

# Enhancing Cultural Communication and Sustainability in Museum-Based Creative Products Through Digital Integration

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**Abstract.** This study addresses the challenge of sustaining cultural communication and encouraging repeat purchases in museum-based creative products. It introduces a digital platform, that dynamically showcases information on cultural relics, museum details, and engaging activities. The platform augments cultural depth and product longevity by employing interactive features. Users scan a QR code within the blind box product to access the H5 interface, initiating a sequence of engagements with grayscale and digital images, cultural relic narratives, museum introductions, and personalized panel selections. This digital integration effectively bridges the gap between consumers and cultural heritage, bolstering both cultural dissemination and economic viability.

**Keywords.** Museum-based Creative Products, Digital Integration, Cultural Communication

## 1. Introduction

The past decade has witnessed a significant emphasis on the cultural tourism industry in our country, aligning with the "Guiding Opinions of the General Office of the State Council on Promoting the Development of All-Region Tourism". This directive highlights the pivotal role of all-region tourism in driving economic development, underscoring the importance of unified planning, resource integration, and the enrichment of cultural content within tourism products. This paper explores the synergistic relationship between all-region tourism, cultural and creative industries, and museums, aiming to amplify consumer demand and disseminate historical culture.

The current cultural innovation product market in domestic scenic spots and museums faces challenges such as homogeneity, lack of innovation, and insufficient cultural depth. This study employs a comprehensive research methodology including questionnaires, interviews, and field surveys to discern user preferences for museum cultural and creative products. Expert opinions are also solicited to inform the development of culturally enriched products. The findings from these investigations serve as the basis for designing culturally significant and innovative products for museums.

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This research endeavors to dissect cultural and creative products within the broader context of the industry chain, encompassing design, service, production, channels, and marketing. By integrating global tourism perspectives and leveraging the cute design theory, coupled with innovative marketing models and sales channels, a comprehensive product service system platform is envisaged. This platform aims to not only bolster sales but also facilitate cultural communication and engagement.

Contemporary tourism trends reveal a lack of meaningful connections between attractions, particularly between museums and scenic spots. Younger tourists, primarily engaged in experiential and "check-in" tourism, often lack an understanding of regional cultural nuances and the historical context that underpins them. The cultural and creative industry, therefore, emerges as a pivotal bridge to engage young tourists with historical contexts and regional heritage. This research seeks to address this issue by proposing innovative marketing models, sales channels, and product and service designs that resonate with target demographics.

By aligning with the national development strategy of global tourism ecology and cultural industry construction, this study centers on museum cultural and creative products. The design theme revolves around "cute design" and takes the form of educational boxes. The ultimate goal is to construct a museum-centric cultural communication platform. This platform leverages the appeal of cute blind box cultural and creative products to engage contemporary teenagers, igniting their curiosity and desire to explore historical contexts.

This research advances a multifaceted approach to invigorating cultural tourism through the strategic development of museum cultural and creative products. By addressing current challenges in the cultural innovation product market and integrating global tourism perspectives, this study provides a theoretical foundation and practical guidance for the design, production, and service of future cultural and creative products. Ultimately, it aims to enhance the effectiveness of cultural broadcasting and contribute to the broader success of the tourism and cultural industries.

## **2. Literature Review**

In an era characterized by the homogenizing forces of globalization, the distinctive identity of urban areas is increasingly defined by their landmarks and local museums. Local museums have evolved into significant cultural symbols, delineating the unique characteristics of cities and regions. The evolving meaning and value of museums within urban contexts mirror the changing tides of time.

### *2.1. Museum Cultural and Creative Industry*

Local museums have emerged as iconic representations of cities and regions, encapsulating their historical and cultural essence. As urban landscapes converge towards a commonality, museums play a pivotal role in distinguishing one city from another. The evolving significance of museums within urban communities is emblematic of shifting temporal dynamics.

## *2.2. Development and Current State of Cultural and Creative Products*

Cultural and creative products draw their vitality from the rich cultural milieu in which they are nurtured. These products accentuate their value in local culture, societal identity, and regional customs. They serve as a catalyst for activating latent cultural elements, engendering a deeper understanding of local customs, and stimulating the creation of innovative cultural products. By infusing traditional cultural elements with a touch of softness and cuteness, these products cater to aesthetic preferences, fostering a renewed dynamism. The "2019 Museum Cultural and Creative Products Market Data Report" highlights a staggering surge in the popularity of these products, particularly among urban young women. This exponential growth underscores the untapped potential within the cultural and creative industry.

## *2.3. Cuteness Design*

In contemporary society, cuteness is manifested through products, characters, or environments that evoke feelings of affection, charm, and allure [1]. The evolving landscape of cultural and creative products has transitioned from traditional souvenir replicas to encompass a diverse range of styles, including cuteness. This aesthetic resonates with specific demographic groups and has permeated various aspects of daily life, heralding a burgeoning artistic presentation style. The realm of cuteness, categorized into Positive Cute and Negative Cute, embodies a spectrum of emotional valences. Positive Cute manifests in characteristics associated with optimism and natural innocence, while Negative Cute encompasses amusing, comical characters marked by playful antics and exaggerated features.

## *2.4. Blind Box Design*

Blind Box design, characterized by the mystery surrounding its contents, epitomizes a contemporary trend in emotional and compensatory consumption. This form of concealed packaging heightens anticipation and satisfaction, particularly among the younger generation. Its popularity can be attributed to factors such as lower unit costs, successful marketing models employing scarcity tactics, and a design aesthetic that resonates with contemporary youth.

The synergy between museum cultural and creative products, cute design elements, and innovative packaging models presents a compelling avenue for invigorating cultural tourism. By harnessing the allure of cuteness, these products offer a fresh perspective on regional culture, engaging a wider audience, and rejuvenating interest in historical contexts. The blind box design, with its element of surprise and emotional resonance, emerges as a promising approach to attract and captivate the younger generation. Through a strategic convergence of these elements, the cultural and creative industry is poised to play a pivotal role in the broader socio-cultural landscape, aligning with the strategic goals set forth by the 14th Fifth Plenary Session of the Central Committee of the Communist Party of China.

### 3. Research Approach and Methodology

In an era characterized by the homogenizing forces of globalization, the distinctive identity of urban areas is increasingly defined by their landmarks and local museums. Local museums have evolved into significant cultural symbols, delineating the unique characteristics of cities and regions. The evolving meaning and value of museums within urban contexts mirror the changing tides of time.

#### 3.1. Questionnaire

Given that this design research primarily focuses on cultural creative product design, the questionnaire was designed to gather insights into the personal aesthetic preferences of the contemporary established demographic. It aimed to capture their preferences concerning styles, colors, functionalities, and experiences of cultural and creative products. Additionally, the questionnaire delved into aspects such as preferred purchase channels, utilization methods, and preferred forms of cultural and creative products. The collected data was subsequently analyzed to provide a foundation for the ensuing design research.

The experimental subjects targeted in this study comprised the general public, selected through random sampling. A total of 140 questionnaires were distributed, of which 120 were deemed valid, yielding a recovery rate of 85.71% with a 100% effectiveness rate. The demographic distribution indicates 61 male respondents, constituting 50.83%, and 59 female respondents, making up 49.17%. Notably, the second main age group, spanning from 1-25 years old, constituted the largest segment, accounting for 60.83%, while the 26-40 age group accounted for 24.17%, coming in second. These findings closely align with the results of the 2019 China Cultural Museum and Cultural Creative Industry Consumption Survey Report by the Institute of Cultural Innovation and Communication of Beijing Normal University, which indicated that 53% of buyers were born in the 1990s and 1980s, totaling 79%. This convergence affirms the validity and effectiveness of the questionnaire selection. In terms of education, the majority of respondents held a bachelor's degree or higher, comprising 77.5% of the sample. Occupation-wise, a significant portion of respondents were students, accounting for 55.83%. Additionally, 39 respondents were employed in enterprises, constituting 30.83%, while civil servants and public institution staff accounted for 11.67%. The questionnaire format predominantly utilized Likert matrix scales and multiple-choice questions. The Likert scale ranged from 1 to 5, with 5 indicating the highest score and 1 the lowest. The average value of each option was computed from these scores to discern the participants' inclinations. Multiple-choice questions were displayed using bar charts, presenting the distribution of preferences among participants.

#### 3.2. Questionnaire Result Analysis

When examining the issues associated with cultural and creative products, respondents indicated particular concerns. These included high pricing (54.17%), perceived lack of practicality (47.5%), and aesthetic shortcomings (46.67%). Notably, the high emphasis on pricing aligns with the expectations of the study. Respondents emphasized that price is a pivotal consideration, given the prevailing trend where cultural and creative products often command higher prices compared to their non-branded counterparts. Regarding practicality, some respondents expressed reservations about the functional aspects of

culturally infused products, citing potential compromises due to their cultural significance. This led to doubts about the utility of such products, with some viewing them more as collectibles or decorations rather than functional items. Aesthetic concerns centered on the perception that contemporary cultural and creative designs tend to be derivative and oversimplified, potentially leading to aesthetic fatigue among consumers.

In terms of quality, respondents pointed out a prevailing perception that cultural and creative products may not always conform to established market standards and may lack the influence of established brands. Consequently, there is a general skepticism regarding the quality of these products, reinforcing a stereotype of subpar quality. Issues of medium concern included single and similar styles (29.17% and 28.33% respectively), perceived low service quality (27.5%), and a perceived lack of depth or connotation (26.67%). Respondents identified these concerns as stemming from an oversaturation of similar products in the market due to a lack of creative investment in the development process. Surprisingly, the importance of cultural connotation, initially expected to be a significant factor, emerged as less critical than anticipated. Respondents indicated a preference for visible, surface-level cultural symbols rather than deeper, less overt connotations. This finding underscores the importance of immediate visual appeal in driving consumer choices.

Issues of least concern were related to publicity and operation (23.33%), difficulties in purchasing (22.5%), low sales quality (20.83%), and inconvenience in transportation (11.67%). Notably, these factors were generally overlooked by respondents, indicating room for improvement in areas such as marketing and accessibility. When questioned about the purpose of purchasing cultural and creative products, over 60% of respondents (63.33%) indicated a desire to acquire them as keepsakes or collectibles. Additionally, more than half (55.83%) expressed an interest in using these products in daily life. Approximately 40% (40%) of respondents stated an intention to gift cultural and creative items to friends and family. In terms of product categories, living utensils garnered the highest preference (55.83%), closely followed by creative stationery (42.5%). Collectibles of cultural relics were also favored, with a user approval rate of nearly 40% (39.17%). Toys and dolls, along with home furnishings, exhibited a slightly lower but still notable level of recognition.

In terms of size preference, mini and small-sized cultural and creative products were most favored, chosen by 33.33% and 31.67% of respondents respectively. Medium-sized products were favored by 26.67%, while large-sized products were the least preferred, selected by only 8.33% of respondents. When considering stylistic preferences, respondents showed the highest acceptance for cute styles (3.98 points), followed by simple (3.31 points) and cool styles (3.14 points). Personalized styles received a slightly lower score (3.08 points), while classical styles garnered the lowest score (2.68 points). The dominance of cute styles among respondents, irrespective of gender, suggests the broad appeal of this aesthetic. Practicality emerged as the most significant functional orientation for cultural and creative products (3.69), followed closely by their commemorative nature (3.54). Decorative (3.48) and interactive (3.37 points) attributes followed. Cultural communication scored the lowest (3.13 points). Respondents value practicality highly, but some expressed concerns about the quality of practical products, noting that they might opt to keep them as collectibles rather than using them.

Regional cultural characteristics were deemed the most important experience attribute (4.1), followed by product quality (3.59) and aesthetic appeal (3.26). Innovativeness, interest, satisfaction, trendiness, and practicality also ranked highly. Practicality, though previously valued, scored the lowest in terms of experience attributes.

In terms of purchasing channels, museums and scenic spots were the most favored destinations, with 64.17% of consumers indicating a willingness to purchase cultural and creative products in such settings. Exhibitions and cultural fairs followed closely, with 56.67% expressing a preference for these venues. Online platforms like Taobao and JD.com were favored by 40.83% of respondents. Unmanned vending machines and small markets garnered relatively lower interest, with 24.17% and 19.17% of respondents respectively. Mini programs, official accounts, airports, and train stations were the least favored options. In consideration of factors influencing purchasing decisions, respondents overwhelmingly identified price as the most critical concern (4.02). Cultural connotation (3.98), interest (3.93), convenient channels (3.88), form (3.86), appearance and packaging (3.83), recommendations from friends and family (3.81), and function (3.62) followed closely. Tour guide recommendations received the lowest score (1.65), indicating that respondents generally prefer to rely on their own judgment rather than external advice.

In summary, this analysis sheds light on the preferences and concerns of contemporary consumers regarding cultural and creative products. It is clear that consumers prioritize practicality, affordability, and visible cultural symbolism. These insights can inform the design and marketing strategies of cultural and creative products, fostering a more nuanced understanding of consumer behavior in this domain.

#### **4. Design of "Banban's Cultural and Museum Journey" Blind Box Product**

Museum-based cultural and creative products serve as a pivotal conduit for public engagement with historical and cultural heritage. However, amidst the hustle and bustle of contemporary life, access to traditional cultural and creative offerings can prove challenging for certain users. Some cultural and creative products merely assemble cultural relic components without achieving the depth and scope required for effective cultural dissemination. The "Banban's Cultural and Expo Journey to Learn from Ancient Times" blind box product introduces a novel approach. It begins by introducing the virtual character "Banban" as a central design concept. The nomenclature "Banban" is derived from the Sichuan dialect, wherein "Ban" signifies "Ba Shi De Ban." In adhering to the vernacular expression of the Sichuan populace, the repetition of words imbues an endearing quality, thus christening it "Banban." The visual representation of this character features an artfully designed child figure. One hand forms the number eight, while the other forms a fist, collectively forming "eighty," a phonetic match for Ba Shi De Ban.

This endeavor aspires to construct an imaginative community distinctive to its locale, deeply steeped in Sichuan's indigenous attributes. Banban is envisioned as an immortal being who has slumbered in the heart of Bashu for millennia. Recently reawakened, he finds himself disoriented, his memories seemingly adrift. Possessing millennia of recollections, Banban embarks on a quest to the seven preeminent museums of Bashu, in search of historical vestiges and the fragments of his own forgotten narrative. Each museum visitation begets a custom-designed set of endearing characters corresponding to the thematic essence of the venue. This ensemble culminates in a comprehensive array of educational boxed products. The design and fabrication of cultural and creative products in museum contexts are intrinsically tied to the cultural milieu from which they originate. Emblematic cultural artifacts housed within museums represent quintessential and pivotal elements for application.

#### 4.1. Design of "Banban"

Within this paradigm, the current design endeavor meticulously curated a selection of paramount materials from seven distinct museums. These cultural motifs, serving as emblematic representations, have been seamlessly integrated into the primary visual identity board.

##### 1) Bamboo Forest Panda Style

The panda motif serves as the overarching theme for the entire incubation box product. To maintain impartiality among specific museums, the iconic giant panda, an emblematic symbol of Sichuan, was additionally incorporated into the design. This portrayal features a panda adorned with a distinctive hat and a jumpsuit, evoking the imagery of a cat. In one hand, the panda clutches a bamboo slip, while a bamboo basket graces its back, giving the impression of a journey afoot. The primary color palette embraces the classic black and white synonymous with the giant panda, supplemented by green accents for aesthetic embellishment. The base card design takes inspiration from the natural habitat of giant pandas, referencing both muddy terrains and bamboo forests.

##### 2) Chengdu Museum Model

Positioned on the western periphery of Tianfu Square in the heart of Chengdu, Sichuan Province, the Chengdu Museum stands as a pivotal cultural institution, boasting a distinctive collection of historical and cultural artifacts. This includes educational programs and culturally inspired merchandise that have wielded substantial influence across the southwestern region. To encapsulate the essence of the Chengdu Museum, the design integrates two culturally significant relics: the Zhenshui stone rhinoceros and the Qiong kiln yellow-green glazed high-foot porcelain furnace. The primary color scheme draws from the stone rhinoceros, with shades of gray predominating, while stylized renditions of the rhinoceros form distinctive elements of the hat and boots. The attire, including cloak and culottes, echo the aesthetic of Qiong kiln's yellow-green glazed high-foot porcelain, albeit in abstracted and emblematic form. The base card design draws inspiration from the historical narrative involving Li Bing, the inaugural governor of Shu County, who employed five stone rhinoceroses to manage the watercourse, invoking a layered historical allusion.

##### 3) Sichuan Museum

Nestled along the Huanhua Creek, the Sichuan Museum stands as one of the most prominent and extensive repositories of cultural heritage in Southwest China. It plays a pivotal role in delineating the historical and cultural tapestry of the Sichuan region. Given its significance, the design of this model was anchored in Zhang Daqian's masterpiece, "Painting of Flying Ladies in Dunhuang," an iconic work by the celebrated modern Sichuan painter Zhang Daqian Guangsheng. The design ethos mirrors the vivid attire, ribbons, and crowns adorning the flying maidens in the painting. The chosen color scheme echoes the vibrant palette of red, yellow, and green, synonymous with the Dunhuang Flying Lady portrayal. The base card design takes its cues from Zhang Daqian's rendering of the flying maidens in Dunhuang, encapsulating the essence of these ethereal figures.

##### 4) Jinsha Site Museum

As a beacon of ancient Shu civilization, the Jinsha Site Museum, alongside the Sanxingdui Site, stands as a testament to the depth and breadth of Chinese cultural heritage. To convey the essence of this museum, the design selectively incorporates the Sun God Crow gold ornaments from the Shang and Zhou Dynasties and the gold masks of the same era. In this style, half of the sun god's distinctive black ring becomes the

focal embellishment at the back of the head, while half of the grand gold mask adorns the eyes. The color palette is drawn from the distinctive hues of these two gold artifacts, complemented by earthy yellow and off-white tones. The base card design takes inspiration from the aesthetic of the Jinsha Site Museum's Boutique Hall, incorporating red velvet as the foundation, while wisps of white clouds create an enigmatic, mist-like veil reminiscent of the museum's aura.

#### 5) Sanxingdui Museum Model

A cornerstone of the ancient Shu civilization, the Sanxingdui Museum stands as a stalwart bastion of Chinese civilization's multifaceted diversity. Renowned for its iconic bronze creations, the museum's global reputation is well-deserved. Thus, the design of this model adheres to the design principles established by the Jinsha Museum's Golden Mask. It incorporates the bronze longitudinal mask, with select portions becoming the focal imagery. The patterns and knotwork of the attire are inspired by the imagery of the bronze sacred tree, also influencing the color scheme. The verdant green, emblematic of contemporary bronze relics, serves as the foundational color palette. The base card design derives its inspiration from the bronze bricks, employing their visual texture to create a layered effect.

#### 6) Yongling Museum Pattern

The Yongling Underground Palace and Yongling Museum hold a unique distinction as the only known imperial tombs constructed above ground. Their stylistic inspiration draws from the overall architectural color scheme of the Yongling Underground Palace and the translated jade treasures within. The design undergoes a deliberate transformation, taking cues from the attire of Wang Jian, the Lord of Shu. The distinctive headless jade treasure is referenced in the headwear, while the dragon-shaped pavement pattern on the chest harks back to the copper pavement door knocker of the Shuiling Underground Palace gate. The color scheme echoes the architectural grandeur of the underground palace, with black and red as primary hues, conveying a sense of solemnity and imperial authority. The stone gray serves as a supplementary shade, harmonizing the interplay of light and shadow. The base card design is a testament to the treasures enshrined within the underground palace, spotlighting the dignified presence of the dragon-shaped totems and the twenty-four noble prostitutes.

#### 7) Wuhou Temple Museum Model

Distinguished as the sole temple in the nation where sovereign and ministers jointly pay homage, Wuhou Temple holds immense scholarly value, both nationally and globally. Though the Wuhou Temple Museum encompasses numerous temple precincts including Han Zhaolie Temple, Huiling Mausoleum, and Wuhou Temple itself, the latter's renown is unparalleled. Thus, Zhuge Liang's image, as etched in collective memory, forms the core of this creation. Adorned with a headdress inspired by the celestial crown atop the deity's statue, Zhuge Liang holds a white feather fan, dons a flowing robe, and sports a feathered turban. The color selection of blue, white, and gray draws from prevalent portrayals in media. The base card design takes its inspiration from a passage within the Wu Gong Temple, featuring red walls, black tiles at the forefront, and verdant bamboo foliage in the background. This interplay of nature and architecture imbues a harmonious and enchanting ambiance.

#### 8) Du Fu Thatched Cottage Museum

The Du Fu Thatched Cottage stands as the living legacy of Du Fu, a luminary poet from the Tang Dynasty, during his sojourn in Chengdu. Painstakingly preserved and restored since the Tang Dynasty, it offers a glimpse into the poet's life during that era. For this style, Du Fu's image as perceived by the public has been selected, draped in a



cloth hat and traditional robes. A brush, symbolizing his poetic prowess, gracefully extends from his attire. The predominant off-white hue, emblematic of commoner's garb, underscores Du Fu's identity as a poet. The base card design intricately depicts the thatched cottage's upper facade and the reflective shadow of Cao Lu below. The pond's surface shimmers in the background, two koi fish meandering in its depths, evoking a tranquil and leisurely atmosphere.



Figure 1. H5 Design

4.2. H5 Design for “Banban”

In contrast to conventional cultural and creative products, which primarily convey cultural significance through their outward appearance, establishing a sustainable channel for cultural communication with consumers proves challenging. Additionally, it is often arduous to instill a desire for repeat purchases among consumers. To address this, the present design study employs a digital platform to disseminate information pertaining to cultural relics, museum details, and engaging activities. This approach serves to accentuate the cultural depth and enhance the product's longevity. In the specific H5 interface design sample, the user initiates the process by scanning the QR code located within the blind box product, granting access to the H5 interface.

This interface initially presents a grayscale rendition corresponding to the style featured in the acquired incubation box. Subsequently, upon clicking the check-in button,

the grayscale image transforms into a vibrant digital card image. At this juncture, the user has the option to save their digital image. By selecting the drop-down menu, they can delve into the source introduction page for the cultural relic image elements, thereby gaining insights into the narratives and significances underpinning the cultural artifacts. A subsequent click leads to the introduction page of the respective museum, furnishing users with a more accessible and comprehensive avenue to acquaint themselves with the featured museums. Following this, another click ushers in an interface housing an unidentified image. Clicking the "Discover more panels tailored to you" button below prompts users to respond to a series of questions, culminating in the revelation of the subsequent panel most suited to their preferences. Through these interactive modalities, users not only gain access to a wealth of historical and cultural knowledge, but also actively participate in the propagation of culture. Simultaneously, this engagement fosters an appetite for continued purchases, yielding a mutually beneficial outcome for both cultural dissemination and economic prosperity

## **5. Conclusion**

The integration of digital technologies into museum-based creative products provides a promising avenue for enhancing cultural communication and sustainability. By incorporating interactive elements, users are actively engaged in exploring cultural relics and museum narratives. This not only enriches their knowledge but also fosters a sense of personal connection to the artifacts and institutions. The resulting increased interest and understanding create a positive feedback loop, driving continued consumer engagement and purchases. Ultimately, this approach represents a win-win scenario for cultural dissemination and economic benefits.

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