Innovative Redesign of Mianzhu New Year Picture Products: A Path to Integrate Culture and Tourism

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ABSTRACT: *This research focuses on fostering the evolution of intangible cultural heritage, taking the case study of the Mianzhu New Year image, a respected element of Chinese cultural heritage. It investigates the potential for innovatively redesigning these image products to boost tourism appeal. The methodology is tripartite. In the initial phase, we probe the demand for a product redesign and seek methods to enhance it via the KANO-AHP model, offering design modification recommendations based on potential consumers' expectations. The second phase incorporates an examination of the cultural and artistic elements of the Mianzhu New Year image. Following a premeditated needs evaluation, the graphic design, form, content, and shape of the image are cultivated for innovation. The final stage encompasses a critique of the refined design. Here, the process is meticulously documented, and experts from product design, tourism, and cultural studies sectors measure the design's effectiveness. To derive valid data, we utilize intentional samples at each stage, applying qualitative or quantitative analyses corresponding to different stage characteristics. Thus, this project not only advances the innovative and transformative development of intangible cultural heritage but also offers insight into effectively merging culture and tourism. This research can provide a blueprint for similar cultural conservation initiatives globally, promoting heritage preservation through attention to local economic and tourism contexts.*
KEYWORDS：tourism, Mianzhu new year picture, KANO-AHP, intangible cultural heritage products

INTRODUCTION

The increasing progression of globalization and modernization has raised concerns about the preservation and promotion of intangible cultural heritage, of which the Mianzhu New Year Picture, an important Chinese folk-art practice, is a significant representation. The Mianzhu New Year

Picture, a respected medium of Chinese-style aesthetics, was included in the first batch of national intangible cultural heritage in 2006. It portrays the richness of Chinese folklore, incorporating various artistic and cultural content such as graphic patterns, material shapes, and craft techniques. The importance of this study emerged after the devastating Wenchuan earthquake in 2008, when the Chinese government embarked on a project to rebuild the region's cultural tourism based on the Mianzhu New Year Picture. This effort was not only a means of preserving this aspect of cultural heritage but also served as a strategy to stimulate the local tourism economy. This amalgamation of intangible cultural heritage with the tourism sector underscored a noteworthy opportunity for further exploration and enhancement, particularly the artistic reimagination and cultural propagation of the Mianzhu New Year Picture.

This study embarks on an exploration of the possibility of innovative redesigning the Mianzhu New Year image products to increase their appeal to the tourism industry. We use ethnographic research methods in the Mianzhu village, employing mixed qualitative and quantitative analysis techniques. The envisioned redesign focuses on aspects of graphics, space, and materials as per the necessities of local tourism development. The study is structured into three phases with the first phase targeting the investigation of the demand for product redesign and its optimization using the KANO-AHP model.In essence, this study showcases an integrative approach to safeguard and endorse the intangible cultural heritage through its adaptation into the tourism industry, underlined by the case of the Mianzhu New Year Picture.

Revitalizing Heritage: Innovative Redesign of Mianzhu New Year Pictures for Tourism

Tourism is one of the most important sources of economic outcomes and employment in the world, accounting for 10% of world GDP, 7% of global trade and 10% of total employment (World Tourism Organization, 2018). In 2006, Xiaode Town (formerly Shejiantai Village), Mianzhu City, Sichuan Province, China was built into a "New Year Picture Village" , with a core area of 288 acres. As a result, it has been built into a high-quality rural folk arts and crafts cultural tourism scenic spot that focuses on rural tourism, New Year picture product production, and processing base construction, as well as combining with the construction of new rural areas. On April 19th, 2011, it was awarded the title of "AAAA National Attraction" , indicating that the Mianzhu New Year picture products have a preliminary research foundation in the research on the integration of culture and tourism .

In 2008, the Wenchuan Earthquake occurred in China. The area where the Mianzhu New Year Pictures is located is the hardest hit area and suffered heavy losses in the earthquake. At present, the "New Year's Picture Village" rebuilt after the disaster has created a good environment for Mianzhu New Year's pictures to be integrated into the tourism industry. With the impetus of tourism economy, Mianzhu New Year's pictures have ushered in the best period of transformation and

upgrading. Therefore, rescue protection and change of thinking and innovation can make Mianzhu New Year pictures keep pace with the times.

As a significant intangible cultural heritage in China, Mianzhu New Year pictures serve dual roles: cultural preservation and economic catalyst for the Mianzhu region. Despite this importance, their development is stymied by several challenges. These include their traditional artistic style's disconnect with modern aesthetics, a slow adaptation to technological advancement, and a worrying homogenization trend failing to reflect local uniqueness.

These issues pose threats to the appeal of Mianzhu New Year pictures for contemporary audiences, their technological relevance, and their contribution in promoting a unique local tourism product. Consequently, these challenges impede the economic growth potential of Mianzhu, and the preservation and innovativeness of this crucial intangible cultural heritage.

Therefore, this research aims to surmount these obstacles through a redesign of Mianzhu New Year picture products. This involves a revitalization of their artistic style reconciled with modern aesthetics, incorporation of technologically advanced functions, and the safeguarding of their local distinctiveness.

A New Look
The integration of intangible cultural heritage into the tourism industry provides a unique pathway for enhancing economic development, cultural preservation, and cross-communication of diverse histories and traditions. This study seeks to illuminate this process by focusing on the Mianzhu New Year image, a significant facet of China's intangible cultural heritage. Through innovative redesign, we aim to transform this traditional piece into a more accessible product for cultural tourism.In a world that increasingly values cultural diversity, the tourism industry has witnessed a growing interest in authentic experiences that stem from different traditions and practices. This study aligns itself with this trend by focusing on the transformation of the Mianzhu New Year image, a deeply rooted cultural artefact, into a tourism offering that resonates with this contemporary demand.
The progression of this research includes a thorough three-phase approach:

1. Identifying the motivational factors for tourists and their general perceptions towards cultural souvenirs. This involves utilising the KANO-AHP model to determine the potential demand for redesign and the best ways to implement this redesign.
2. A detailed analysis of the culturally and artistically significant elements in the Mianzhu New Year image. This phase focuses on understanding the heritage iconography and motifs that resonate with audiences while maintaining the authenticity of the Mianzhu New Year image.

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3. A vital review and evaluation of the design outcomes. This stage documents the entire design process and assesses its effectiveness through expert opinions from separate fields of product design, tourism, and cultural studies.

The potential impact of this research is multi-fold. It uncovers the intricate nuances of Mianzhu New Year images, providing strategies for their innovative development, especially after enduring the effects of natural disasters like earthquakes. It provides a clear, in-depth roadmap for product designers, aiding in the preservation and promotion of this delicate piece of intangible cultural heritage. Moreover, it offers critical insights into the transformational process of a historical artefact into a commoditized tourism product.

In synopsis, this study contributes to the broader academic conversation on the complex relationships between intangible cultural heritage and tourism. It offers valuable insights to effectively synchronize culture and tourism, aiming to create an harmonious balance between preservation and innovation, thereby contributing to sustainable tourism development.

The Project
This research employs a comprehensive, three-phase approach to explore the redesign of the Mianzhu New Year image as a tourist product. Each phase caters to a specific aspect of the study, beginning from assessing demand to evaluating outcomes. The KANO-AHP model is used as a strategic tool in the early stages to determine optimization strategies. A blend of qualitative and quantitative methods is adopted throughout, allowing a flexible approach aligned with the unique requirements of each phase.

Approach
The research design discussed was designed to answer three research objectives and research questions. The research method of this research is a mixture of qualitative and quantitative research methods, mainly using ethnography. Aiming at the Village of Mianzhu New Year Picture area, field investigations are carried out, and research is carried out by means of observation and participation. Among other things, the KANO-AHP model will be used for research and data analysis.This paper studies the tourism product redesign of Mianzhu New Year pictures, which is based on "R E-DESIGN" theory. It was put forward by Kenya Hara (b. 1958) in 'Design in Design' (Hara, 2018), an international master of graphic design in Mesozoic Japan. This theory refers to re-designing, returning to the original point, examining the surrounding designs, and finding the meaning of design through differences.

The redesign of Mianzhu New Year's pictures tourism products is to return to Mianzhu New Year's pictures themselves, analyze the cultural and artistic features of Mianzhu New Year's pictures, break through the graphics, space and materials of Mianzhu New Year's pictures on the basis of retaining

certain recognizability, and create innovative products that meet the tourism demand and are different from traditional New Year's pictures.

Process

The first phase of the "Mianzhu New Year Picture" tourism product demand survey will use the "Kano" questionnaire model. Kano model: a tool for classifying and prioritizing user needs proposed by Noriaki Kano, Tokyo Institute of Technology (1984) to investigate the nonlinear relationship between product performance and user satisfaction based on analyzing the impact of user needs on user satisfaction. Is a typical qualitative analysis method.

Based on the Kano evaluation table, the consumer demand has been divided into attribute categories, and excluding the irrelevant demand, the quantitative analysis has been continued: Through the "relative customer satisfaction coefficient ratio" method proposed by Berger (1993), consumer needs are screened, and the most important priority needs for consumers are selected, that is, the attribute requirements to be met by the final design. But this study will add the quantitative model AHP for simultaneous research in order to increase the validity of the Kano model. Based on the KANO-AHP models for the study of the demand for the redesign of Chinese Mianzhu New Year picture tourism products. The questionnaire was mainly released through a standardised questionnaire platform https://www.wjx.cn/ and the subjects participated in the questionnaire by answering the questions online. The process was as follows:

- The KANO questionnaire research was conducted with specific subjects who were recruited for the processes. This was initiated through a preliminary compilation of literature on New Year pictures, followed by comprehensive guidance from experts in tourism, culture, and art. Based on the demand for the redesign of Mianzhu New Year picture tourism cultural and creative products, the necessary redesign was determined to primarily focus on appearance design, functional design, and characteristic design. This also involved considering the fundamental features of Mianzhu New Year pictures, tourism consumption preferences, cultural communication functions, and the specific content of artistic and technological enhancement — all of which were formulated as design attributes. These attributes were further refined to derive 30 design indicators, which were used to design the KANO questionnaire. In the KANO questionnaire phase, three respondent groups were specifically targeted: 30 university students, 70 local tourists, and 20 art designers. The questionnaire was configured to gather fundamental information such as the respondents' identities, ensuring more accurate screening of respondent groups. The respondents were asked to rate various aspects on a five-point scale: very satisfied, satisfied, indifferent, dissatisfied, and very dissatisfied considering both positive and negative elements.

- KANO questionnaire research subjects were recruited for the following processes. An initial collation of literature on the New Year pictures was conducted, followed by comprehensive

guidance from experts in tourism, culture, and art. The demand for the redesign of Mianzhu New Year picture tourism cultural and creative products was assessed. It was determined that the redesign needed to focus on appearance design, functional design, and characteristic design. The basic features of the Mianzhu New Year picture, tourism consumption preferences, cultural communication functions, and specific content of artistic and technological enhancement were formulated as design attributes. These attributes were further refined to obtain 30 design indicators and to design the KANO questionnaire. In this phase of the KANO questionnaire, the respondent group comprised of 30 university students, 70 local tourists, and 20 art designers. The questionnaire was designed to select basic information such as the identity of the respondent to ensure a more accurate screening of the respondent groups. Respondents were asked questions from five directions: very satisfied, satisfied, indifferent, dissatisfied, and very dissatisfied for both positive and negative aspects. The subjects for AHP questionnaire research were recruited for the subsequent process. The AHP model was used to calculate layers, setting the optimal redesign solution for the Mianzhu New Year picture tourism product as the target layer. The essential attributes, desired attributes, and charm attributes were set as the criterion layer, and the comprehensive weights of each design factor were determined. By constructing a scientific and reasonable judgement matrix and applying the geometric mean method to calculate the indicator weights for the criterion layer and sub-criterion layer requirements, the final design scheme for the redesign of Mianzhu New Year picture products for the tourism industry was proposed, prioritizing high weight design factors. This stage involved analyzing the demand attributes of the Mianzhu New Year picture tourism product redesign in the demand evaluation system of the KANO questionnaire. The user demand of the essential attributes, desired attributes, and charm attributes were identified, while user demand for non-differentiated and reverse attributes were eliminated. The demand evaluation system was constructed, and an AHP questionnaire was designed. Mianzhu New Year picture tourism product 20 dealers and 10 experts and professors were recruited to conduct online or offline questionnaire research.

Ethical considerations are paramount in any research and this study has strictly adhered to it. In this study, online recruitment strategies were utilized, which included entry passwords and identity verification to ensure participant's protection and maintain confidentiality. All participants were reminded not to disclose any personal or private information, reinforcing the importance of data privacy. Moreover, it's imperative to note that the onset of the questionnaire was contingent upon the participant's understanding and agreement with all the provisions applied, emphasizing informed consent. The questionnaire included explicit options for the willingness to participate, providing clarity about their voluntary participation.

In terms of cultural respect, the second phase of the study that involved analysis of the cultural and artistic elements of the Mianzhu New Year image was carefully handled. The process was committed to acknowledging cultural norms, values, and sensitivities to prevent any

misunderstandings, misinterpretations, or misuse of cultural symbols or practices. Further, expert evaluations in the final stage were conducted with transparency and participants' rights to maintain anonymity were respected. Feedback from these evaluations was treated as confidential. In essence, this research prioritized ethical guidelines and values of all the parties involved, ensuring a respectful and value-adding research process.Finally, the product will be designed and validated based on data analysis and design studies.

Data Analysis

This research, an ethnographic study, was carried out within the touristic village of Mianzhu, China, and Sichuan Normal University. The research followed a mixed method approach, incorporating both qualitative and quantitative methodologies. Techniques used included a KANO-AHP questionnaire alongside a comprehensive analysis of the data collected, a study of cultural and artistic characteristics inherent in Mianzhu New Year images, and finally a calibration of the redesigned product (Table 1). KANO Model Analysis: The KANO model analysis utilized cross-tabulation leveraging positive and negative evaluations. Here, the independent variable was identified as the positive evaluation, whereas the dependent variable was recognized as the negative evaluation. These categories were compared against the KANO model demand category evaluation table, leading to valuable data from the demand item questionnaire. Consequently, the KANO calculations were executed, determining the demand categories based on the cross-tabulation histogram.

AHP Model Analysis: The AHP model analysis followed, drawing upon data from the KANO questionnaire. Subsequently, a screening process took place, retaining questions according to assigned weights.

Table 1: *Research steps*

step	question	method	objective	scope
1	What type of redesign for Mianzhu New Year images is most preferable to consumers within the tourism industry?	**Qualitative & Quantitative ：** KANO-AHP questionnaire survey **KANO Sample:**120, tourist consumers, University students，Designers. **AHP Sample:** 30，Experts, dealers	The objective is to propose a model for redesigning Mianzhu New Year images as tourism products that provides satisfaction to consumers.	**Area：**（Sichuan Province, China）New Year Painting Village, Xiaode Town, Mianzhu City. Sichuan Normal University
2	What methods can be used to identify the cultural and artistic elements of Mianzhu New Year images that can be utilized in their redesign?	**Qualitative：** Document analysis, in-depth interview, observation, Photography **Object:** Mianzhu New Year pictures	The aim is to determine the cultural and artistic elements of Mianzhu New Year images that are appropriate for incorporation into the redesign process.	**Area：** New Year Painting Village, Xiaode Town, Mianzhu City, Sichuan Province, China
3	What is the feasibility and potential impact of redesigning Mianzhu New Year images as tourism products on the tourism industry?	**Qualitative：** Photography, expert evaluation **Object:** Tourism Product Design of Mianzhu New Year Pictures **Sample:**10，Experts	To test the redesign of Mianzhu New Year pictures tourism products and analyze the design effect.	.**Area：** New Year Painting Village, Xiaode Town, Mianzhu City, Sichuan Province, China

This research was conducted in the tourist-centric village of Mianzhu, China, and at Sichuan Normal University using an ethnographic study design that integrated both qualitative and quantitative research methods. The investigative strategy employed a KANO-AHP model

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questionnaire, and a detailed analysis of the unique cultural and artistic elements of Mianzhu New Year images to guide redesign calibration.

The use of the KANO model facilitated an understanding of consumer satisfaction. Cross-tabulation analysis, which treats positive evaluations as independent variables and negative evaluations as dependent, was enacted. This approach, when used in conjunction with the KANO model evaluation table, allowed for the identification of demand categories via a cross-tabulation histogram.

The Analytic Hierarchy Process (AHP) model was employed afterwards to analyse the data, effectively filtering out questions that weighed disproportionately from the KANO model questionnaire.

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