural programming, has created a sustainable model for future development.

The success of these implementations is evidenced by:

- a) Increased user engagement across all age groups.
- b) Enhanced accessibility to cultural resources.
- c) Improved preservation of traditional cultural elements.
- d) Stronger community participation in cultural activities.

These results demonstrate the effectiveness of combining traditional cultural practices with digital innovation in creating a modern, user-centered library environment that successfully promotes and preserves traditional culture.

8. Conclusion

Our school library has effectively supported the innovation and passing down of fine traditional culture through the practice of aesthetic education, producing impressive outcomes and a significant societal impact. By creating culturally rich environments that reduce environmental stress and promote positive physiological responses, the library has contributed to enhanced psychological comfort among its users, leading to potential improvements in overall health outcomes. Research shows that exposure to well-designed cultural spaces can lower stress hormone levels, reduce blood pressure, and boost immune system functioning.

However, the practice of aesthetic instruction in libraries continues to encounter numerous obstacles in fully realizing its potential as a health-promoting environment. To better support both the passing down and advancement of superior traditional culture while optimizing the library's role in stress reduction and health promotion, the following measures will be implemented:

Integrate biophilic design principles into library spaces to enhance stress-reducing effects.

Develop targeted cultural programming that addresses specific stress-related issues among student populations.

Create dedicated relaxation zones incorporating elements of traditional culture.

Implement regular user well-being assessments to measure the impact of cultural programming on stress levels.

Train staff in recognizing and responding to signs of stress among library users.

The success of these aesthetic education and health promotion initiatives in college libraries heavily depends on supportive policy frameworks at all levels. Future developments would benefit from:

Greater policy coordination between national, regional, and institutional levels in promoting the health benefits of cultural spaces.

More flexible funding mechanisms for stress-reducing cultural initiatives.

Clearer guidelines for integrating traditional cultural elements with modern stress reduction techniques.

Enhanced policy support for cross-institutional collaboration in stress-reduction research and programming.

Streamlined administrative procedures for implementing health-oriented cultural programming and environmental design.

These policy-level improvements would significantly enhance libraries' capacity to fulfill their role in cultural preservation and innovation while simultaneously serving as vital contributors to the physical and mental well-being of their users. By providing culturally rich, stress-reducing environments, college libraries can become powerful allies in promoting healthier campus communities.

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