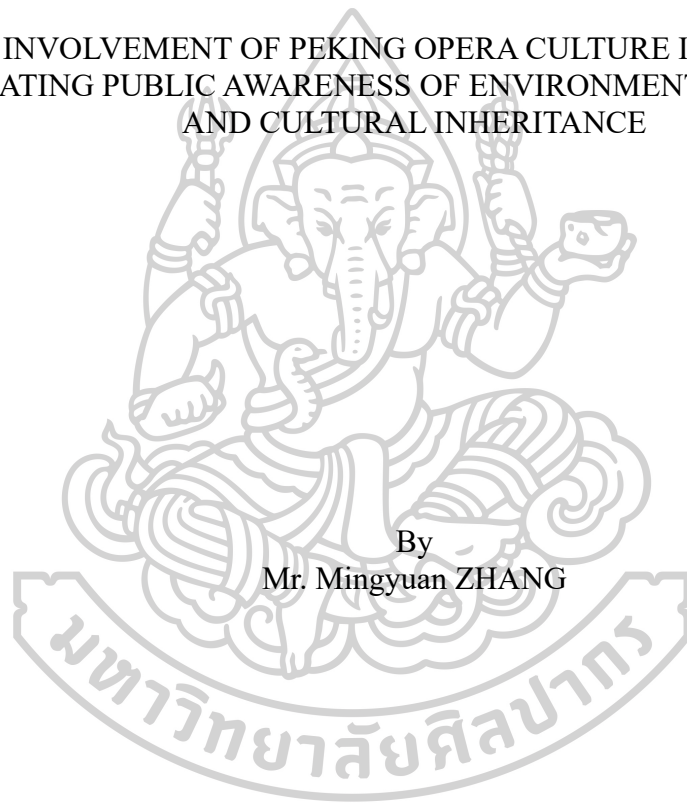THE INVOLVEMENT OF PEKING OPERA CULTURE IN SCRAP ART:
STIMULATING PUBLIC AWARENESS OF ENVIRONMENTAL PROTECTION
AND CULTURAL INHERITANCE

By
Mr. Mingyuan ZHANG

A Thesis Submitted in Partial Fulfillment of the Requirements
for Doctor of Philosophy DESIGN
Silpakorn University
Academic Year 2023
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Mr.Mingyuan ZHANG

วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปรัชญาดุษฎีบัณฑิต
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มหาวิทยาลัยศิลปากร
ปีการศึกษา 2566

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Title	The involvement of Peking Opera culture in Scrap Art: Stimulating public awareness of environmental protection and cultural inheritance
By	Mr. Mingyuan ZHANG
Field of Study	DESIGN
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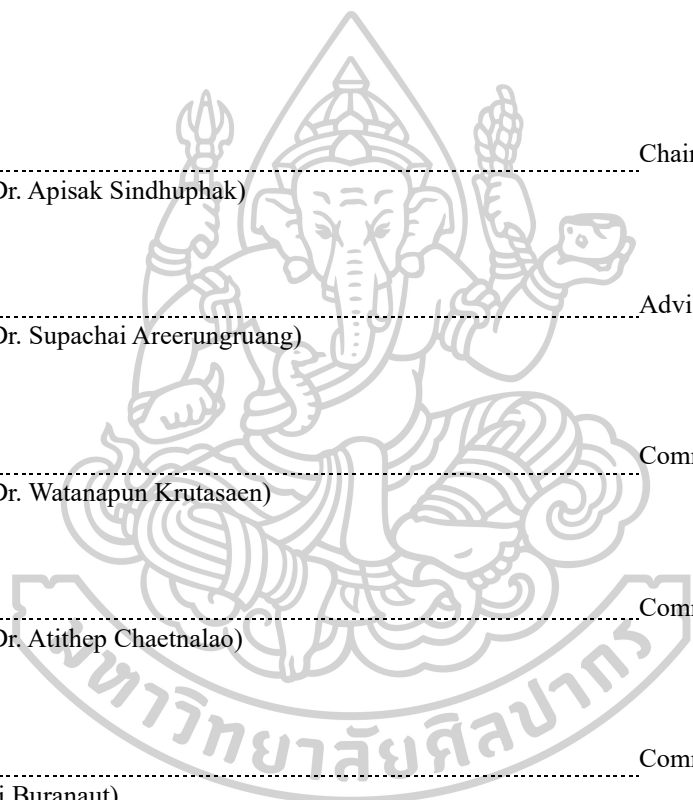
Mr. Mingyuan ZHANG : The involvement of Peking Opera culture in Scrap Art: Stimulating public awareness of environmental protection and cultural inheritance Thesis advisor : Asst. Prof. Dr. Supachai Areerungruang

The research explores the involvement of Peking Opera culture in the art of waste materials to enhance the public's awareness of environmental protection and cultural heritage. Given the current situation of the gradual decline in the perception of Peking Opera's cultural heritage and the need to raise the public's awareness of environmental protection, this research proposition was chosen.

Objective 1 is to deepen the public's awareness of the value of environmental protection and traditional cultural integration through workshops, Objective 2 is to complete the process of creating works of art with Peking Opera culture intervening in the art of waste materials, and Objective 3 is to evaluate the impact of the creative process and the results of the research on the public's awareness of environmental protection and cultural heritage attitudes and actions in exhibitions and community activities.

The research process was completed by establishing a theoretical foundation for the pilot study. Hierarchical analysis of hierarchy (AHP) was conducted to analyze the weights of non-heritage cultures, a panel of experts was formed to score the data, and data was analyzed to determine the weights and priorities of Peking Opera culture. The theme of exploring Peking Opera elements' fusion with waste materials' artistic expression was established through preliminary workshop experiments. The creative practice was then carried out, including a review of the creative process, exhibitions, and community engagement, documentation and publicity, reflection and evaluation, determining the theoretical framework model for the final research hypothesis, completing the final questionnaire, analyzing the collected data, and validating the results.

The research results indicate that the research process of Peking Opera culture intervening in the art of waste materials effectively fosters the public's awareness of environmental protection and the perception of Peking Opera's cultural heritage. This research process establishes more channels and ways for the revitalization of traditional art forms and the enhancement of the public's awareness of environmental protection, and, at the same time, provides essential references for the governmental departments to protect the non-heritage culture and carry out environmental protection activities.

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Chapter 1 Introduction

This chapter focuses on current knowledge gaps. The researchers demonstrate the applicability and importance of the topic in a larger field. The investigative structure of this study is the explicit research question. Next, research objectives define the study's objectives and the route plan for the investigation. Researchers formulate research hypotheses to provide potential connections or predictions to test. Research hypotheses provide provisional justification for research findings and guide data interpretation and analysis. This chapter will introduce nine parts: 1.1 Research Background, 1.2 Research Questions, 1.3 Research Purposes, 1.4 Research Hypotheses, 1.5 Research Results, 1.6 Research Conceptual Framework, 1.7 Research Scope, 1.8 Research Methods, 1.9 Defined Terms, and1.10 Chapter Summary.

1.1 Research Background

The Peking Opera is a traditional form of Chinese drama with historical and cultural significance (Xusheng, 2001). It tells the story of Chinese history, folklore, and literature and has been recognized as the main art form representing the essence of Chinese cultural heritage. However, in recent years, the popularity of Peking Opera among the younger generation has been declining, challenging its cultural heritage. With the increasingly prominent impact of modern entertainment and the West, traditional art forms like Peking Opera face challenges while striving for more attention and participation in audiences. Peking Opera's decline in popularity threatens its continuation as a vibrant cultural tradition. In this research project, in addition to the challenges in the field of cultural heritage, environmental problems, such as waste production and resource depletion, and pollution, are also paid attention and valued and are very urgent. Essence Excessive waste of waste, lack of resources, and environmental degradation have become an urgent need to pay attention to and take action immediately.

The concept of Scrap Art offers a creative and innovative approach to addressing the challenges facing Kyoto's culture and the common need for environmental protection. Scrap art transforms scrap, discarded objects, or unused resources into artistic creations. It is a form of up-cycling, re-conceptualizing, and reusing materials to give them new life and value. The integration of junk art into the efforts to revive Peking Opera culture holds promise in fostering public engagement and enthusiasm, particularly among the younger demographic. By integrating suitable components of contemporary

artistic expression, such as the utilization of recycled materials, experimental art, or multimedia displays, Peking Opera can be revitalized for contemporary audiences in a manner that effectively connects with them. The integration of conventional artistic practices with novel methodologies serves to reconcile the dichotomy between tradition and innovation, resulting in a distinct and captivating encounter for the viewers. Furthermore, the incorporation of waste material art into the cultural realm of Peking Opera presents a valuable avenue for enhancing public consciousness towards environmental conservation. The correlation between artistic expression and sustainable practices can be elucidated through the exhibition of the innovative conversion of discarded materials into artistic creations. This connection facilitates the viewers' introspection regarding their personal consumption patterns, waste management strategies, and the possibility of devising innovative approaches to address environmental obstacles. The practice of scrap art involves the transformation of waste or discarded materials into creative masterpieces, with the aim of promoting principles of sustainability and fostering innovation. The integration of junk art within efforts to revive Peking Opera culture has the potential to resonate with contemporary audiences(Zhang et al., 2019). and enhance public consciousness towards the preservation of the environment. The existing body of literature offers valuable insights into the topics of cultural revival and the utilization of recycled materials in artistic endeavors. However, there are notable gaps in research pertaining to the application of scrap art as a means to reinvigorate Peking Opera and foster environmental consciousness. Hence, the primary objective of this research is to investigate the efficacy of utilizing waste material art as a means of rejuvenating Peking Opera culture and fostering public consciousness regarding environmental issues. This endeavor will adopt an interdisciplinary methodology.

The phenomenon of waste material art in the context of cultural regeneration has garnered growing interest; yet, its full implications for the cultural landscape of Kyoto have yet to be comprehensively investigated. The extant body of scholarly work provides valuable perspectives on the topics of cultural revitalization, environmental sustainability within the arts, and the utilization of recycled materials in artistic endeavors. Nevertheless, there exists a dearth of scholarly inquiry pertaining to the utilization of waste materials in the revitalization of Peking Opera and its capacity to engender heightened public consciousness regarding environmental issues. In order to address this research void, the present study seeks to investigate the efficacy of employing waste materials in the revitalization of Peking Opera

culture, with the concurrent objective of enhancing public consciousness regarding environmental preservation. This study seeks to make a contribution to the domains of cultural heritage preservation, sustainable development, and community participation by examining the transformational potential of artistic expression and the innovative utilization of materials. This project will employ an interdisciplinary methodology, incorporating theories and concepts from cultural studies, environmental psychology, sustainable development, and artistic expression. This research aims to investigate the impact of junk art on the cultural renewal of Peking Opera and its potential to promote environmental consciousness. The research methodology will involve the utilization of case studies, interviews conducted with artists and specialists, as well as the examination of audience responses. These empirical approaches will be employed to gather evidence and acquire valuable insights pertaining to the topic under investigation.

The outcomes of this study will contribute to our understanding of the approaches via which traditional art forms can be revitalized and preserved using innovative ways that promote cultural heritage and environmental protection. The outcomes of this research will offer significant perspectives for the formulation of forthcoming policies and efforts intended to rejuvenate the Peking Opera culture and promote public awareness of environmental issues. The objective of this study is to uncover the possible advantages and obstacles associated with the incorporation of waste material art in initiatives aimed at revitalizing culture. Additionally, this research seeks to offer relevant perspectives and suggestions to cultural practitioners, policymakers, and researchers involved in the fields of cultural heritage and sustainable development(Ping, 2013).

1.2 Research Questions

RQ1: How does Peking Opera culture influence traditional art forms to raise public awareness of environmental protection and the inheritance of Peking Opera culture?

RQ2: What main elements influence the Peking Opera culture's capacity to advance cultural heritage and environmental awareness?

RQ3: How has Peking Opera culture influenced people's attitudes, actions, and beliefs towards cultural heritage and environmental preservation?

1.3 Research objective

RO1: investigate a public understand on the value of environmental protection and traditional culture, the researchers combined Peking Opera culture with a waste art form.

RO2: Organize the role of Peking Opera culture to intervene with waste materials to create artworks.

RO3: Evaluate Peking Opera culture to intervene in waste materials to form art works. By displaying and entering the community and affecting the public's attitude, actions, and belief in environmental protection and cultural heritage.

1.4 Research Hypothesis

RH: The integration of Peking Opera culture role and waste materials art will positively inspire the public's awareness of environmental protection and cultural heritage.

1.5 Research Achievement

1. This research has sparked the public's understanding of environmental conservation and cultural heritage. The traditional art style has been effectively revitalized by blending trash art techniques into Peking Opera culture, appealing to a broad audience and ensuring its preservation and relevance for future generations. This accomplishment demonstrates the transforming power of scrap art in efforts to revive the culture.

2. By combining scrap art with Peking Opera culture, researchers aim to effectively improve the public's awareness of scrap and the inheritance of Peking Opera culture. Researchers present innovative works of recycled materials as modern interpretations of traditional art styles. This restoration gave Peking Opera culture a new form of expression and attracted audiences to understand Peking Opera culture.

3. Research has also demonstrated the decisive role of grunge art in promoting environmental protection. Researchers transform scrap materials into art to increase the artistic value of scrap materials. The researchers conducted surveys and interviews with the public and found that it significantly impacts the public's awareness of sustainable habits and environmental protection. Environmental messages are successfully incorporated into the revamped works to increase public engagement and awareness.

1.6 Research Scope

1. This study examines the involvement of scrap art in Peking Opera culture from April 2020 to December 2022. The goal of the research is to use discarded materials to create art, mainly sculptures and paintings, into which the researchers incorporate the cultural components of Peking Opera. This study explores creative ways to revive the Peking opera tradition by turning scrap materials into new works of art.

2.scrap art and Peking Opera Culture: Inspired by Peking Opera culture, researchers focus on using scrap materials in artistic creation. This study examines using discarded objects to reinterpret classic aesthetics such as clothing, characters, and stories. This study attempts to capture the essence of Peking Opera and infuse it into a new artistic work by fusing various cultural components.

3. Nanchang City: Nanchang City, Jiangxi Province, China, is the focus area of this study. This geographic scope allows for an in-depth examination of the local cultural environment and specific areas where Peking Opera meets scrap art. Taking Nanchang as the research object, this study studies the local art scene, cultural institutions, and available resources combining scrap art and Peking Opera culture.

4. The study will be conducted between April 2020 and December 2022. Investigating initiatives, projects, and events related to Nanchang clip art and Peking Opera culture is now possible. By creatively reusing scrap materials within a projected time frame, researchers can comprehensively assess the cultural heritage of the revival of Peking Opera.

5. Paintings: The study aims to make fresh paintings into art. Researchers study integrating discarded materials into Peking Opera culture and form artworks with environmental protection and inheritance significance. The researchers combined collage, mixed media, and painting techniques to create expressive and symbolic paintings inspired by Peking Opera.

6. Research areas and works are completed: This research was conducted in the field of Peking opera cultural intervention in old art, focusing on stimulating the public's environmental awareness and cultural heritage. The scope includes three research works: four sculptures, 11 paintings, and two three-dimensional works. The research will be displayed in two exhibitions to show the results of the intervention measures and their impact on the target audience. The research will be held in two exhibitions to show the completed works and their potential for inspiring public awareness. As a platform

for the vast audience to show the intervention, these exhibitions allow direct interaction and observe the audience's response to comprehensive art.

1.7 Conceptual Research Framework
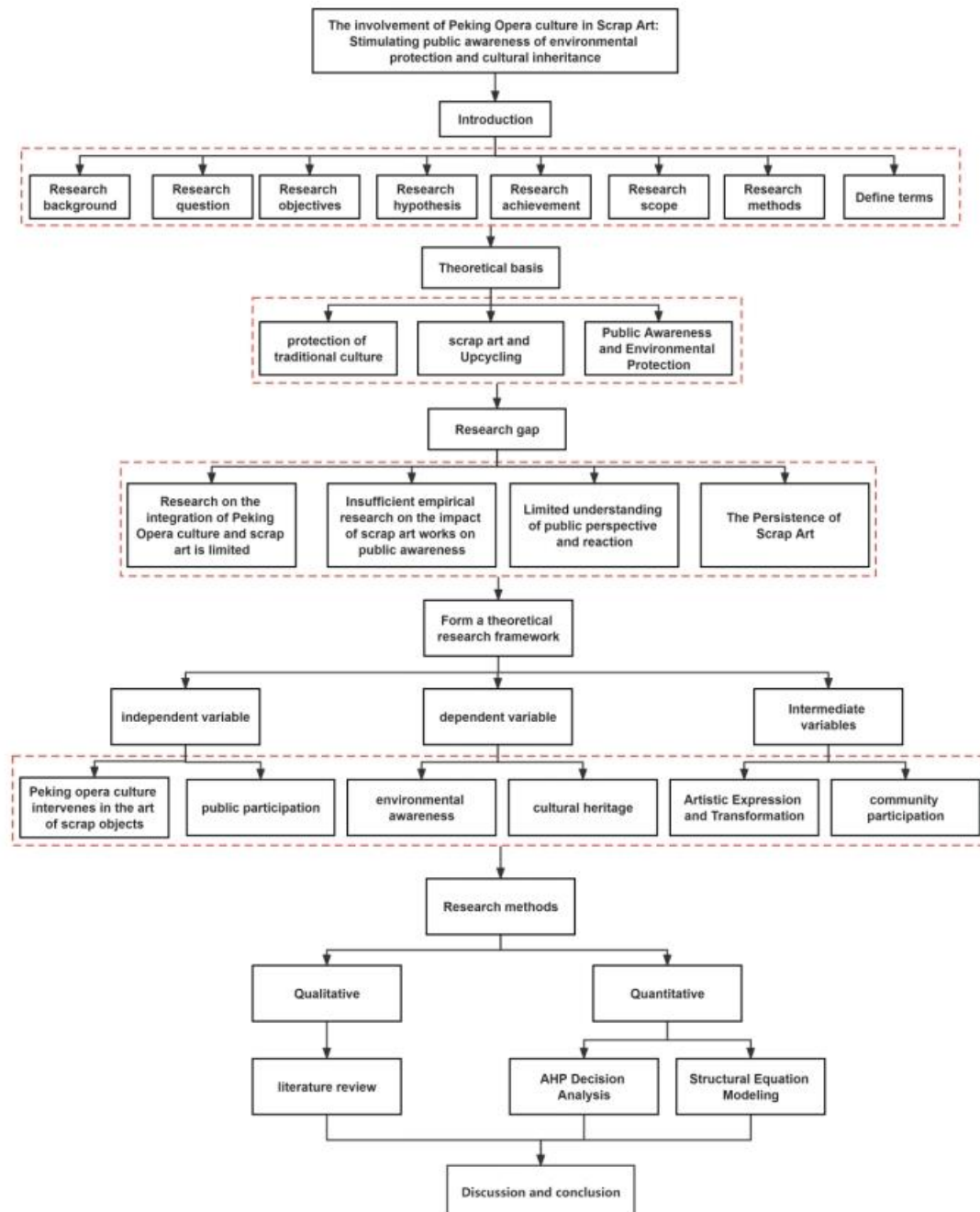
Figure 1 Conceptual Framework Study

Source: Auther,2022

1.8 Research Methods

　（1）Literature research:

This study used both qualitative and quantitative research techniques. In order to determine the main research objects and technical methods of this study, the researchers first consulted Chinese and English literature on related topics through China National Knowledge Infrastructure CNKI and Google Scholar in the theoretical research stage.

　（2）Analytic Hierarchy Process (AHP) for weight analysis:

The Analytic Hierarchy Process (AHP) is used in this study to assess the importance of cultural heritage components. This method enables the systematic evaluation and ranking of numerous cultural heritage components. The study determined the importance of various aspects of cultural heritage through a structured decision-making process combining expert opinion and criteria. Following this examination, the research's chosen study area was Peking Opera culture.

　（3）Experimental method:

The experiments in this research aim to show how Peking Opera culture can use scrap art to transform into sculptures and paintings. The researchers' experimental steps are outlined below:

Artistic Conceptualization: Working with artists, performers, and cultural experts to create a conceptual framework for translating Peking Opera culture into the painting medium. Artwork needs to create creativity, combine traditional Peking Opera features with modern artistic expression, and determine a specific theme or storyline that will be expressed in the painting.

Material gathering and preparation: Collect various scraps of paper, fabric, plastic, and other appropriate materials that can be utilized to create paintings. Ensure materials are clean and suitable for artistic manipulation before organizing and preparing them.

Painting creation: Give participating artists a selection of scrap materials and instructions on making works of art influenced by Peking Opera culture. While including classic features of Peking Opera, artists are encouraged to explore various techniques such as collage, mixed media, and creative approaches. The Peking Opera should be open to interpretation and reimagining in any artistic medium.

Art transformation: Keep track of and record the process, recording how a painting develops from the first idea to the finished piece. Watch how the artists make decisions, their methods, and how they consider the fusion of scrap iron art and Peking Opera culture.

Organizing displays or presentations to show off altered paintings to the public are examples of exhibitions and evaluations. Diverse audiences are invited to watch and engage with the artwork, including fans of the Peking Opera, art enthusiasts, and local community members. Visitors are invited to offer input, discuss their perspectives, and consider how the changed paintings have affected environmental consciousness and Peking Opera culture.

Data collection: Views, responses, and observations on the changed paintings and their connection to Peking Opera culture and environmental protection are gathered from exhibition attendees through a survey. Gather qualitative and quantitative information about how viewers respond to, comprehend, and appreciate art.

Analysis and Interpretation: To find patterns, themes, and insights into the transformational impact of the painting, analyze the data that has been gathered, including survey responses, interview transcripts, and observations. Analyze the audience's knowledge of Peking Opera culture and how they perceive the relationship between art, culture, and environmental concern.

Results and conclusions: Based on the evaluation of experimental results, conclusions have been made. Write a summary of the study's findings using the technology of scrap iron art to translate Peking Opera culture into paintings. Examine the success of this strategy in preserving cultural heritage, fostering environmental conservation, and reviving the Peking Opera tradition.

The experimental procedure offers a chance to demonstrate how Peking Opera culture can be artistically transformed into visual works using scrap art approaches. It makes it possible to engage the audience, receive feedback, and conduct analysis to determine the effectiveness of this technique in reviving the Peking Opera tradition, increasing environmental consciousness among the general public, and promoting cultural heritage.

（4）Community participation questionnaire:

A participation survey was developed to gauge the impact of community involvement on people's environmental and cultural understanding. The survey collected data on the extent of community

involvement, attitudes toward environmental issues, perceptions of environmental difficulties, and the consequences of community involvement on perceptions of environmental awareness and cultural heritage. By analyzing the survey results, this study evaluates the effectiveness of community involvement in raising public environmental consciousness and promoting cultural heritage protection.

1.9 Defining Terms

（1）Peking Opera Culture：is a historical art form rooted in China. Peking Opera Culture is sometimes referred to as Peking Opera or Peking Opera. Singing, dancing, acting, donning costumes, and telling stories are just a few of the many components that are combined. A unique art form with a rich historical and cultural legacy in Chinese society is Peking Opera.

（2）Scrap Art：Scrap art is a clever way to transform wasted or unwanted materials into works of art. Artists use this substance to upcycle old works of art into brand-new ones. Scrap art frequently promotes sustainability, environmental awareness, and cutting-edge artistic practice.

（3）Environmental protection is the process of preserving and protecting the natural environment. It calls for raising environmental stewardship awareness, pollution reduction, sustainable lifestyles, and environmental protection. Environmental protection ensures ecosystems' long-term viability and lessens the negative consequences of human activity on the environment.

（4）Cultural inheritance：Cultural heritage is the transmission of cultural customs, traditions, knowledge, and values from generation to generation. It involves transmitting cultural heritage, such as artistic creations, languages, customs, and beliefs. Cultural heritage enables the preservation of cultural diversity, the development of identity, and the preservation of cultural heritage for future generations.

（5）Public Awareness：Public awareness refers to the degree of general understanding, acceptance, and knowledge of a specific subject or topic. In the context of this study, public awareness includes an understanding of the Peking Opera's cultural significance, environmental conservation efforts, and other related topics. It involves opinions on particular topics and behaviors related to them, and it can evolve due to exposure to media, culture, and education, among other things.

1.10 Chapter Summary

An overview of the studies on the use of recycled materials in Peking Opera culture revitalization and preservation is given in this chapter. It discusses the study's background, objectives, theories, results,

scope, conceptual framework, methodology, and definitions of key terms. The report discusses environmental problems and the collapse of the Peking Opera and suggests scrap metal sculpture as a novel remedy. Investigate whether recycling iron scraps may revive the Peking Opera and spread environmental consciousness. The integration of trash art is being investigated, as well as how it affects consciousness and how to promote cultural heritage and environmental sustainability. The idea of garbage art is to engage audiences, enhance cultural heritage, and increase environmental consciousness. The outcomes show how influential scrap metal art can be in reviving the Peking Opera and spreading awareness. From April 2020 to December 2022, Nanchang city was the subject of a study that concentrated on Peking Opera and scrap metal art. The conceptual framework, which directs the gathering of data and its analysis, looks at how Peking Opera culture, trash art, environmental preservation, cultural heritage, and public awareness interact. The analytic hierarchy process (AHP) of weight analysis, the theory of planned behavior, the experiment of turning a painting of the Peking Opera into one, and the questionnaire on community involvement are some of the approaches used. Peking Opera culture, trash art, environmental conservation, cultural legacy, and public awareness are among the terms defined. which offers a thorough review that establishes the study framework for investigating the possibilities of scrap art in reviving the Peking Opera, raising awareness of environmental issues, and preserving cultural heritage.
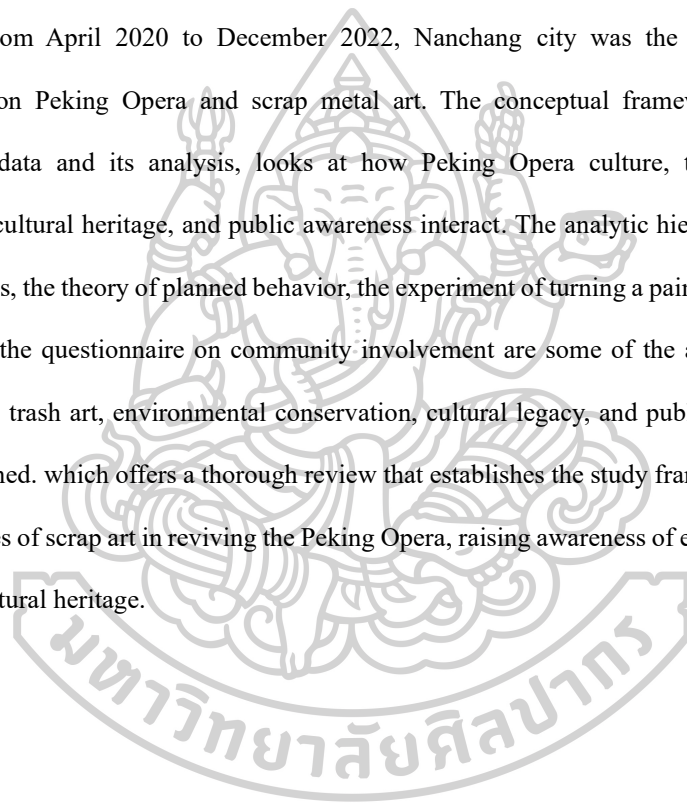
Chapter 2 Literature Summary

The second chapter of this article conducts a comprehensive review of the innovative application of waste materials in the context of intangible cultural heritage, which mainly emphasizes the combination of waste materials and drama intangible cultural heritage. This preface summarizes the theme covered in the literature review, highlighting the key areas of exploration and analysis.

This chapter first studies the concepts of waste and discuss their definitions, sources, and various types. It also handles actual challenges and defects related to waste use and clarifies the importance of finding practical solutions for the transformation and reuse of waste. This chapter draws inspiration from the Practice of successful waste recycling in different countries, explores the specific application of scrap art in China, and pays special attention to the feasibility of establishing public environmental awareness through art conversion.

Next, this chapter examines the transformation and utilization of China's waste materials, discusses the diversified Practice of relevant government policies, the diversified Practice of waste materials, and the innovative application of waste material art on the background of intangible cultural heritage. The usefulness of waste material art, its applications, and its instructional relevance in older art are further explored in this section.

This chapter has also extensively researched the history and evolution of Chinese drama and paid particular attention to Peking Opera to provide a thorough study background. Discuss the origin, performance form, cultural significance, language expression, essential elements, and the current status and protection measures of the opera's intangible cultural heritage.

In summary of the literature review, this chapter emphasizes the use of waste material art, especially in drama, to improve the importance of public environmental protection awareness by expressing and spreading methods. Emphasizing the importance of Chinese Peking Opera, highlighting the characteristics of Peking Opera, the current status of development, and the combination of Peking Opera elements and other art categories.

The summary of this document provides the foundation for the follow-up chapters, providing valuable insights into the innovative application of waste, the development of Chinese opera, and the possibility of combining waste material art with cultural heritage. This chapter has laid the foundation for the research of this article through extensive research on related literature and cases. It has paved the way for exploring the Peking opera culture by combining traditional Art and environmental consciousness.

2.1 Overview of Waste Materials

2.1.1 The Concept of Waste Materials

Waste materials are waste or idle things, and there are also abandoned. Most of them can be used as recyclable materials for renewable resources. Many of them need help to use items in daily production and life. Such as waste metal, regenerative plastic, and waste paper fabric. Including the materials generated by the old, second-hand, inventory, and production and life of inventory or scrap. The waste material is not garbage; it is also a resource, but people have not noticed it. It has been upholding the traditional thoughts of losing old goods, that is, and throwing waste products for a long time. This affects the ecological environment, and these "babies" have not been fully used, which wastes specific resources.

2.1.2 Sources of Waste Materials

Most of the waste materials are derived from our daily production and life. The main channels need to be more qualified quality. The finished products are worn-up or losing the original value of the original value, and renewable resources that the users cannot use. Specific materials such as ordinary waste materials in daily life, construction waste materials, and materials with a specific dangerous nature. Among them, waste materials with a specific dangerous nature cannot be mixed with ordinary waste materials and must be specially treated.

2.1.3 Types of Waste Materials

It has been a long time since the discussion on waste materials, and more people think it is produced in the production process or life. In our daily production and life, a large number of unused materials will be generated, or there are no waste items that use value for the time being, such as waste metals, old paper, rubber products, waste plastic, waste appliances, and electronic products in life, Waste

tires, waste batteries, packaging waste, building decoration waste materials. They are all everyday waste items in our daily life, but we often ignore them and even discard them directly because we have yet to form waste use or re-re -reinstallation. The habit of design is also a resource, but it needs to be noticed by people, and we have formed the traditional idea of throwing old goods, which are thrown up and throwing waste. This not only affects the ecological environment but also wastes resources.

Many types of waste materials are common daily, but many people need to learn the shape and SourceSource of the materials. We can classify according to several common materials in life. The classification is as follows:

Table 1 Types of waste materials [Source: author,2022]

Serial number	Sources	Types of materials
1	Industrial and architecture	Regenerative plastic
2	Industrial and architecture	Metal
3	Industry, life	Scrap paper
4	Industry, life	rubber products

2.1.4 Defects and Practical Problems of Waste Materials

Waste materials usually exist in many forms, but solid and liquid are the two most important. These waste materials are exposed to the air for a long time. After a long time of decomposition, these waste materials will react chemically and physically, which will more or less affect the environment to a certain extent. If they are not handled properly, the garbage's pollutant components will enter the ecosystem through the atmosphere, soil, surface water, or groundwater, damaging the ecological environment and even jeopardizing human health through the food chain and other pathways.

The concept of waste materials has been proposed for a long time, but there have been many obstacles and difficulties during the specific recycling process. Many factors exist, such as "waste = garbage" in people's traditional concepts. In China, most people think that using "garbage" to transform products and become part of their living facilities is difficult to accept. In those people who are backward, there are no face and quality assurance. The reason for the use of waste materials by the people is blocked; second, the policy support of government departments. As a social behavior guiding department, the government needs to introduce some policies that encourage the use of waste materials and make rewards. Proposal guidance in the " strategy " method " can help realize the dual value of reusing waste materials

in the market and commercial use. Third, the designer's artistic proposition is that although the use of waste materials is reuse for the design of waste materials that cannot be obtained, whether it can restore this type of product through some design, depending on the creativity of the designer's creativity and Design positioning, it is undeniable that designers need the support of the public and the government in terms of promoting and using regenerative materials. Fourth, as the last loop of the use of waste materials, consumers' acceptance and recognition of the Recycling of waste items are related to whether waste materials can complete the entire cycle process. Therefore, it advocates the effective use of waste resources in society and encourages every family to every family. Recovering waste materials and using reprocessed design products is very important. Fifth, in addition to the above conditions, Recycling waste materials also requires the support of process technology. How can some chemicals and plastic products be further changed into valuable products for humans without polluting the environment, which requires cutting-edge technology support? It is a problem of these comprehensive factors that the process of waste materials has changed slowly, but difficulties are always short. Over time, the defects of waste materials will gradually improve.

2.1.5 Outstanding Cases of Waste Material Art Regeneration in Various Countries

In the field of waste materials, western developed countries attach more attention than developing countries and move earlier—the use of waste materials indicates that people have begun to understand and value our environmental problems. In 1980, the word "sustainable development" was proposed for the first time in the "World Nature Protection Outline." The term "development" has also been widely recognized by most countries. In addition, sustainable development is also reflected in laws formulated by other countries or regions, such as the "Green Documents on the Urban Environment" set by the European Union in 1990 and the "Our Common Heritage" released by the UK in 1992—the establishment of the European Environmental Affairs Bureau. The release of these measures and documents shows that they have begun to pay attention to and protect the environment.

Figure 2 Recycling diagram of building waste materials

Source: designed and modified by Mingyuan Zhang, original picture from Baidu

(1) Colombia

Alvaro, a Spanish artist, took part in a project in South America in 2011 to focus on the problem of plastic waste pollution in the Amazon. Many PET bottles flooded the tropical waters of South America, creating a giant "plastic island." With the help of a local craft organization, Alvaro combined PET bottles with local weaving techniques to give plastic waste a second life; these whimsical lamps are sold to other European countries. This solves the PET plastic waste problem, brings some economic benefits to the local people, and spreads the local weaving technology and knowledge worldwide.

Figure 3 Part of the brilliant waste recycling ideas

Source: https://magaceen.com/es/arts/pet-lamp/,2022

(2) The United States

As for the utilization of waste materials, western countries, represented by the United States, began to investigate and practice Recycling waste plastics in the 1960s. Similarly, more than half of

European plastics were recycled in 2007, with around three layers being recycled. At the beginning of the new century, European countries increased their recycling targets even further, possibly because of environmental degradation and resource shortages. For example, the United States recycles paper earlier and more carefully than others. Some countries are better at paper recycling. From the perspective of paper recycling, the United States divides recycled paper into four basic types: newspaper, corrugated board, high-grade paper, and mixed paper.

Table 2 US waste paper recycling situation [Source: Author,2023]

Types of recycled paper	Recycled paper source	Recycling rate and recycling use
newspaper	Scrap newspaper	33% (re-produced into newsprint, corrugated or other grade paper products, plant fiber materials.)
Corrugated paper	Packing box	45% (mainly for making new cardboard containers)
High-level paper	Computer paper, white and colorful writing paper, printing paper and other paper, chopped books, and copy paper	87%(the alternative of the pulp, or it can be used to produce hand paper and high -quality paper after removing ink)
Mixed paper	Newspaper, magazine, and long fiber paper.	62%(container cardboard and various publications)

(3) Britain

In the UK, the government and ordinary people have highly valued the Recycling and utilization of waste products, and even some terms are written into the law. In addition to Recycling and utilizing everyday waste materials, many still use waste products to make artwork in the local area. Ptolemy Elrington is such an artist. He did not choose to create artwork on canvas or paper. Instead, he chose car recycling. As the SourceSource of creative inspiration, the wheel lid in the parts is created with the help of assistants and tools. He can use these materials if you can think of an animal image. He collects the materials of these works at the abandoned market or recycling station. In addition to bringing

some popularity to him, these works can bring considerable economic benefits. The people joined the team that used waste products for artistic creation.

Figure 4 Sculpture made with waste wheel cap

Source: https://www.hubcapcreatures.com/,2022

(4) Some countries in Africa

In our fixed impression, Africa is a well-developed region with drought, rain, and heavy pollution. However, this is only part of them, and some African countries pay attention to environmental protection. Kenya environmentalist Julie Church is one of them. She started with waste plastic slippers and recycled the brightly colorful and peculiar shape of the shape. After a series of steps such as screening, cleaning, cutting, polishing, and processing Become a cute craft. In 1999, she established the Ocean Sole Kenya Marine Protection Organization to promote this work faster and broader. Most of the crafts they made are mainly animal images. It can be sold to other countries and regions, increasing residents' income.

Another Nigerian artist Eugene Conoboy is also an environmentalist. He also uses waste shoes to make artwork. He is better at using waste slippers to make mosaic murals. After collecting these slippers, a series of processing in the future, these old slippers of different colors will be arranged in the color area corresponding to the mosaic murals. Usually, these murals are placed in the community where he is so that they can beautify the environment and educate significance.

Figure 5 Marine animal toys made with waste plastic slippers

Source: https://goodblacknews.org/tag/julie-church/,2022

Figure 6 Artist Eugene Conoboy is in front of his mosaic work

Source: https://www.kuwaittimes.com/nigerian-artist-turns-old-soles-into-mosaic-portraits/,2022

(5) The application of China

In China, the cycle utilization of waste materials started in the late 1990s. At the time, some parts of coastal provinces, while vigorously developing their industries, also gradually began to pay attention to the shaping and social responsibility of the enterprise's external image, including environmental pollution participation, including environmental pollution participation social welfare services, and waste materials recycling. After entering the new century, the concept of environmental protection has gradually been introduced into society and school project education. More and more

environmental education achievements and social and environmental values are reflected in the environment of our lives. For example, the waste materials in school environmental protection education are handmade, using sculptures transformed by waste products and humanistic landscapes. These are the artistic expression of waste materials in education and Practice.

In the specific presentation method, most waste materials are presented in sculpture, and the use of materials on a single artwork is relatively single. In addition, the content of the content is mostly animal images. The lack of a combination of cultural content needs to be improved. In particular, the combination of traditional non-heritage culture could be much better, which has led to some works and products in appearance and lack of profound meaning given by culture. Due to the lack of cultural participation, these works can only play a specific role in beautification and decoration. They have lost the significance of education and guidance, especially for young people; they cannot attract attention.

Figure 7 Lantern made from Shanghai River Middle School students in the classroom using plastic waste

Source: Zhou Daojun(Zhou,2021) https://www.163.com/dy/media/T1509600574543.html,2022

2.1.6 Practice of the Artistic Transformation of Waste Materials in Some Parts of China

2.1.6.1 China Beijing 798 Art Park

Beijing 798 Art District is China's most famous art gathering area, which is converted from old factory buildings. These old factories and machines were primarily built in the early last century. It is a model that reuses the outer typical Bauhaus architectural style and internal emotional space(Rongrong et al., 2019). Before the reconstruction, it was full of ruined scenes, but we also praised the explorers who were the earliest discovery and stayed here. Look at the value of this historical heritage.

Figure 8 The corner of Beijing 798 Art District

Source: http://www.798yishuqu.cn/,2022

2.1.6.2 Nanchang 699 Cultural Creative Industry Park

The 699 Cultural and Creative Park was formerly the Jiangxi Hua'an Knitting Factory, built in 1957. The plant was involved in the design and construction by former Soviet technicians. Later, due to the difficulty of business operations, corporate restructuring was carried out. In 2010, Jiangxi Hua'an Knitting Factory transformed into a cultural and creative incubation park with various creative design, cultural education artist studios, exhibition and performing arts, and other supporting facilities(Song-Feng, 2012). The park has dozens of Soviet-style factory buildings, generally built with red bricks. There are also outdoor sculptures composed of old large machinery and equipment, such as old-style sewing machines and knitted machines. In recent years artistic decorative sculpture, more and more people have come here for leisure, such as taking wedding photos. Today, 699 Cultural Creative Park is more prevalent in Jiangxi Province and even the country.

Figure 9 Nanchang 699 Cultural and Creative Park

Source: Photo by author,2022

2.1.6.3 Shenzhen Guanhonghu Ecological Art Park

Shenzhen Guanhonghu Ecological Art Park is a comprehensive theme park that integrates ecological tourism, sports entertainment, and leisure. The park has more than 20 unique and rich environmental art sculptures—production of ball cars and other items. On the day of opening the park, the park opened freely and organized several environmental protection theme activities. Nearly 10,000 citizens and tourists jointly witnessed the upgrade and renaming of the park.

Figure 10 Shenzhen Guanhonghu Ecological Art Park

Source: https://news.sznews.com/content/2019-11/11/content_22616282.htm,2022

2.1.7 The Feasibility analysis of the Artistic Transformation of Waste Materials on the Establishment of the Awareness of the Masses

In our cognitive category, environmental protection has become more and more valued. Through tangible waste materials regeneration, art expression, and application in our living space, it has gradually become an effective way to promote environmental protection. At the same time, the artistic

expression of waste materials is transformed into visible artistic visual aesthetic content, this enriches the artistic atmosphere of the community and enhances the aesthetic taste of the public space, publicizing the concept of environmental protection(Ai-Xia & Yan-Min, 2019). For some communities and groups that are less environmentally minded，we need to find a way they can accept and understand them for practical research. In the previous literature review and exchanges, the research was used as a research object through drama themes with national cultural connotations and presented through waste material transformation. Community displays and workshops were used as practical research methods.

As a more traditional and ancient artistic expression form of drama culture, ordinary people have always loved drama culture(Shihui, 2019). In spreading and displaying, the drama culture has a broader mass foundation, which is conducive to being accepted; the discharge of waste materials is complex and has specific participation, so it is suitable for families, communities, and children. The combination of culture is a fusion of environmental protection behavior and cultural and educational functions, which everyone can recognize; the elements of drama culture, as the national essence of China, have been unanimously recognized by China and foreign countries; Weak and environmental protection also need to be gradually established in the consciousness of young people. Therefore, both need to be advocated and protected.

2.2 China's Concept of Transformation and Utilization of Waste Materials

2.2.1 The Chinese Government's Handling of Waste Materials

China issued a series of related regulations on waste items in early 2000. Whether national or local governments, it has made clear regulations on resource recovery and utilization. From the perspective of policy guidance, it is mainly to encourage the Recycling and utilization of renewable resources. Although it is relatively later than the policy formulation of our developed countries, the state has realized the importance of Recycling and using waste resources.

China's environmental protection concept -take the Road to Green circulating low-carbon development.
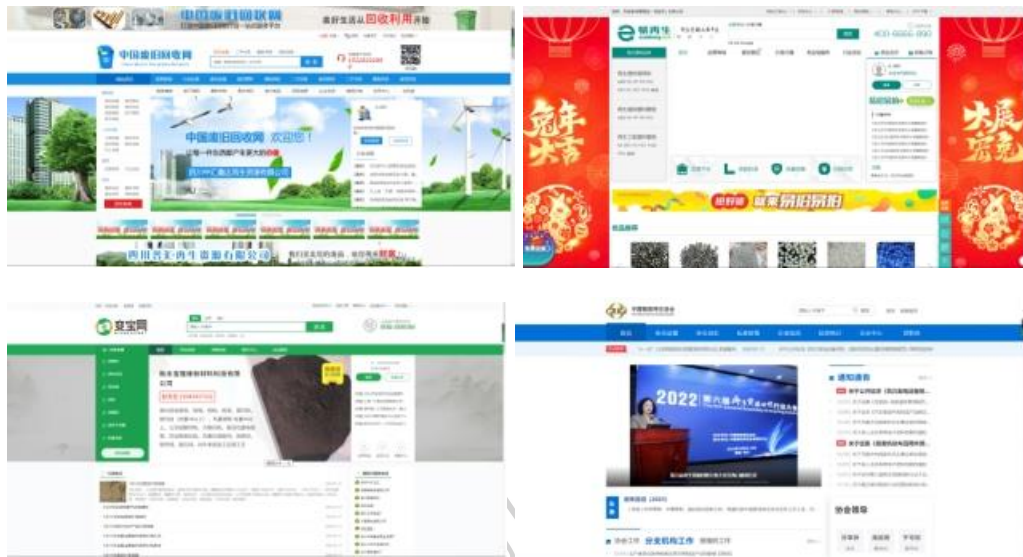
Figure 11 Domestic Regeneration Association, Waste Recycling Website.

Source: http://www.zgfjhsw.com/,2022

Source: http://www.crra.com.cn/,2022

Source: https://www.bianbao.net/,2022

Source: https://www.ezaisheng.com/,2022

In 2012, our country proposed for the first time to promote green development, recycling development, low-carbon development, green low-carbon recycling development economic system, and to build a resource-saving and environmentally friendly society as the national development road. The establishment of the China Material Regeneration Information Network in 1998. Currently, nearly 30 websites and associations are related to waste material recycling. Moreover, Researchers need to find the corresponding information on these websites. Saving resources and protecting the environment is not only a national policy. In recent years, this policy has also been supported and affirmed by people from all walks of life and ordinary people. For ordinary people, we can participate more intuitively. For example, we do an excellent job of garbage classification, Recycling and utilizing waste materials, less plastic products, And so on. Let environmental protection and green ecology participate in our actual life until it becomes a habit.

2.2.2 The Diversified Practice of the Concept of the Use of China's Waste Materials Cycle

（1）The practitioner of the use of consciousness of the use of waste materials for young people Youth is the most important force of each era because they represent the future. Therefore, how young people use waste materials determines whether our environment can be sustainable. In recent years, young people have had high popularity in using waste materials. They will consider more practicality and personality without paying too much attention to prices and faces. They hope to use some transformed works in their lives in their own lives. Young people have a wide field of vision and have the spirit of exploration. They are good at using different materials to try to make some strange personality works and, at the same time, add some regional characteristics or trendy elements that meet the aesthetic characteristics of this population(Dandan, 2020).

Yang Tiewen, who graduated with an interior design of the Xi'an Academy of Fine Arts, is a member of many people who like the transformation of old things. He initially worked as a designer in a design company in Shenzhen, but he liked this exciting thing because of contacting the waste transformation. After resigning from his job, he started making waste installation artworks at various large art festivals, calling himself a "tattered artist." They used the car picked up in the COART Art Festival of Lijiang, Yunnan to make a mobile booth with the car picked up in the waste station. The main point of the venue device is that these materials come from waste stations and waste materials fields (Sohu, 2017).

Figure 12 The flow booth made by using waste cars

Source: Yang Tiewen （Yang,2017）

They have unique ideas and hope to transform or use the waste materials according to their needs. He is willing to transform the waste materials because of his interest, and, more importantly, he already has the idea in his heart that he wants to give the waste materials more spiritual and emotional significance. "I think people have a special attachment to things with a sense of history," he said. "Wouldn't it be better to give something new meaning to the old? It is environmentally friendly and saves money. You can say that this is a recycling of resources, and the key is that what comes out is the most special "(Sohu, 2017).

(2) Create the exhibition space of the old factory building to transform the plastic art District

It is a popular construction method in Chinese cities to transform art districts or cultural life creative parks with old factory buildings. It is long-term work to cultivate people's awareness and concept of environmental protection, inseparable from how to make good use of the living and working environment and to remind people that they should pay attention to garbage classification and waste recycling. The environment we live in has the most significant influence on people. In our city, many Spaces can be used, such as displaying sculpture art of waste materials on both sides of crowded streets, arranging a small exhibition of waste materials art transformation in the shopping mall, and transforming waste factory space in the city. How to make good use of these environments and let their bodies always be in a waste materials art space; such influence will let waste materials recycling into their hearts, and when the time is ripe to practice(Ting, 2012).

The 699 Cultural and Creative Industrial Park in Nanchang, China, exemplifies the transformation of old factories(Yun-Yang et al., 2019). 699 Cultural and Creative Park is the predecessor of Jiangxi Hua'an Knitting Factory built-in 1957. On December 14, 2014, 699 Cultural and Creative Park was approved as China's national AAA tourist attraction. The factory is dominated by Soviet-style architecture, distinguishing it from other modern buildings in the modern city and maintaining a nostalgic style. The park's overall appearance is maintained in the renovation process, only roads are trimmed, and some road signs are set up. In the renovation process, the original old equipment and machines are cleaned, adequately transformed, and placed in the park. You can almost see these processed works of Art wherever you go. Visitors can always feel the artistic charm brought by the transformation of these waste materials. Some of the works can also be used for children to play. This kind of experience in the

park environment brings people closer to the artworks of waste materials. It also enables more tourists to perceive and realize the artistic charm brought by these waste products and introduce and pass on this experience to others so that the artistic transformation of waste materials can gain more recognition in people's hearts and continue.

Figure 13 Reconstruction of waste materials in 699 Art Park

Source: Photo by author,2021

2.2.3 Specific Practice of Artistic Regeneration Value of Waste Materials

As a relatively obscure artistic practice, the Art of waste materials often needs more attention. However, with people's aesthetic diversification and personalized needs, the works presented by the transformation of waste materials are gradually accepted and loved by people. Some places take this as a feature to attract tourists and consumers. Only by allowing the Art of waste materials to participate in people's lives and meet people's spiritual and life needs can it be genuinely popularized in the crowd. In China and worldwide, there are many successful cases of artistic transformation of waste materials. These used to be considered "garbage" in another way to present in front of people.

2.2.3.1 Innovative Application of Waste Materials to Intangible Cultural Heritage

The transformation of waste materials is mainly presented through tangible images. The artistic transformation of waste materials should not only focus on the transformation itself but should give the transformed works more cultural and educational significance, which requires combining these waste materials and culture. The transformation direction of waste materials mainly focuses on animal image, living utensils, costume design, character imitation in movies and TV plays, environmental landscape, and other aspects. However, many problems exist, such as similar shapes, lack of innovation,

and lack of connotation(Xie, 2022). In order to improve ordinary people's awareness and expression ability of waste material transformation, it is necessary to carry out multiple creative and cultural expressions of existing waste material transformation works to enhance the public's aesthetic cognition ability and mining ability of traditional cultural attributes(Wang & Zheng, 2008).

The craft of glazing was listed as a national non-legacy program at the beginning of the 21st century. Glaze product firing generally takes more than ten days or longer after more than twenty procedures to complete the firing. In a glass products studio in Dongtaipu village, Taiyuan City, Shanxi Province, Ge Yuanyuan, the inheritor of the glaze firing technique of the national intangible cultural heritage, has been developing glaze artifacts for five years. He uses the slag produced after coal combustion to make glaze artifacts, transforming the worthless waste slag into exquisite artifacts. The shape of this craft is more casual. Each work will be set according to the shape of the coal cinder itself, greatly enriching the aesthetic shape of glass products. The innovation of these works lies in selecting a different form of waste slag and then combined with a kind of intangible heritage technology to complete it.

Figure 14 Mr. Ge Xianyuan is making glassware made of slag.

Source: https://www.qhlingwang.com/xinwen/guoji/2019-03-14/240249.html,2022

Completing a successful work not only requires the author's ability but also to attract consumers enough how to make your work attractive, which requires the work to have a particular innovation and personality. In the above example, the reconstruction of waste materials is very closely related to culture. Culture can expand the content of waste material transformation. In particular, non-heritage culture can provide more creative references for the artistic expression of waste materials and, at the same time, let more people understand the extensive and profound non-heritage culture through

the artistic transformation of waste materials. The two complement each other in the integration, which has improved the category of expression.

2.2.3.2 The Combination of Waste materials and Drama Non-Heritage Culture

The focus of this study is to combine waste materials with the non-heritage culture of opera, to broaden the scope of artistic expression of waste materials, and to pass on the non-heritage culture of opera, and improve people's aesthetics. Through the early questionnaire survey and analysis, it is found that people have a narrow understanding of the use of waste materials. At the same time, they know less about the drama culture in the intangible cultural heritage. Therefore, researchers focus on these contents and investigate them. The concept of combining with non-heritage culture was proposed during the use of waste materials, and this concept was applied to our aesthetic education. In the inheritance process of intangible cultural heritage, it proposed to inherit and practice intangible cultural heritage in actual life to protect Practice in the continuous exploration of Practice(Ling-Ling, 2011). It proposed the concept of intangible cultural heritage to help improve the quality-of-life services.

(1) Innovation and expression of waste material art

With increasing public awareness of environmental protection and technological advances, the range of used materials is becoming richer and richer due to changes in people's mindsets, craftsmanship, and innovative design. we can also innovate applications and redesign existing waste materials to meet the needs and usage habits of different groups(Yangyuan et al., 2015). The Art of waste materials is an innovative form of Art. Through garbage recovery and creative design, waste items are converted into artworks with aesthetic value. The creative expression of waste material art has the following:

Deformation: Redesign and combine the waste materials, change their original shape, color, texture, etc., and create unique artwork. For example, waste tires can be cut into short strips for making various furniture and decorations.

Patching: Patching is a common artistic expression of waste materials, which strides into a three-dimensional or plane image. For example, abandoned cartoons, newspapers, or corrugated paper can be cut and collaged into superb photos, portrait paintings, or pioneers.

Synthetic: Blending different waste materials to create a more colorful modeling form and, for example, using steel bars, gravel, waste wood, and other materials to create an artistic sculpture in the concrete.

Transformation: By processing the process of waste materials, it becomes a new product with practical and cultural. Reduction and beautify the environment.

Practical creativity: Using waste materials is combined with practicality while paying attention to beauty and Art. For example, use old tires to make commercial reminder boards, waste sweaters to make cute toys, or bottle caps to make exquisite accessories. In short, the Art of waste materials is an innovative expression. The use of waste items to create artworks with aesthetic value has been used to promote environmental awareness and artistic creativity(Tian & Tian, 2012).

The following two works are artistic works made by artists using the simplest waste materials in our lives. The first work uses unique context stripes and natural extensions of the leaves, which can show an elegant temperament. He looks thin and transparent. Like high-end silk enamel works. Another work is a tree-shaped decoration made by a chain to create and deform the waste chain to make the original hard iron chain a "vitality tree." They do not look complicated, but they are full of the charm of design and artistic vision.

Figure 15 Kaiey Sikaqitu "Dead Leaf Bowl"

Figure 16 Drew Evans "Tree"

Source: http://k.sina.com.cn/article_6358547300_17affbb64001007v2p.html,2022

Source: https://new.qq.com/rain/a/20201014A0J8EW00,2022

Figure 17 Grass rope woven drama characters

Figure 18 Crab Shell Draw the Drama Facebook

Source: https://www.sohu.com/a/372756975_748274,2022

(2) Design of non-heritage handicraft works

Handicraft works generally refer to people's labor to meet the needs of life and aesthetic requirements and a kind of arts and crafts based on handmade production. The requirements are low, but it is used to achieve better results with simple materials around you. Therefore, waste materials have a practical application effect. During traditional handicraft production, waste materials are used as local materials. Although these traditional handicrafts are made from waste materials, it considers two attributes aesthetics and practical application. Traditional non-heritage crafts are generally more popular in the countryside and in some traditional cultures. They have solid national culture. Most of the attributes are mainly traditional cultural content. Traditional crafts are cultural arts and daily necessities closely related to people's lives(Wei, 2015). In the life of a fashion city, some traditional handicrafts are very popular. It represents a kind of emotional transmission, and at the same time, it is also personal creativity and unique artistic charm.

The design of old Art and handicraft works is a form of artistic expression in the handmade creative industry. They all use handmade art skills to emphasize the spirit and skills of handmade. They all use various existing materials, but their expression and design methods are different:

The Art of old objects is used to turn them into meaningful artworks by redesigning them. It enables waste to play a new vitality and artistic value by circulating regeneration. For example, abandoned wooden plates are made into furniture, and clothes are made with waste fabrics. The Art of old things has the connotation of environmental protection and emphasizes the concept of "new things become new," thereby giving the old things new life and value.

The design of handicraft works is to make more artistic crafts or accessories through innovative methods and different materials. Compared with the Art of old things, the design of handicraft works pays more attention to the expressiveness, beauty, and practicality of design. For example, I am using handmade soft pottery to create beautiful vases, using wood and metal materials to make unique structures, hand-cutting, sewing fabrics, etc.

Generally, the design of old-fashioned Art and handicraft works differs, but they all pursue innovation, aesthetics, practicality, and functionality. These industries have a certain depth and height in culture and have specific economic and social value.

Figure 19 of the traditional handicraft

Figure 20 Traditional holiday handicrafts

Source: https://www.thepaper.cn/newsdetail_forward_6412078,2022

Source: https://www.0730news.com/detail?infoid=110641,2022

Figure 21 Hand-carved crafts of avocado core

Figure 22 Handmade paper artwork

Source: http://k.sina.com.cn/article_6358547300_17affbb64001007v2p.html,2022

Source: http://www.zxart.cn/Detail/214/75386.html,2022

(3) Non-heritage cultural heritage and development

China had begun to emphasize cultural development at an earlier time., and its cultural development since the Tang and Song dynasties has gradually become prosperous. As one of the four ancient civilizations, the development and influence of Chinese culture are incredibly far-reaching, including South Korea, Japan, Central Asia, and Southeast Asia. Whether it is a traditional non-heritage project with national characteristics or a cultural heritage project with a wide range of regional influences, it is an essential cultural carrier that affects neighboring countries. From the four significant inventions to modernization, China's cultural heritage and development have played a specific role in promoting the progress of world civilization.

Since the beginning of the twentieth century, several circulars and opinions have been issued at the national level, all of which are aimed at strengthening the protection of local intangible cultural heritage, and the issuance of these documents proves that the national level has attached great importance to the development and transmission of intangible cultural heritage (Li-Chun, 2010).

The intangible cultural heritage encompasses a large number of categories, including a wide range of traditional cultural expressions, such as the skills that have been handed down from generation to generation by the people of various regions, the knowledge gained from the practice of life and nature, and the forms of performance that are characterized by regional characteristics. In

addition to these, it also includes physical objects and places. It is an essential symbol of the achievements of our country and the nation's historical and cultural development. They specifically include the following forms:

1. Types of oral language and performance;

2. Performance art;

3. Social Practice, ritual, and festival activities;

4. Knowledge and practice of exploration of nature and life;

5. Traditional handicrafts.

The specific category and the related intangible cultural heritage project are as follows:

Table 3 Types and non-heritage project content Summarize according to the classification of intangible cultural heritage [Source: Author,2023]

Category	Intangible Cultural Heritage Project
Drama	Peking opera, Huangmei opera, Yu opera
Type	Flower Drum Opera, Yu Opera
Martial arts	Tai Chi, Shaolin Temple Kung Fu, Wing Chun Boxing
Traditional technology	Chinese painting, paper-cutting, ceramic Art, brocade.
traditional custom	Chinese Traditional Festivals
Music and dance	Chashan Opera, Miao Lusheng Dance, Yi Dance.
Folk literature	Jiangnan's Words, Cantonese opera singing.
Traditional medicine	Traditional Chinese medicine, acupuncture, Tibetan medicine, Mongolian medicine, haha medicine.

Folk art	A wooden version of a New Year painting, window flowers, carving paint, and hollow bone cards.
Folk craft	Tea picking skills, silk dyeing technology, delicate stone silhouette.

Note: The above list is only part of the intangible cultural heritage in China, and each country and region's heritage and cultural characteristics are also quite different.

Among them, the traditional drama non-heritage belongs to the scope of performance art. This non-heritage has a history of hundreds of years of development. The love of young groups for non-heritage cultures, such as drama, is gradually declining. Many young people may have yet to be exposed to drama-related cultures, which is fatal for protecting and inheriting intangible cultural heritage. The main reason is that the fast-paced life can no longer let young people take more time to walk into the drama culture. Second, the cultural inheritance of drama is relatively single, and most of them are displayed in the form of performances. Young people gradually develop aesthetic fatigue. Third, the diversification of entertainment methods has given youth groups more alternatives. Other art forms gradually replace the monotonous and boring drama culture. Therefore, it is necessary to improve the current intangible cultural inheritance issues to help those about to disappear non -heritage memory to restore the vitality of the past. Moreover, let more people understand and understand the wisdom and cultural heritage of the Chinese people through non-heritage culture.

Waste materials are a kind of substance that gradually loses application value in our lives, but how to use and exert more excellent value is a question that researchers have always thought about. In addition to the use value of waste materials, there are other cultural attributes to be studied and developed by researchers. How to enable waste materials to be recycled and, at the same time, it can increase the rich value attributes of waste materials is worth studying in the future.

in conclusion，The Recycling of waste materials is a consensus formed by all countries and people. Whether it is a developed or a developing country, it has its plans and policies for waste circulation. The consensus is generated below. China began to propose the concept of waste circulation in the 1990s. China has more actions and considerations under the concept of carbon neutrality worldwide.

Waste materials and non-heritage drama culture are one of the substances that we often contact in our lives. One is the commonly lost waste material in life, and the other is our traditional form of performance. These are often exposed in our lives. Initially, how the two unreasonable contents were used to graft the relationship between the two through a medium so that they had a connection between them while transmitting the concept of environmental protection, we can realize that waste materials can be combined with drama culture, expand the environment and value of the use of waste materials, and enhance the people's aesthetic ability and appreciation level. At the same time, we can improve people's awareness of environmental protection and let everyone realize the unique value of waste materials and their multi-angle use. From the perspective of non-heritage culture, it can help people understand the various forms of performance of drama non-heritage, and it has an excellent value to propagate and inherit the non-heritage of drama non-heritage.

As a classic performance form left by our ancestors, the drama culture has been sung for hundreds of years. However, with the harsh survival conditions of drama art, this ancient art style may also face the dilemma of inheritance, especially the young people. There are fewer and fewer drama cultures that can be exposed. Only through various forms can we spread and inherit this non-heritage culture from different angles so that more youth groups can understand and understand the connotation and connotation and connotations of drama culture and drama culture. Value. Therefore, in this research project, the researchers believe that the meaning and Practice of culture given to the culture of old objects can increase the value of waste materials and make waste materials more meaningful and valuable. Increasing the value of the Art of old things can also indirectly declare the drama non -heritage culture while improving the public's environmental awareness of using old things.

2.3 Aesthetic Value and Cultural Significance of Waste Material Art

The Art of old objects is an art form that renovates, remakes or reorganizes old objects to give them new life and artistic value. Old-thing Art has a unique cultural significance and aesthetic value.

First, the Art of the old objects can re-get the life of the abandoned old objects, thereby reducing waste and environmental pollution. The phenomenon of this creative handicraft also has a positive effect on issues such as environmental protection and sustainable development.

Secondly, cultural heritage can preserve and inherit the Art of old things. Fixing and replicating ancient objects can reshape their spiritual core and aesthetic value and allow the younger generation to come into contact with this cultural heritage to better understand, understand and inherit culture.

Third, the Art of old things also has a unique charm in terms of aesthetic value. The integration, composite, and innovation of this cultural symbol and personal stories make the value and significance of the Art itself more critical. The production and maintenance of old artworks also require high skills, superb craftsmanship, and meticulous quality control(Mengmeng, 2008).

In general, the Art of old things expresses the concept of sustainable living and is an art form with cultural and aesthetic value and environmental protection. In this fast -consumption and excessive waste of society, the Art of old things is becoming a lifestyle advocated by more and more people. It is also essential for our consumption concepts and environmental awareness.

2.3.1 Application Value of the Art of Old Things

The aesthetic value of old-fashioned Art mainly comes from its historical and cultural significance, as well as the unique creativity and skills of the artist's re-repair, creation, and combination of old objects. The following is the place where I think the aesthetic characteristics and values of the Art of old things:

Ecological value: In the process of old-thing, Art, and crafts, the reuse of old things has reduced the waste of resources and environmental pollution, and it also promotes the promotion of resources to save resources and reduce waste pollution. With the support of extensive green environmental protection concepts, the Art of old things has irreplaceable ecological value.

Aesthetic value: Giving artistic and cultural attributes and values to waste materials can bring back to life old objects that would otherwise be abandoned, and through individualized creation, it formed cultural exchanges of ancient and modern, east and West. Artists can deeply integrate and compatible cultural elements and art forms, generating highly unique and personalized artistic value.

Landscape value: The Art of old objects is widely used in landscape construction, making the old objects that were initially abandoned into a fresh landscape resource and beautifying space. For example, after renovating old objects, they can be used as commercial or family decoration, giving the

indoor space culture and art atmosphere. The beauty element in the scene performance allows the scene to be more emotional, living, and artistic.

Humanity value: The application value of the Art of old things is that it can't only preserve cultural traditions and promote cultural protection and development but also conveys culture to future generations through art forms, which have the significance of cultural consciousness and self-confidence in the nation. Many old things represent the historical trajectory of the local economic development, and the residual items evoke the people's cultural Memory. These have critical humanistic values.

Economic value: As a creative industry, the Art of old objects can achieve the business value driver of the market on the one hand and conduct benign guidance and construction of the manufacturing supply chain of the old objects processing, production, and sales. At the same time, it can lead to a more substantial economic value.

Historical culture: The Art of old things often uses existing old objects, and they have rich historical backgrounds and cultural stories behind them. Fixing and making these items retain their cultural value and connect the historical background, social style, and people's living conditions, showing a unique and interesting historical and cultural style.

Creative techniques: The Art of old things often needs to use different techniques and creativity to achieve the reinterpretation and creative reuse of the heritage left by history and years. When dealing with and repairing old objects, artists must use various technologies and handicrafts, such as stainless and grinding, fabric repair and sculpture suppression, and the choice and combination of supplementary materials. This requires high skills and creativity.

Aesthetic performance: As a unique art form, the aesthetic value of the old Art is reflected in the artist's creativity and the need to choose the material Selection of the items, at the same time, the Selection of style and expression of cultural background.

Significance of environmental protection: With the importance of people's environmental protection, sustainability, and Recycling, it is more significant to use energy saving and emission reduction in using old objects in the Art of old objects. At the same time, the performance of this Art is also unlimited to get new lives for the use of materials that have been moisturized.

2.3.2 The Application and Dilemma of the Old object of Art in the Education Process

In actual life, the art form of the old things has a specific history, cultural connotation, and aesthetic value, and its aesthetic application also has some restrictions and dilemmas:

In terms of conditions: The Art of old things requires a certain history, culture, collection, repair, and creative ability to support. Artists need high creativity and good aesthetic consciousness. In addition, market demand and consumer acceptance or scene applicability are also crucial factors.

In terms of a dilemma: Due to the lack of systematic markets and industrial links, it is difficult for old-thing Art to gain widespread attention and support, and it is also challenging to develop the old-fashioned art market. In terms of artistic expression, the processing, repair, and production of old objects need specific technical and design capabilities to avoid excessive changing in the nature and style of the original items.

The follow-up nature of items: Since the old objects generally have been eroded over the years, once it is repaired, it is necessary to reuse and maintain them, and it also needs to be structurally structured and the detection of climate. This aspect's high cost and maintenance cost is also a dilemma of the aesthetic application of the old things in actual life.

Although the Art of old objects has unique aesthetic value and cultural connotation, the market and industrial promotion require more attention. Artists and designers need to understand the antiquities' historical, cultural value, and aesthetic requirements. Meet the growing market demand and aesthetic height.

2.3.2.1 Application of Education on Campus

As people pay more and more attention to environmental protection, some primary and secondary school classrooms have gradually set up waste material transformation art practice courses to cultivate children's awareness of taking care of the environment and "turning waste into treasure" from an early age. Curriculum teaching is an indispensable and essential part. In 2001, the Chinese education authorities developed a standardized art curriculum that. This standard pointed out that in the art course practice process, combine natural environment resources (including natural landscapes and materials.), campus environment, and social life resources. The standard features of these resources are they are

easier to contact and understand in our lives. Of course, of course, of course, of course, of course. It also includes waste resources. In the specific process of art classroom practice, we do not care what materials are used, but in the practice process, to cultivate students to establish a sense of Recycling waste materials(Huang et al., 2019).

On the one hand, by showing students how to use old items to be used again, students can cultivate student's environmental awareness and educate them to reinterpret the use of resources. On the other hand, the Art of old things can also be used as a creative course, encouraging students to use creativity and imagination and transform waste items into valuable artworks. This helps stimulate students 'creative thinking, improve their ability to solve problems and creativity, and cultivate students' ability to reuse and re-create materials and materials. At the same time, because the Art of old things requires little money and items, it can achieve low-cost and environmental protection education on campus.

You can use the following ways, for example:

Creating creative space: Schools can create a particular creative space for students to use waste items for creation. This space can also be an exhibition space for students to show their artwork.

Design Creative Course: Schools can offer creative courses and create by using waste items to help students exercise their creative thinking and artistic skills.

Figure 23 Old object transformation art classroom

Source: https://www.meipian.cn/3c3abckx,2023

Organize art competitions: Schools can organize art competitions to encourage students to use old items for creation. This not only helps to promote the creative thinking of students but also enables students to feel happiness and a sense of accomplishment in society.

Environmental propaganda activities: Schools can convey the importance of environmental protection by organizing environmental protection-related publicity activities. The Art of old things can be part of these activities and use practical actions to show students how to protect the environment by reuse waste items.

Visit the old art exhibition: Schools can organize students to visit old art exhibitions and museums. This allows students to understand the story behind the Art of old material, contact more art forms, and stimulate their interest and enthusiasm for Art. In addition to completing the transformation in classroom teaching, the waste transformation must also conduct a specific aesthetic education. This process is to cultivate children not only knowing how to complete the transformation but also paying attention to the beauty of the final work and whether they can bring the admirers to be pleasant to the

pleasant pleasures of the admiral. Feeling this can teach students the ability to do it and improve their understanding of beauty in the production process so that the younger generation has more aesthetic ability.

In addition to school education, we hope to lead children to participate in waste transformation and utilization in family life.

Figure 24 Display artwork from the transformation of old materials

Source: https://www.meipian.cn/1yaf12js,2023

2.3.2.2 How to Avoid Homogeneity

The Art of old objects is prone to homogeneity during the creative process because abandoned items usually have similar textures and colors. The following points can help the Art of old things to avoid homogeneity:

Open field of vision: Creators should keep an open and novel vision; they can get through various exhibitions and museums, collect different materials, and find inspiration and creativity.

Exploring new materials: Researchers can not only use traditional waste items but also explore new waste materials, such as electronic waste, air cushion bags, and waste cardboard. Thereby opening up new creative space.

Fusion of different art forms: Combine the Art of old objects with other art forms, such as painting and architecture, to create more possibilities.

Cultivate their style: Creators can avoid being too homogeneous by forming their personality and style in the creation.

In short, the Art of old things needs to be continuously explored and tried, constantly updating its thoughts and creativity to avoid the problem of homogeneity.

Adhere to the characteristics of national and regional

When combining the Art of old things with non-heritage culture, it is necessary to integrate regional characteristics and cultural elements into the works, and the following aspects should be implemented:

Digging local cultural characteristics: While digging the characteristics of the local cultural characteristics, you can deeply understand the local history, legends, and geographical environment, to better integrate local cultural elements into works.

Create with local traditional skills: During the creation process, you can consider using local traditional skills and crafts, such as stone carvings, woodcarving, and weaving dyeing. Combining local cultural elements and techniques.

Using local characteristic raw materials: During the creative process, you can choose local characteristics of raw materials, such as reeds, rattan, and bamboo products, and use these raw materials to create works with local characteristics.

Innovation and development: It can make non-heritage culture more modern, practical, or artistic through innovation while maintaining the innocence and traditional nature of cultural elements.

In short, to integrate regional characteristics and cultural elements into the Art of old things, you need to understand the local cultural characteristics and traditional skills, find raw

materials with local characteristics, and use modern technology and concepts to innovate. This can maintain the uniqueness of the local culture and make the work more creative and practical.

2.4 the history and Development of Chinese Opera

2.4.1 Origin of Chinese Opera and Opera

Chinese Opera originated from the dance and music performances in ancient religious rituals and sacrifice activities and has a history of more than 2,000 years. The earliest form of Opera can be traced back to the Zhou Dynasty. At that time, opera performances were usually accompanied by religious rituals and sacrifice activities. After a long development period, Opera has gradually become a unique form of cultural and artistic forms and an indispensable and essential part of Chinese cultural heritage.

Figure 25 Ancient drama — performance of "Drama"

Source: https://cq.qq.com/a/20190403/003108.htm,2023

Ancient opera performances are rich in forms, and the most representative is Peking Opera, Kunu, Henan Opera, Peking Opera, Huang Mei Opera, Yue Opera, Rating Drama, Qin Qiang, and Hebei Xunzi. They express stories through various artistic methods, such as performing instruments, action, singing, and make up—the concept of cultural value and ideological connotation of the cultural value. There is a different connection between Opera. They have their characteristics, but they also have many communities. They are vivid, realistic, lyrical, and gorgeous artistic performances.

Figure 26 Chinese Opera represented by Peking Opera

Source: https://baijiahao.baidu.com/s?id=1598089509029773529,2023

In the Tang Dynasty, the development of Opera reached a peak. Different regions and cultural traditions have affected and contributed to opera art. For example, the Tang Dynasty's South Opera (including Yue opera, Cantonese Opera, and Fujian opera) was influenced by Opera and local folk art in the southern region. Court songs and dances influenced Peking opera. Kunju originated from the ancient art traditions and instruments in Jiangsu and Zhejiang.

Chinese Opera originated from ancient society's religious rituals and sacrifice activities. After a long period of development, it has formed a characteristic opera drama and has become an indispensable cultural heritage in Chinese national culture

2.4.1.1 Definition of Chinese Opera

Chinese Opera is an esteemed and time-honored cultural and artistic expression. The Opera in Chinese history has a lengthy and intricate lineage, originating from ancient Chinese music, dance, theatre performances, and literary art. It encompasses a diverse range of artistic techniques, such

as singing, chanting, acting, instrumental performance, and dance. The aforementioned object holds significant value as a Chinese cultural item and boasts a historical lineage spanning around two millennia.

The Opera art form effectively combines elements of Chinese cultural aesthetics and philosophical concepts to exemplify the characteristics and methods of traditional Chinese aesthetics in many artistic expressions such as singing, performing, music, dance, and visual arts. Opera works often employ complex storylines and dynamic structures to effectively communicate many aspects of history, mythology, stories, individuals, and societal events. The presence of these entities can be observed within the realm of Chinese history and literature(Ting-Xin et al., 2015).

Peking Opera, Kunju, Henan Opera, Huang Mei Opera, Yue Opera, Drama, Qin Qiang, Hebei Xunzi, and various other dramatic genres and forms represent a selection of Chinese opera traditions. Every theatrical production possesses its own unique presenting style, incorporating elements such as arias, musical components, and choreographed dance sequences.

Chinese opera is an emblematic, multifaceted, and dynamic traditional cultural and artistic expression that assumes a pivotal function in the transmission and perpetuation of Chinese cultural values. Moreover, it constitutes an indispensable constituent of the Chinese cultural legacy.

2.4.1.2 The Performance of Chinese Opera:

One of Chinese opera's distinctive artistic charms is the performance format, which incorporates a variety of artistic techniques, such as:

Singing: An example of opera art is the area, which can be found in dramas with individual arias, such as Kunju, Yu, Huang Mei, and Peking Opera. The main singer's music and the percussionists' and accompaniment's accompaniment typically execute the aria. The character's emotion and image characteristics are expressed through the high-pitched sound, the variety of sound tones, and different aria skills.

Body: The figure is one of the cores of the opera performance. It means that the actors express the character's image, expression, and emotion through body postures and movements, including a series of body actions such as rotation, rotation, bumps, jumping, and upside down. They represent Opera, which represents Opera—the peak of the body dynamic during the performance.

Figure 27 The body movement performance in the shadow play

Source: http://www.chinadaily.com.cn/shys/2015-07/14/content_21271964.htm,2023

Makeup, dressing, props: Makeup, dressing, and props are essential elements in opera performances. They can better show the characteristics of the character's image and social life, such as the facial makeup, wigs, and clothing commonly used in opera performances, as well as Various props to be used in the play.

Figure 28 Performance props in Opera

Source: https://sucai.redocn.com/yishuwenhua_7704261.html,2022

Source: https://www.sohu.com/a/164131882_664260,2022

Music: Music in opera performances is an essential means of expression. It is responsible for creating an emotional atmosphere for actors. At the same time, it also coordinated with singing and body performances to form a complete style of the entire performance. There are diverse musical instruments in music, including string, tubular, percussion, etc.

In short, opera performances are a highly comprehensive form of artistic expression. With their unique forms, skills, and characteristics of expressions, skills, makeup, and music. Important carriers and promoters.

2.4.1.3 The cultural carrier of Chinese Opera

Chinese opera is a part of traditional Chinese culture and has a certain degree of representation in foreign propaganda. In its long-term development process, the Opera has become one of the essential carriers of Chinese culture. It has the characteristics of the following aspects of a cultural carrier:

Language performance: Most traditional Chinese characters are sung in opera performances, making Opera a part of the Chinese language culture. The rhythm, rhyme, rhyme, etc., used in the opera singing not only make the Opera more musical rhythm but also invites many literary masters to write the Opera so that the opera lines have unique literary expression and charm in them.

Mask and clothing: In the opera performance, actors often make makeup and play various roles. Through the actor's face, clothing image, and body movement, emotions have made Opera one of the carriers of traditional Chinese jewelry culture.

Social and historical performance: Opera works reflect the culture, life, historical background, and attitude of ancient Chinese society in many aspects. In the process of singing opera, many ancient cultural and religious traditions were also introduced into Opera and retained in various forms.

Artistic conceptual inheritance: Opera is a very complete cultural and artistic system, which includes music, dance, drama performances, and literary and artistic aspects. Among them, both literary and artistic concepts have penetrated the opera script, and through the way passed down from generation to generation, it has become an essential carrier of traditional Chinese cultural ideas and philosophy.

In addition to the above carrier, it also has the characteristics of cultural carriers and the inheritance of cultural experience: Chinese drama is one of the representatives of traditional Chinese culture, inheriting rich cultural experiences such as Chinese social history, life, and value. The songs, dances, music, and performances in the Opera have all the characteristics and Essence of Chinese culture, which is an essential carrier of national culture.

The embodiment of human wisdom: The rich cultural elements in Chinese dramas show the rich connotation of traditional Chinese culture and the Chinese people's humanistic wisdom and emotional cognition. Different forms of Opera, the artistic style, and the show's characteristics reflect the cultural accomplishments of different regions, nations, and cultures.

The embodiment of the human spirit: As a stage art, Chinese drama emphasizes the expression of human emotions, ideals, and cognition and the pursuit of historical and cultural. The rich content, such as social ethics and values conveyed in opera art, has become an important manifestation of the pursuit of the human spirit.

Inheritance of national culture: As one of the essential representatives of Chinese traditional culture, Chinese drama has long been highly respected for inheritance protection and development of Chinese national culture. During the development of traditional Chinese culture, the art

of Opera has always played a vital role and has continuously contributed to the Chinese nation's cultural heritage and innovative development.

In general, Chinese Opera, as a traditional and rich traditional art form, is an integral part of the Chinese cultural heritage and has strong cultural carrier characteristics. Through the inheritance and development of Opera, the precious culture, history, and artistic traditions in many Chinese cultures have been reborn.

The language expression of Chinese Opera has unique characteristics, mainly manifested in the following aspects:

2.4.1.4 Language Expression

Traditional Chinese character dialects: Most Chinese Opera uses traditional Chinese dialects to sing, including Mandarin, various dialects. creating strong regional and cultural characteristics. Using dialects while expressing emotions and plots, Opera also presents the language and cultural characteristics of various regions in China.

The rhythm of the aria: The aria language in the opera performance has a strong sense of rhythmic rhythm, which is composed of fast, slow, high, low, and these different sound-high rhythms. The vocals are gradually enriching during the singing process, which not only expresses the characters and emotions of the characters but also carries rich culture and historical content.

Poetic expression of named name: In the Opera, the name of the name shows a profound poetic expression, such as "Typhoon Tunny, Suzhou Sima Green Shirts Wet," This poetic expression not only makes the image more vivid and more vivid and more vivid and livelier. It also has a gorgeous artistic effect.

Artistic expression: Chinese drama emphasizes the conversion of artistic conception in language expression and has high requirements for tone, pronunciation, and tone of words. The actors must adjust their voice through cough and mouthwash, and Express emotions and artistic conceptions.

A unique expression of accent: When actors create characters in the opera performance, they usually use specific expression forms, such as sound, high and low pronunciation

changes, etc. These unique expressions are widespread in Opera, allowing actors and characters to fit more and continuously.

In general, the language expression of Chinese Opera has unique cultural characteristics and charm. Through the singing and interpretation of people, it can better inherit the Essence of Chinese national culture, history, and art and create a more colorful cultural Life.

2.4.1.5 Art Form:

With its artistic form, performance skills, and artistic characteristics, Chinese drama has a unique position on the world stage. Peking opera, Kunju, hangmen Opera, Drama, and Henan Opera. are the most representative artistic forms in traditional Chinese operas. The artistic form of Chinese drama is an important part of the traditional Chinese opera culture. Its expression forms are diverse, including elements such as singing, chanting, doing, playing, dancing, scenery, and sound, forming a unique performance style and artistic characteristics. The following is a shared artistic form of Chinese drama:

Peking Opera (also known as "Peking Opera"): As one of the representatives of traditional Chinese operas, Peking Opera began during the Qianlong period of the Qing Dynasty, er hung cavity, and other local dramas—one of the forms of culture and art. Peking opera combines the artistic forms of singing, chanting, dancing, acrobatics, and kung fu, and shows the image and emotion of the characters through the actor's performance. It is known as the treasure of Chinese culture.

Figure 29 Peking Opera

Source: https://www.xiaohongshu.com/explore/62dfc815000000001c01486e,2023

Kunju：：Kunqu opera is a form of Opera developed from Yuanqu, which is derived from Suzhou. It is famous for its elegant and refined vocal vocals and exquisite performances. Kunqu is dominated by chanting and singing; dance and action performances are also very important. It has won the love of many audiences with delicate, soft, and implicit expressions.

Figure 30 Kunqu opera

Source: https://www.meipian.cn/25snuzca,2023

Huangmei Opera: Huangmei Opera is a folk art in Huangmei County, Hubei Province. After more than 100 years of development, it has gradually become one of the mainstream Chinese opera cultures. Huangmei Opera is famous for its lyrical, beautiful, and smooth area and has a relatively unique artistic style.

Cantonese Opera: Cantonese Opera is a form of opera performance in Guangdong Province, southern China. It is named after being sung in Cantonese: Details and psychological states.

Cantonese Opera also has unique dress and performance skills, becoming one of the treasures of Chinese Opera.

Yu Opera: Yu Opera is a local Opera in Henan Province, China. It is characterized by the conciseness of the story and the plot twists and turns. The area is beautiful, and the performance is realistic.

In addition to the above, there are many other characteristics of Chinese drama. The unique charm of Chinese Opera is described through the characteristics of these art forms.

Facial spectrum: Facial spectrum is also one of the important art forms of Chinese Opera. The character and image characteristics of the characters can be presented through the actor's facial makeup. It can be divided into white, red, black, and green noodles. It represents different characters with patterns. The facial spectrum cooperates with the body and singing and jointly shapes the unique art form in the Opera.

Music: Music is also one of the indispensable artistic forms of Chinese Opera. It can not only create the atmosphere of the scene in the Opera but also complement and coordinate with other art forms such as arias and body, constituting the complete style of the full opera performance. Music forms include the performance of various musical instruments, such as Jingyun Drum, Gongs and Drums, Erhu, and so on.

In general, through the combination of various art forms such as aria, body, facial spectrum, and music, Chinese Opera reflects the character, emotion, and social life elements, forming a unique artistic expression method of artistic expression. Essence Various art forms complement each other in opera performances and constitute the overall sense of space and artistic charm(Xue-Ying, 2018).

2.4.1.6 Basic Elements of Opera

For drama, there are generally four essential elements. They are:

Plot: The plot of the drama refers to the storyline, character relationship, and conflict expressed in the drama, which is the cornerstone and core of the drama plot. The plot needs to have a structure of inheritance and transition to make drama development logical and coherent.

Characters: Drama characters are the main manifestations of the plot. The character and characteristics of the characters are portrayed through different characters, words and deeds, and

emoticons. Drama characters need comprehensive performances such as form, spirit, sound, color, and emotion, and they show the characteristics and emotions of the character vividly and vividly.

Singing: One of the elements of opera performances is singing. The voice of actors, along with various musical accompaniments, rhythmic alterations, and rhythmic expressions, is the primary mechanism of character emotion. One of the essential components of opera performances is singing, which is also a crucial component of Chinese opera.

Dialogue is a crucial component of a drama performance since it helps to explain the plot and the relationships between the characters. Research has found that dialogue can convey information such as the characters' emotions, psychology, and social and historical background and create an impression of complex scenes, intense emotions, and tense atmosphere. Beautiful writing, decent language, and sincere feelings are necessary for a good dialogue.

The drama's structure is built around these four key components. The four fundamental components—an art form, connotation, content, and performance—can be altered and modified following the drama's theme and the variations in performance techniques(JIAOFENG, 2020).

2.4.2 Types of Chinese Drama

Chinese drama, which has a lengthy history and numerous cultural overtones, is an essential component of traditional Chinese culture. Chinese drama can be categorized into the following categories based on the various performance formats:

Peking Opera: It is the most representative Chinese drama. It originated in Beijing and performed in various art forms such as music, dance, Opera, poetry, and other art forms. Peking opera is the central singing with the "four major inventions" vocal cavity and is well-known for its superb performance skills, rich connotations, and unique sounds. Peking opera is a traditional Chinese Opera and one of the peak arts in China. Its performance method is mainly singing, chanting, doing, and playing. Peking opera was formally formed during the Qianlong period of the Qing Dynasty. In its later development, it reached the most prosperous period, becoming a model of Opera in various places. Peking opera is famous for its rich colors, gentle tone, unique performance skills, and detailed and exquisite stage layout. It is usually performed around famous figures and historical events in Chinese history. Therefore, on the one hand, it expresses the role of the role, and on the other hand, it shows the

fine reproduction of the entire historical background. Peking Opera usually takes the "four supporting actors" as the primary performance form, including the characteristics of four characters: literary, martial arts, "Chou" and dan, representing different personalities and styles. Peking opera actors need to learn various performance skills, such as voice pronunciation, singing, performance, performance, movement, and dance, to express the shape and expression of the characters in the Opera. Peking opera is an essential part of Chinese culture and a representative of Chinese national culture(Jiwen, 2016). Its performance skills are unique, with diverse forms and rich content. Its performance is not only about the plot and the character image of the character but also the purpose of achieving humanistic spiritual maintenance and sublimation of humanity. As part of Chinese culture, Peking Opera has always been loved and inherited by people.

Huangmei opera: Huangmei opera originated in the Huangmei area of Anhui and is one of the crucial dramas in the Jiangnan area of China. With Hubei and Anhui as the primary performance areas, the main features of expressions, funny and rational dramas are the main features(Feng, 2014).

Review of drama: The drama is one of the traditional Chinese opera dramas. It was born mainly for female actors in Henan, Hebei, and other regions. The primary expression of the drama is based on the singing, and the performance method of refreshing, lyrics, and half-singing is used to form a unique artistic style.

Yu opera: Yu opera is one of the leading local dramas in Chinese opera culture. It was born in Henan and is a folding local drama based on Henan Peking Opera actors. Taking Allegro and Mingyi as the primary performance skills, they often show vivid, humorous plots and funny anti-string images, which the audience loves(Wang, 2021).

Cantonese Opera: Cantonese opera is one of the major local opera genres of Chinese opera, with Guangdong, Hong Kong and Macao as the main performing regions. It is a unique and splendid art form in Chinese opera culture, characterized by delicate production, actors who excel in action performances and improvisation(Johnson & Yung, 1990).

Plum String: Plum String is one of the types of Chinese opera drama. It is a small repertoire with piano strings and singing. It is more prevalent in the Jiangnan area. Hong Zhaoying and Ye Yongcheng's works are the most famous.

The above is only part of Chinese drama. Each drama has its unique expression, expressing the unique charm of traditional Chinese culture. With the development of the times, more and more modern elements are incorporated into Chinese drama, making Chinese drama continue to be loved and chased by people.

2.4.3 The Development Status of Chinese Drama

Chinese Opera is one of the essential parts of traditional Chinese culture, covering almost the entire Chinese region and different ethnic areas. It is an art form with a long history, profound cultural heritage, and diverse forms. However, with the acceleration of modernization, Chinese Opera has experienced changes and challenges in the past few decades.

There are indeed some opportunities and challenges in Chinese Opera at present. From the existing research, the primary development status of the significant development is as follows:

Inheritance and protection: The inheritance and protection of Chinese Opera have become a national cultural engineering. The government encourages young people to learn and engage in related professional industries by supporting various opera schools, training courses, and professional theater troupes. At the same time, some scholars, artists, and cultural practitioners are actively participating in inheritance and protection(Shi-Min & Wen-Yan, 2015).

Innovation performance: With society's progress and audiences' needs, the form of opera performances is constantly adjusting and innovating. Modern elements such as music, clothing, and props are integrated into the performance. The new stage technology and lighting effects are also used in some modern dramas. These efforts help to attract more audiences and enhance the spread of Opera in contemporary influence.

Viewers' needs: With the development of China's socio-economic, people's living standards and cultural needs are also increasing. Following the art of Opera also faces many challenges: younger audiences hope to see modern, diversified, and unique performances, but many elderly audiences want to see traditional dramas. Therefore, the opera market needs to continue to innovate based on maintaining traditionality to meet the needs of audiences with different levels and cultural backgrounds.

Regional differences: China is a multi-ethnic, multi-culture country, and the forms and performance styles of Opera in various regions are also different. While protecting traditions, operas in different regions must find their own characteristics and development direction. Government, scholars, and artists need to adopt various means to encourage and support the development of opera art in various regions.

In general, Chinese Opera's current development status is still relatively rich and complicated. It requires government, scholars, artists, and practitioners to work together to protect the tradition and innovative development and allow Chinese Opera to be widely spread and recognized in contemporary.

2.4.3.1 The Cultural Root of the Opera

As a traditional cultural heritage, Chinese Opera has a long history and is deeply rooted in the deep soil of Chinese culture(Long-Fei & Ting, 2011).

First of all, the cultural root of Chinese Opera can be traced back to the ancient sacrifice culture of China. Ancient Chinese sacrifices have performances such as performing music and dance. Moreover, the origin of Opera is also related to sacrifice activities. According to cultural and historical data, there is a "Yuefu opera" in "Zhou Li," which may be one of the origins of Chinese Opera.

Secondly, the cultural roots of Chinese Opera are also related to Chinese philosophy and cultural traditions. The Chinese culture has always paid attention to morality and humanity, which is also reflected in the performance and script of Opera. It often reflects the traditional virtues such as justice, love, loyalty, and loyalty in Chinese tradition. Also, it reflects the concept of "the unity of heaven and man" in traditional philosophical ideas(Yu-Zhuo & University, 2015).

In addition, China's regional diversity and national diversity also provide rich cultural soil for the formation and development of Opera. There are different folk art forms from all over China, and many of them have been integrated into the Opera. For example, Peking Opera, Kunqu, and Yu Opera. Each form of Opera has different cultural traditions and national styles.

In general, the cultural root of Chinese Opera can be traced back to the ancient Chinese sacrifice culture, philosophy, cultural traditions, and the diversity of regions and nations.

Combining these factors forms a unique style and profound cultural heritage of Chinese Opera(Li et al., 2013).

2.4.3.2 The Current Situation of Non -Heritage of Chinese Opera

At a time when fast-food culture is rife, the development of China's non-heritage opera faces many challenges, such as a shortage of talent and lagging performance forms. However, efforts are being made to help revitalize it, including by the government and all those who love opera culture.

The protection and transfer of intangible cultural heritage is highly valued by governmental bodies and social institutions. In recent years, several levels of competent authorities have sequentially promulgated a succession of legislation, rules, and policy papers. Simultaneously, several cultural institutions and social groups persistently engage in endeavors focused on the preservation and transmission of non-heritage practices within Chinese play, so fostering its development.

The shortage of inheritance talents: Over time and with the acceleration of modernization, the inheritance of traditional opera art faces severe challenges. The shortage of inheritance talents is an important issue facing the current protection of non-heritage.

The rich and diverse forms of songs and performances: The non-heritage of Chinese drama has rich songs and performance forms. Among them, Peking Opera, Henan Opera, and Kunqu opera are recognized as representative cultural symbols. In addition, the innovation of modern Opera is gradually promoting the update and transformation of opera performances.

Figure 31 The distribution map of local Chinese Opera

Source: https://www.bilibili.com/read/cv16126219/,2023

International communication and cultural exchanges: Chinese drama non-heritage has received widespread attention and recognition internationally. Government and cultural institutions have actively played an important role in promoting Chinese culture in international exchanges and dissemination. At the same time, international cultural exchanges have also brought new development opportunities to Chinese drama.

戏曲非遗的发展现状
The development of Chinese opera
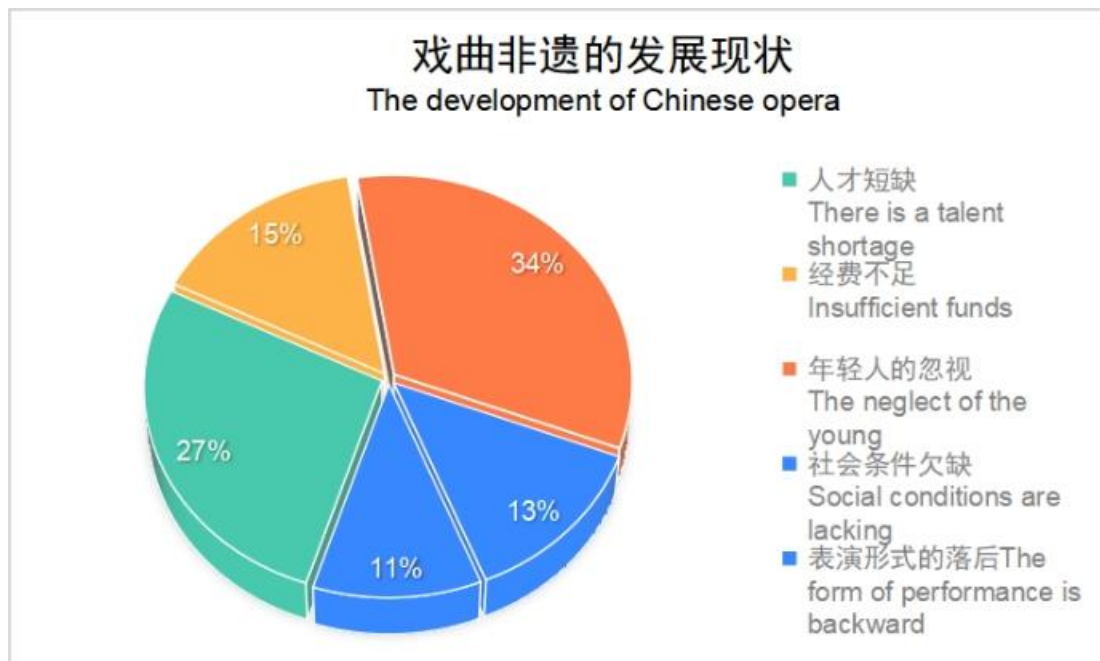
Figure 32 Investigation of the current situation of Opera non-heritage development

Source: Author,2022

In general, the non-heritage culture of Chinese drama has a long history and profound cultural connotation, and it is an indispensable and essential part of traditional Chinese culture(Yuehua, 2018). However, there are many problems, such as the shortage of talent teams, insufficient cultivation of funds, neglect of young audience groups, the decline in social influence, and performance forms that cannot keep up with the times. Especially the neglect of young groups and the decline in the interests of interests. As a result of the inheritance process. Although facing different challenges and difficulties, the support of the government and social institutions and the inheritance of people's efforts provide a better guarantee and foundation for developing social non-heritage. More people will participate in the future in the future in protection of the non-heritage of Opera.

2.4.4 Protection of Non-Heritage Culture

Opera is a long history, a unique performance form, and is an essential representative of Chinese non-heritage culture(Jia, 2016). Due to the development of modernization and cultural impact, the non-heritage culture of Opera faces severe threats and dangers, and it is necessary to carry out adequate protection and inheritance. The following are the current protection measures for Opera's non-heritage culture:

Protection of national laws and regulations. In 2011, the State Council of China issued the "Intangible Cultural Heritage Protection Law" and the implementation measures to protect non-heritage culture's inheritance, development, and protection. At the same time, relevant laws and regulations also require governments at all levels to strengthen the protection of non-heritage culture and have issued a series of protection action plans, including strengthening the investigation, classification, and assessment of non-heritage culture, formulating the protection and inheritance plan of non -heritage culture and inheritance plans. Wait.

Protection of cultural institutions: Chinese countries and governments at all levels have established specialized cultural institutions and non-heritage protection institutions to protect the inheritance and development of non-heritage cultures, such as the Ministry of Culture and the Chinese Quyi Association. These institutions have carried out activities such as investigations, classification, protection, and inheritance of non-heritage culture and also introduced modern technical means, such as digital inheritance and network publicity.

Protection of cultural programs and performances: China has actively promoted opera culture at home and abroad, such as Chinese Opera Week and Chinese Opera Art Festival, in recent years. At the same time, under the leadership of the Anti-Heritage Protection Law, local governments have also carried out exhibitions and performances of non-heritage culture across the country to attract more young people and broader audiences.

Protection of cultural heritage protection technology: For precious opera cultural relics and materials, and the protection and inheritance methods obtained from this, many experts and scholars are busy here carrying out cultural relics and technology protection work and using new technologies, such as digital robots, computers, computers, computers Software, nanotechnology, etc., will not be performed, protected, and final promotion and inheritance will be performed to improve the non -heritage culture, other cultural relics, and other conventional cultural relics.

Development and revitalization protection: Cultural and artistic authorities have given some tilt in policies and resources, especially to take specific measures to develop and revitalize local operas— the practice of non-heritage of Opera.

In short, the inheritance and protection of Opera's non-heritage culture require all aspects of the effort. It requires the participation of the government, all sectors of society, cultural institutions, and artists to continue to increase publicity and protection. Protection and inheritance work allows this important Chinese cultural heritage to be more widely inherited and promoted in the development of modern civilization(Hongwei, 2018).

2.4.4.1 Measures for non-genetic inheritance of opera

Peking Opera is a treasure in Chinese culture(Liu-Yuan et al., 2017). In order to better inherit and protect the Chinese intangible cultural heritage of Opera, the Chinese government and all walks of life have taken various measures. Here are some inheritance measures for the intangible cultural heritage of Opera:

Government policy: The government administration attaches great importance to traditional culture and enacted a law in 2011, which stipulates the meaning and content of intangible cultural heritage, its safeguarding, transmission and utilization, as well as the need for local governments to formulate relevant safeguarding plans.

Strengthening research and inheritance: Several universities and cultural institutions have opened opera majors to integrate research and inheritance. Inheritance is set up for appraisal, training, assessment, and teacher inheritance systems to ensure stable inheritance. At the same time, the "National Intangible Cultural Heritage Entry Project" was carried out, and it actively provided training in intangible cultural heritage inheritance and management knowledge for grassroots people to strengthen heritage.

Innovation tradition: As people's lives, consumption methods, and aesthetic concepts are constantly changing, making opera content innovation has become an essential job. In this regard, well-known contemporary masters have tried to innovate Opera's theme, content, and performance forms. For example, some repertoires have added elements of current social hotspots, such as online buzzwords and popular news, to attract young audiences and improve the timeliness and attractiveness of inheritance.

Guide market demand: Driven by market demand, the excellent Opera non-heritage culture is introduced into a mass market for commercial development, publicity, and promotion. Such as market-oriented activities include non-heritage cultural exhibitions and tourist attractions.

In summary, China's inheritance measures for the intangible cultural heritage of Opera are very diverse. These measures include government policy support and heavy investment in cultural institutions, conducting related research, strengthening inheritance and innovation, and guiding market demand. Improve the inheritance and protection of opera non-heritage on all fronts.

2.4.4.2 The Inheritance Conditions of China's Intangible Cultural Heritage of Opera

The intangible cultural heritage of Chinese Opera has been a traditional Chinese cultural heritage since ancient times, with a long history and rich cultural connotation. With the continuous changes in society and culture, Theatrical non-heritage faces many new challenges and opportunities (Wei-Hong, 2019). The following are the inheritance conditions of the current intangible cultural heritage of Chinese Opera:

Promoting traditional culture: China needs further to cultivate the younger generation's understanding of traditional culture, let them understand the historical origin and cultural connotation of opera culture, enhance the artistic foundation of inheritance, and promote and promote the non -heritage culture of Opera.

Diversified expression forms: With the development of the contemporary social and cultural market, various cultural activities need to be carried out so that non -the heritage culture of Opera can better integrate into public life—music dramas. Inherit and promote the aesthetic standards and consumer needs of modern people(Siqi & Yongqiang, 2017).

Strengthening the cultivation of opera talents: It takes unique Opera non-heritage culture to spread more in new ways, cultivate new generation actors, and thoroughly study the deep meaning of traditional culture to continuously use the importance of cultural heritage.

High-tech applications: Today, countries worldwide are paying attention to the innovative application of culture and technology and use scientific and technological methods to promote

non-heritage cultures, such as VR, 3D printing, digital music, and virtual images. They are showing non-heritage culture in front of the world.

Strengthen policy support: The government and all sectors of society should strengthen the inheritance and protection of traditional opera culture, provide as much support as possible in terms of policies, funds, and activities, and strengthen the formulation and regulation of laws and regulations so that the intangible cultural heritage can be more effectively inherited while appropriately preserving it.

In summary, currently there are still many difficulties and challenges in the development of Chinese opera non-legacy, which requires joint efforts from all walks of life. In order to better inherit and carry forward the non-heritage culture of Opera, we need to promote traditional culture, strengthen talent training, enhance the form of expression, and strengthen scientific and technological applications. At the same time, strengthen policy and social support to ensure opera culture's rapid and stable development(Zhao, 2020).

2.4.4.3 The Feasibility Path of the Communication Method

Effective communication methods can help traditional culture to be accepted and recognized by the public once again, the following are several feasible ways of drama non -genetic ways:

Exhibitions and performances through cultural institutions: Cultural institutions can hold exhibitions and performances, display and spread non-heritage culture, and introduce opera culture into public places so that more people have the opportunity to contact and understand the non-heritage culture.

Training and learning: A non-heritage cultural learning institution can conduct training in communities, schools, companies, and other places so that more people can participate in the inheritance of the non-heritage culture of Opera, learn and inherit related opera culture, understand the charm of opera art, Essence

Online promotion: Online promotion has also become a meaningful way. Promote the culture of Opera on the Internet, such as opening official websites, social media, and various audio and video platforms to increase the gold content of publicity and promotion.

Traditional and righteous performances: Traditional opera performances are the best way to retain and inherit non-heritage culture. Opera artists can usually provide public welfare performances. Opera talents can excavate and support new talents, such as new-generation opera actors and volunteers.

The use of activation: The rapid development of the times also affects people's aesthetic taste. The spread of non-heritage of Opera should also follow the footsteps of the times, especially the aesthetic habits of young people, how to make the Opera non-heritage innovation in the subject matter and themes and create. It is a cultural taste and can attract young people at the same time,

Taking literary creativity as the carrier: for example, by organically combining opera art with other literary forms, for example: combining music, dance, literature, and film. The opera performance formed a new literary style. The opera culture improves young people's acceptance of opera art.

Digital carrier presentation: With the continuous development of new technologies, traditional cultural styles should also be changed promptly. The combination of online self-media and artificial intelligence, and many high-techs can increase communication and audience. At the same time, it has also improved—the science and technology of traditional culture.

In short, to spread the non-heritage drama culture, it is necessary to adopt various publicity strategies and communication methods to customize according to the characteristics of non-heritage culture and inheritance goals and audience groups. At the same time, it is necessary to actively explore and innovate inheritance, discover and organize non-heritage culture, enhance its cultural gold content and market value, and thereby promote the widespread spread of opera art non-heritage culture(Jing et al., 2018).

2.5 Chinese Peking Opera and its history and Development

2.5.1 Relevant Overview of the Concept of Peking Opera

Peking Opera, a conventional manifestation of Chinese theater, integrates elements such as music, mime, dance, acrobatics, and martial arts. Its origins may be traced back to the latter part of the 18th century, and it reached its pinnacle of development and recognition around the mid-19th century. It

is considered the main form of Chinese drama, representing a comprehensive programming action, singing, dialogue, mime, and acrobatic battle.

Peking opera is mainly composed of the following elements:

Music: Peking opera is mainly Chinese traditional music. A small ensemble of percussion and string instruments is typically included in this. The music emphasizes dramatic movements and can change with the scene's emotions.

Vocal performance: There are four main types of vocal performances of Peking Opera: singing, speaking, Jinghu (a recitation), and speaking. These components can be utilized following the requirements of the plot.

Matto and dance: Peking opera uses symbolic gestures and movements. A small action can represent a significant movement, like a character traveling a long distance. Dance elements are also integrated into performances, often used for fighting scenes and dramatic moments.

Acrobatics: Peking Opera's acrobatic combat is a key element. Performers often show their strength, balance, and agile feat, especially in military characters.

Clothing and makeup: Peking opera clothing is carefully made, conveying information about the characters. The color, patterns, and character clothing styles can show their social status, roles, and even personality characteristics. Similarly, makeup is used to depict the character and destiny of the characters. Facebook, or "Facebook," uses different colors and patterns to distinguish heroes and villains, clowns, and nobles.

Characters: Peking opera characters are mainly divided into four types: "Sheng" (male character), "Dan" (female character), "Jing"(personality character), and "Chou" (funny character). Each character type has its practice in terms of clothing, vocal performance, and character characteristics.

These elements jointly create a highly stylish and symbolic drama form, telling the story of Chinese history, folklore, and classic literature. Although Peking Opera has a long history, it is still part of the vitality of Chinese culture, and it is constantly adapted and reinterpreted for contemporary audiences(Zhang & Wang, 2011).

2.5.2 The Characteristics and Significance of Chinese Peking Opera

Peking opera is an integral part of Chinese traditional culture and is known as one of China's four major opera dramas. Its characteristics are mainly manifested in the following aspects:

Unique performance forms: Peking opera combines a variety of art forms such as dance, music, instrumental music, aria, and acrobatics, and its performance forms are unique.

Figure 33 Form of Performance of Peking Opera

Source: https://www.duitang.com/blog/?id=936123566, 2022

Unique aria: Peking opera's vocal tone is elegant and melodious, has a sense of rhythm, and the singing method is unique.

Exquisite shape: The shape of the Peking Opera is also extraordinary such as vests, big sleeves, water sleeves, etc., which have become characteristic signs of various types of Peking opera performances.

Figure 34 The exquisite shape of Peking Opera

Source: https://cj.sina.com.cn/articles/view/7142965639/p1a9c10187001012vkz,2023

Pay attention to the character portrayal: Peking opera attaches great importance to character portrayal. It is a major feature of Peking Opera through music, performance, and language. It is a significant feature of Peking Opera.

Attention to context conversion: Peking opera plots are ups and downs, climaxes are overwhelming, and converting contexts will make the plot more tense and expressive.

In summary, Peking Opera's performance form is unique. It is unique and unique in singing, exquisite shapes, focusing on the character portrayal of the characters, and focusing on context conversion. These unique features make Peking Opera one of the most representative of traditional Chinese culture and allow friends worldwide to experience the essence and unique charm of Chinese culture(Rui, 2003).

2.5.3 The Current Status of the Development of the Chinese Peking Opera

Chinese Peking Opera is aware of its problems. Therefore, changes have been made in recent years, including efforts by the government, Peking Opera performers, and industry associations, and better results have been achieved, mainly in the following areas:

1. The Peking Opera market is increasingly expanded: With the rise of the cultural industry, Peking Opera has gradually occupied a place in the stage drama market, and more and more audiences have begun to like this ancient art form.

2. Reform and innovation: To meet the needs of modern audiences, Peking Opera has carried out reform and innovation, injecting modern elements and launching many new repertoires, which has had a significant effect.

Peking opera, as one of the representatives of traditional Chinese art, still has high value and influence(Guo, 2002). In order to make it better meet the needs of modern society and audiences, Peking Opera is conducting various innovative attempts, including the following points:

Reriven innovation: Peking opera attracts the audience with its unique plot, character image, and performance method, but with the changes of the times, traditional repertoires are becoming increasingly challenging to attract the interest of modern audiences. Therefore, the Peking Opera world has made many innovative attempts to choose and arrange the repertoire and introduced more modern subject matter and content, such as "Beijing Love Story" and "Youth of Struggle." At the same time, Peking opera actors also pay more attention to performance details and emotional transmission, making the repertoire get closer to life.

Stage art and technical innovation: The core of the dancing beauty of Peking Opera lies in "one focus and two prominent"; that is, the characters, props, and backgrounds are highlighted in a limited stage space, and the audience's attention is focused on the center of the stage. In modern dramas, stage art is becoming more and more modern. It uses advanced technical means to realize multimedia interaction, strengthen the visual impact, and bring an incredible visual experience to the audience, such as combining a live-action stage and a virtual game environment. In addition, the skills of Peking opera actors are constantly innovating, absorbing the expression of different art forms of the East and the West, and making the performance more diverse.

Communication and integration: Today's prosperity and development of culture and art are inseparable from unique historical and social conditions. The exchanges between art and culture of various categories are becoming increasingly frequent, prompting the mutual conversion of information between them—for example, culture and environmental protection, art and life, and non-heritage and

home furnishings. Allow more audiences to understand the communication and integration of various arts and cultures through different forms and promote their healthy development.

Figure 35 The product transformation of opera intangible heritage

Source: https://www.sohu.com/a/359304036_698810,2023

With the deepening of cultural globalization, Peking Opera has also begun to communicate and integrate with other cultural and artistic forms worldwide(Wen-Dian, 2015). For example, cooperate with local artists in overseas performances to perform and host the International Peking Opera Festival. At the same time, Peking Opera has been affected by other art forms, such as modern dance, musicals, and movies. These exchanges and integration have brought new inspiration and inspiration to Peking Opera and promoted its update development.

3. International exchanges are becoming more active: Peking opera's influence in international exchanges has increased yearly, and more and more foreigners have begun to understand and learn this cultural form. At the same time, China has also actively promoted international exchanges of Peking Opera.

In general, the development status of Chinese Peking Opera is constantly changing and updating, but it has always maintained its unique charm.

In summary, Peking Opera is constantly innovating and carrying forward to continuously rejuvenate new vitality and vitality and lead the development of traditional Chinese culture and art.
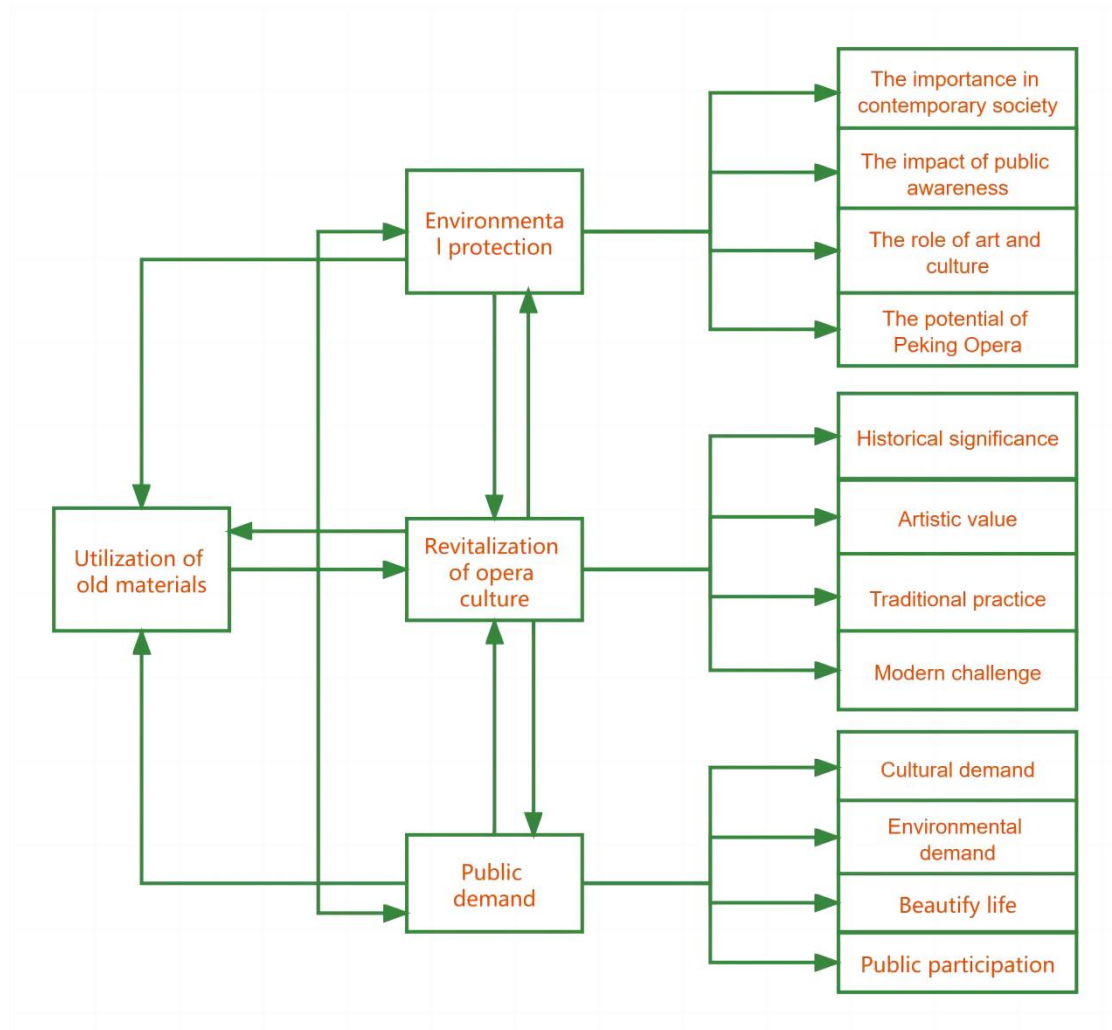
Figure 36 Map of the relationship between the use of old objects, environmental protection, the revitalization of opera culture, and the public demand diagram

Source: Author,2023

Using old-material art under the background of Peking Opera performance can help promote sustainable development and reuse. This method is an aesthetic effort; it will provide a powerful medium for cultural education and environmental consciousness.

In summary, this literature review summarizes the historical significance of Peking Opera, the continuous challenges of waste use, upgrading and recycling behavior, and the integration of these

elements. Finally, when emphasizing the potential of Peking Opera's awareness of environmental protection and cultural heritage, researchers emphasized the importance of using traditional art as a modern information medium. Therefore, the old art with Peking Opera as the medium integrates cultural protection, environmental education, and sustainable development. These attributes allow young people to be familiar with Opera through the workshop of the workshop and display. The spirit of culture, inheritance, and promoting traditional culture allows the old things to rejuvenate life and artistic charm.

Chapter 3 Research method

The research methods used in this study of Chinese Peking Opera culture on the art of waste materials and their impact on public environmental protection and cultural heritage include structural model equations, AHP decision-making analysis (also known as hierarchical analysis method), literature research method, etc. These methods include weight analysis, theoretical research framework, and experimental process. These methods provide a systematic data collection, analysis, and interpretation method. This chapter emphasizes the importance of these methods in solving research problems and achieving research goals. The discovery of these methods will help us understand the theme more deeply and provide information for the subsequent chapters. There are nine parts in this chapter: 3.1 Determine research issues; 3.2 Determine the research theory; 3.3 Pilot research through the establishment of theoretical foundation; 3.4 Analysis of the weight of non-heritage culture; 3.5 Preliminary experiment; 3.6 Creative results; 3.7 determine the theoretical theory of research assumptions Frame -up model; 3.8 Community participation and assume the test results; 3.9 This chapter is summarized.

3.1 Determine Research Issues

The use of waste materials in artwork king the Opera culture raises research issues that must be solved. Determined the following research issues to guide the investigation and exploration of this topic:

RQ1: How to use the art of old things to revitalize Peking Opera culture?

The first research problem is exploring innovative ways of revitalizing Peking Opera culture using waste material art creation. It aims to explore how to use waste materials to transform them into artistic creations and inject new vitality into traditional art forms such as Peking Opera. This problem explores the strategy, skills, and creative process that combines the art of waste materials with Peking Opera culture and ultimately contributes to the revitalization and preservation of Peking Opera.

RQ2: How can using waste materials and artworks affect the public's environmental awareness and cultural heritage?

The second research problem is the impact of the use of waste material artworks on inspiring the public's awareness of environmental protection and cultural heritage. It looks at ways to communicate the value of environmental sustainability, resource protection, and cultural legacy. It also looks at the creative use of waste materials in Peking opera culture. The potential of abandoned material art to draw

in public, educate them, and encourage a better awareness of cultural and environmental issues is examined in this issue.

RQ3: What prospects and potential problems exist for the art of waste materials to revive Peking opera culture?

The third study examines the potential difficulties and advantages of waste material art in the resurrection of the Peking Opera tradition. It surveyed practical considerations, restrictions, and obstacles when the artistic technology of abolition material art is implemented in the background of Peking Opera. At the same time, it also explored the opportunities brought by this integration, such as promoting sustainable practice, generating new artistic expression, and promoting community and public participation.

Through the formation of these research issues, this study aims to explore the use of waste material art to revive Peking opera culture. By solving these research problems, this study will contribute to the existing knowledge in this field and an in-depth understanding of the potential of the art of waste materials in stimulating the public's environmental awareness and cultural heritage. In addition, it will determine challenges and opportunities related to this integration and pave the way for effective strategies and measures to support the revitalization of Peking opera culture and the sustainability of environmental protection.

3.2 Determine Research Theory

3.2.1 Literature Review

(1) Activate traditional art forms:

Fuxing traditional art forms has always been essential for cultural research and heritage protection. Studies emphasize the importance of protecting and promoting cultural heritage, especially in the face of modernization and globalization. Explore the fusion of contemporary and traditional art expression forms to attract different audiences and bridge the gap between tradition and innovation. This cooperation may inject new vitality into traditional art forms and ensure continuity(Rui, 2003).

(2) The art of waste materials and its significance:

The art of waste materials is also called upgrade or recycling art, involving transforming waste materials into art creation. It represents a creative form of expression that reuses waste materials

and emphasizes the importance of sustainable practice and environmental awareness. The literature on the art of waste materials emphasizes its potential to improve the public's awareness of environmental issues and promote sustainable lifestyles. In the context of the revival of cultural heritage, waste material artworks have attracted attention due to their ability to inject new elements, narrative, and interpretation for traditional art forms.

(3) Peking opera culture and the challenges they face

Peking Opera faces challenges in contemporary society as a traditional Chinese drama art form. Its popularity declines, especially among the younger generation, threatening its survival and cultural heritage. Scholars investigated the factors that led to the decline of Peking Opera and explored the strategy for revitalizing Peking Opera. Need to attract new audiences, adapt to changing cultural landscapes, and find innovative methods to spread their cultural significance.

(4) Fusion of Peking Opera Culture and scrap art

Integrating Peking Opera culture and waste materials provides a promising way to revitalize and improve public awareness. Study and inspect the transformation potential of combining traditional art forms with contemporary artistic expression, including recycling materials, non-traditional stage technology, and multimedia display. These innovative methods are to make Peking Opera closer to modern audiences, expand actual participation, and be more attractive while promoting environmental sustainability and cultural heritage protection.

(5) Impact on public environmental awareness and cultural heritage:

Academic research explores the impact of cultural intervention and artistic performance on the public's awareness of environmental protection and cultural heritage. Studies have shown that creative efforts can effectively convey information, evoke emotions, and stimulate changes. Emphasizing the connection between environmental and cultural issues is made possible by integrating Peking opera culture and waste products. The study and inspection of the audience's response, views, and understanding of the transformed art revealed the potential of stimulating public awareness, cultivating environmental awareness, and promoting the appreciation of cultural heritage appreciation.

The context and significance of Peking opera culture's intervention in waste materials are established in this essay using the literature study to raise public awareness of environmental protection

and cultural heritage. It emphasizes the possibility of fusing modern and traditional artistic expression, the value of the art of waste in encouraging sustainable practices, and the difficulties facing Peking Opera in modern society. The current research results provide information for the research goals and provide a solid foundation for further exploration of this field.

3.2.2 The Gap Between the Identification of Existing Knowledge

(1) There is not much research on the integration of Peking opera culture and waste materials: Although more and more research on cultural revitalization and the use of waste materials, there is still a lack of specific research on the integration of Peking opera culture and waste materials art. It is necessary to study further to explore the potential synergy, challenges, and results of combining these two different art forms.

(2) Insufficient research on the impact of waste materials artworks on the impact of public environmental protection awareness: Although there is research discussing the impact of art intervention on public environmental issues, the empirical inspection of the impact of the influence of waste materials art on public environmental protection and cultural heritage Studies are still lacking. More empirical research is needed to evaluate the effectiveness of the art of waste materials in promoting environmental awareness and appreciation of cultural heritage.

(3) Limited understanding of the perspective and response of the audience: The literature review needs to discuss the perspective and response of the audience on the transformed artwork. Exploring the interpretation of the relationship between art, culture, environmental consciousness, emotional connection, and reflection is essential for understanding the effectiveness and potential of the art of waste materials in stimulating the effectiveness and potential of public participation.

(4) The durability of waste material art: Although the potential of scrap art in practical applications in life has been recognized, the literature review has not deeply studied the preservation and protection of waste material art, so that waste material art will not become waste again. Further research is needed on the protection and permanence of waste material artworks.

Solving these shortcomings of existing knowledge will help more comprehensively understand the integration of Peking Opera culture and the art of waste materials, their influence on public consciousness, and practical strategies and policies required to promote environmental protection

and cultural heritage. Future research should focus on the protection and persistence of empirical research, audience perspective, and the protection of waste materials artworks.

3.2.3 Establish the Theoretical Foundation

Protection of cultural heritage resources: This study recognizes the importance of cultural heritage protection and the necessity of revitalizing traditional culture. Researchers have observed the Peking opera culture's challenges in contemporary society and the importance of protecting and promoting cultural heritage for future generations.

scrap art and upgrade: The integration of scrap art in the revival of Peking opera culture provides a creative and innovative way. The concept of upgrading and recycling transforms waste materials into artistic creation, highlighting the use of waste materials to create various artistic expression forms.

Public consciousness and environmental protection: Study emphasizing the role of art and display in improving the public's environmental awareness. It recognizes the potential of waste material art in attracting the public, evoking emotions, and promoting sustainable practices (including environmental protection and resource conservation).

Combined with the above theoretical foundations, the study will help the public to understand the intervention of Peking Opera culture in the study of waste materials. It recognizes the importance of cultural heritage protection, the potential for changing waste materials, and the importance of public consciousness on environmental protection and cultural heritage. The theoretical basis provides a framework for data collection, analysis, and interpretation, guiding the research process, and helps to discuss cultural revitalization and sustainability more widely.

3.3 Pioneer research through the establishment of a theoretical foundation

3.3.1 The Establishment of the Theoretical Model of Pilot Research

Based on the establishment of the above theoretical foundation, combined with the research theme, independent variables (Peking Opera Culture and Waste Materials Arts (IPOSA), public participation (PP)), due to variables (PAEF), cultural heritage (CI)), The theoretical framework model between the intermediary variables (artistic expression and transformation (AET)) is as follows: as shown in Figure (37).
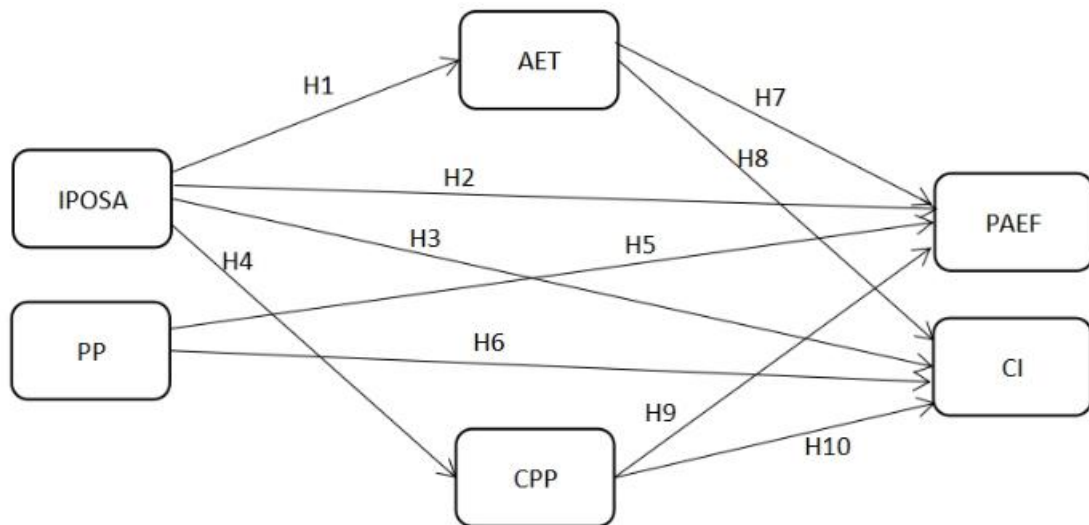
Figure 37 Pioneer Research Theoretical model

Source: Author,2023

In order to explore the art of Peking opera culture: Stimulating the public's environmental awareness and cultural heritage, this study uses people aged 18-60 as the investigation object and consulted two experts (professors of Nanchang University) to evaluate the questionnaire. The survey adopted the independent variable due to the evaluation of the independent variables and due to variables in the Licker 5 component table, and conducted a structural questionnaire survey of the representative samples of the target group, and accurately located through the online questionnaire platform. The investigators completed the questionnaire, which was designed according to the determined influencing factors. Researchers will use statistical technologies such as SPSS software and structural equation (AMOS) related and regression analysis to collect data and preliminary exploration of data analysis.

3.3.2 Sample Features

The researchers chose three communities to participate in the survey using the sampling method. In order to improve the accuracy, the data selection is based on the residential district of Nanchang High-tech Zone. The survey target is the 18-40-year-old residents of Nanchang High-tech Zone. There are 18 questionnaires and no invalid issues by expert review. Finally, there are 18 questions. Three hundred eighty-seven questionnaires were issued, 334 recycling questionnaires, and the recovery rate was 86.3%. Among the 334 questionnaires, 287 women accounted for 52.37%. In addition, male samples account for 47.63%. Regarding age distribution, the 18-25-year-old samples have the most, with

295 copies, accounting for 53.83%. People aged between 20 and 40 account for 30.84%. From the education perspective, more than 40%of the samples are "undergraduate," and 40.33%of people choose "office workers." Students account for 35.95%. Finally, enter the SPSS of 334 questionnaires.

3.3.3 Data Collection and Measurement

Researchers use the Lockert measuring Table as the primary data collection technology to test the influencing factors of public exhibitions on public exhibitions on public environmental awareness. This method systematically evaluates the attitudes and views of participants in research variables.

As mentioned earlier, in March 2021, 387 questionnaires were issued to the public, of which 334 were recovered. Through independent variables, due to the study of the relationship and intermediary variables, the participants will be asked to use numbers to evaluate their consent or disagreement with each statement, usually from 1 (very disagreement) to 5 (very meaning) (Likert) (Likert) (Likert) (LIKERT, LIKERT, 1932). This method provides a structured and quantifiable method to evaluate the opinions and attitudes of the participants on the research structure. Researchers used the Lockert meter data to analyze four stages. In the first stage, the data is described as a descriptive analysis, evaluating the reliability and effectiveness of the instrument used in the pre-survey and the evaluation table or measurement of the reliability of measurement. Carry out factor analysis, evaluate the effectiveness of the structure, and find out if there are any problems. In the second stage, explore the relationship between the variables in the data before the investigation. Conduct related analysis or cross-watch to determine the connection between different interest variables. According to the insights obtained from the pre-investigation data, the potential improvement or adjustment of the leading research projects can be considered. In the third stage, explain the results of the data analysis before the investigation in the context of research goals and issues. The insights obtained from the pre-investigation data are the design, methods, and critical information of the leading research projects.

3.4 Analysis of the weight of non-heritage culture

According to the results of the pilot mentioned above research, the researchers need to analyze the weight of the factors of non-heritage culture. The method of weight analysis uses AHP (decision analysis method). First, analyze the weight analysis of non-heritage cultural factors (folk stories,

performing arts, etiquette celebration culture, traditional crafts, and musical instruments), then analyze other factors of the selected non-heritage culture.

AHP (decision analysis method) is a research method that promotes decision-making and priority sorting by quantitative evaluation of different standards or factors. This method includes several key steps:

(1) Problem identification: Clarify the type of non-heritage culture to use the AHP method for analysis and decision.

(2) Content determination: Establish a factor in non-heritage culture: folk story, performance art, etiquette celebration culture, traditional craftsmanship, musical instrument. Determine the highest weight through AHP from the above factors, and then determine the highest weight from the sub-factors.

(3) Two or two comparisons: Make two or two comparisons between factors and child factors to determine their relative importance. Using a scale, usually from 1 to 9, to express the preferences or importance of another factor. As shown in Table (4) and Table (5).

(4) Judgment data collection: Collecting expert opinions or judgments on the two comparisons. Interviews, investigations, or expert groups can complete this. Ensure that experts have relevant and professional knowledge in the field of research.

(5) Weight calculation: Use mathematical methods such as feature values or feature vectors to calculate standards and sub-standard weights. Back to the preference matrix and export the primary feature vector, the main symbol vector represents the relative priority of each factor.

(6) Consistency check: Evaluate the consistency of the data by calculating the consistency ratio. This helps to ensure the reliability and effectiveness of the two or two. Check and modify the judgment if the consistency ratio exceeds the premium threshold.

Through this process, the weight and priority of Peking Opera culture can be determined in the context of analyzing the weight of non-heritage cultural factors. This provides a quantitative assessment of the importance and significance of Peking Opera culture relative to other factors, helping to distribute the decision-making process and resource allocation related to the protection and promotion of cultural heritage.

3.5 Preliminary Experiment

(1) Formation of artistic conceptualization: The conceptual framework for formulating Peking opera culture to art. Explore the integration of Peking opera elements and contemporary art expression. The framework establishes the guiding principles and themes for the artist during the creative process.

(2) Collect and prepare waste materials suitable for researchers to practice: identify and collect various waste materials, such as waste fabrics, paper, plastics, waste metals, etc., suitable for artistic creation materials. The cleaning, organization, and preparation of materials should ensure the availability of their safety and artistic purposes.

(3) Founded the waste materials provided by the Workshop for Peking Opera cultural inspiration art creation: provided the selected waste materials to students participating in Workshop and instructed them to use these waste materials for Peking Opera cultural inspiration art creation. Encourage students to try various technologies while combining the traditional elements of Peking Opera, such as collages, mixed materials, and innovative methods. Students should have the freedom to create, interpret, and -conceive Peking Opera with their own artistic style.

(4) Organize exhibitions or exhibitions to show the transformation of paintings and provide participants with a platform to show the public to the public. Share the art journey of participants, interact with the audience, and get feedback and appreciation for their creative efforts.

(5) Record: The final harvest through photography records. The high-quality images of the work, as well as descriptions and artists' statements, have been captured to preserve the gains of the Workshop and the artistic achievements of participants. These documents are used as a record of the impact of the seminar, which can be used for future reference and promotion.

(6) Reflection and evaluation: The final harvest includes the process of reflection and evaluation, and the results, challenges, and gains of participants and researchers evaluate the seminar. This reflection makes individual and collective learning possible, enabling participants to understand their artistic growth in depth, the impact of workshops 'understanding of participants' understanding of Peking opera culture and environmental protection, and how to further improve their creative work.

The final result of the Workshop represents the creative achievements of the participants, the impact of workshops on their artistic growth and understanding, and wider exposure to society. It reflects the

power of artistic expression, cultural exploration, and environmental awareness, helps the revitalization of Peking opera culture, and promotes the public's environmental awareness and cultural heritage.

3.6 Creative Results

After transforming Peking opera culture into the experimental stage of painting art using waste materials, the stage of creative practice followed. In this phase, artistic techniques are further explored and developed, and artistic works are shared and promoted. The steps of the creative practice process are as follows:

(1) Further practice before creation: Based on the experimental stage, artists constantly develop and improve their artistic strategies, transforming Peking Opera culture into painting art. Research may include more technical, material, and thematic exploration to enhance artistic expression and the impact of the work.

(2) Creation of artistic works: Researchers have produced several pieces of art that incorporate Peking opera culture and trash. This research should demonstrate how traditional Peking Opera features can be creatively reinterpreted and reimagined using waste materials.

(3) Exhibition and exhibition: Organize exhibitions and gallery art activities to show the artwork created to the public. Choose venues for different audiences, including art professionals, cultural enthusiasts, and ordinary people. The exhibition should highlight the unique integration of Peking Opera culture and waste materials and convey information about environmental protection and cultural heritage.

(4) Public participation: Encourage the public to participate and interact with artworks. Let visitors have the opportunity to understand the creative process and potential concept of the work. Hold guidance activities, artist lectures, or workshops to deepen the dialogue and understanding of the relationship between Peking opera culture, waste materials art, and broader environmental protection and cultural heritage themes.

(5) Record and publicity: Creative process, exhibition, and audience reaction through photography records. Make promotional materials, and spread information about art, art methods, and project goals.

(6) Reflection and evaluation: Reflecting on the stage of creative practice, considering the feedback and reactions of the public, researchers, and experts. Evaluate artistic methods in stimulating public

environmental protection and cultural heritage effectiveness. Determine prosperous areas and areas that need to be improved and incorporate experience lessons into future creative efforts.

The creative practice stage is based on the results of the experimental stage and further explores, refines, and spreads the artistic works of Peking Opera culture and waste materials. As a platform through creative artistic expression, it attracts the public, improves environmental awareness, and praises the rich cultural heritage of Peking Opera.

3.7 Determine the Theoretical Framework Model of the Research Assumption

Based on the establishment of the above leading research and theoretical foundation, combined with the research theme, independent variables (Peking opera culture and waste materials (iPosa), public participation (PP)), due to the variables (PAEF), cultural heritage (PAEF), cultural heritage (PAEF), cultural heritage (PAEF) (PAEF) CI), intermediary variables (artistic expression and transformation (AET), community participation (CPP)), and the theoretical framework models between variables are as follows: as shown in Figure (38).
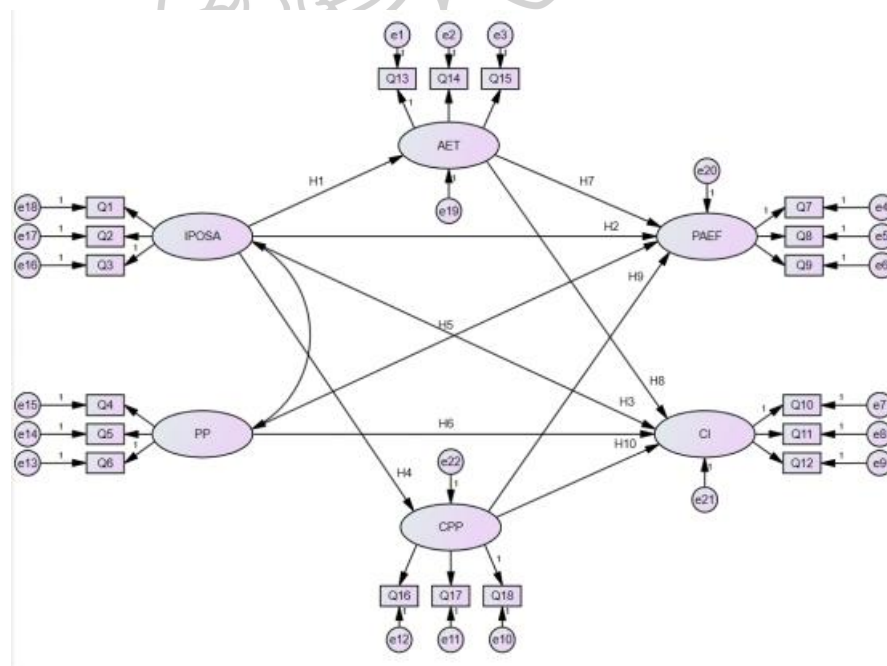
Figure 38 Theoretical framework model

Source: Author, 2023

H1: There is a correlation between the fusion of Peking Opera art and waste material art with artistic expression and transformation.

H2: There is a correlation between the integration of Peking Opera art and waste material art and public environmental awareness

H3: There is a correlation between the integration of Peking Opera art and waste material art and cultural inheritance.

H4: There is a correlation between the integration of Peking Opera art and waste material art and community participation.

H5: There is a correlation between public participation and cultural heritage.

H6: There is a correlation between the integration of public participation and waste material art and artistic expression and transformation.

H7: There is a correlation between artistic expression and transformation and public awareness of environmental protection.

H8: There is a correlation between artistic expression and transformation and cultural heritage.

H9: There is a correlation between community participation and public awareness of environmental protection.

H10: There is a correlation between community participation and cultural heritage.

3.8 Community Participation Inspection Assumption Results

Eventually, through community participation, a final questionnaire survey was conducted. Researchers explored the art of Peking opera culture to intervene in the art of old things: and stimulate the public's environmental awareness and cultural heritage. This study uses people aged 18-60 as the survey target and consulted two experts (culture Experts in the field and art creation) to evaluate the questionnaire. The survey adopted the independent variable and due to the evaluation of the independent variables and due to variables in the Licker 5 component table, and conducted a structural questionnaire survey of the representative samples of the target group, and accurately located through the online questionnaire platform. The investigators are filled in the questionnaire, and the questionnaire will be designed according to the determined influencing factors. Researchers will apply statistical technologies such as SPSS software and structural equation models (AMOS) to collect data and finally perform data analysis of verification factor data.

3.8.1 Sample features

The researchers chose the living community to participate in the survey using the sampling method, the data selection is based on the residential district of Nanchang High-tech Zone. The survey target is the 18-40-year-old residents of Nanchang High-tech Zone. There are 18 questions in the questionnaires, and the issues of expert review are valid. Five hundred fifty questionnaires were distributed, 506 recycled questionnaires, and the recovery rate was 92%. Among the 506 questionnaires, 274 were female, accounting for 54.15%. In addition, male samples are 232 points, accounting for 24.85%. Regarding age distribution, the 18-25-year-old samples have the most, with 295 copies, accounting for 58.3%. People aged between 20 and 40 account for 30.84%. From the education perspective, more than 40%of the samples are "undergraduate." 40.33% chose "office workers." Students account for 35.95%. Finally, enter the SPSS of 506 questionnaires.

3.8.2 Data Collection and Measurement

Researchers use the Lockert measuring Table as the primary data collection technology to test the influencing factors of public exhibitions on public exhibitions on public environmental awareness. This method systematically evaluates the attitudes and views of participants in research variables.

As mentioned earlier, in June 2022, 550 questionnaires were issued to the public, of which 506 were recovered. Through independent variables, due to the relationship between variables and intermediary variables, the participants will be asked to use numbers to evaluate their consent or disagree with each statement. Usually from 1 (very disagreement) to 5 (very agreed) (very much). This method provides a structured and quantifiable method to evaluate the opinions and attitudes of the participants on the research structure. Researchers used the Lockert meter data to analyze three stages. In the first stage, descriptive statistics provided a summary of collected data. This includes mean, median, standard deviation, and frequency distribution measures. Moreover, use hypothetical inspection, related analysis, regression analysis, and variance analysis (ANOVA). These statistical methods help test the relationship between variables, test the research assumptions, and determine the importance of the research results. The findings of the data analysis are explicated and examined in the subsequent phase, taking into account the theoretical frameworks and study aims. The discussion of study restrictions, such as limitations in sample size, data collection methods, or potential sources of deviation, is of utmost

importance. The final phase encompassed the conclusion, whereby the primary discoveries derived from the data analysis were summarized and any study assumptions or concerns were addressed. The text moreover elucidated the importance of the research outcomes, encompassing their ramifications for theoretical frameworks, practical applications, and policy development.

3.9 An overview of this chapter

This chapter centers on the research methodologies employed by the present study to investigate the involvement of Peking opera culture on the utilization of waste materials in art, as well as its influence on public environmental conservation and cultural heritage. This chapter elucidates the research methodology, emphasizing its significance and correlation in the study. The initial section of this chapter is an introduction to hierarchical analysis (AHP) as a method for doing weight analysis. The level analysis approach assesses the significance and precedence of cultural heritage aspects, with particular emphasis on the Peking opera tradition. The process encompasses the establishment of principles, the formulation of standards, and the formation of an expert panel tasked with calculating data to ascertain the significance of Peking opera culture. This chapter next examines the utilization of the planning theory (TPB) framework. Urban civilization indicators serve as a conceptual framework for shaping public consciousness and conduct regarding the environment. This article elucidates the methodology employed in designing a questionnaire that is rooted in the Theory of Planned Behavior (TPB), specifically focusing on the constructs of attitude, subjective norms, perceived behavior control, and intention. The purpose of the questionnaire survey is to gather data for the purpose of analysis. Furthermore, the present chapter provides a comprehensive exposition of the experimental methodology employed in this work. The aforementioned procedure involves collaborative efforts with artists, performers, and cultural specialists in order to develop an artistic framework that effectively converted Peking opera tradition into painting arts with discarded materials. This paper aims to provide an overview of the art conversion process, specifically focusing on the creation of paintings, monitoring, and exhibition management. This chapter highlights the significance of research methodologies in facilitating the acquisition, examination, and understanding of data. These methodologies have the capacity to thoroughly examine research problems and facilitate a profound comprehension of the subject matter under examination.

Chapter 4 Research Results

Through the analysis of the results of pilot research data, the analysis of the weight of experts on non-heritage culture scoring was led. The weighing results of the integrated art of abolished art based on the pioneering research data and the evaluation of the weight of the non-heritage culture was based on the pilot research data and the expert's evaluation of the weight of non-heritage culture. As a result, artistic expression and transformation and the final results of creation are displayed. The display of creative results and community participation introduced formal research questionnaire surveys and obtained the assumption results of the theoretical model framework through data analysis. There is a significant relationship between the relationship between reality variables.

4.1 Sort on Research Gap

Based on the theme of "Peking Opera Culture Intervention in scrap art: Stimulate the Public's environmental awareness and cultural heritage," based on identifying the existing knowledge gap and establishing a theoretical foundation, this study can identify the following gaps:

(1) Research on the integration of Peking opera culture and scrap art limited

(2) Insufficient understanding of the impact of public consciousness and cultural heritage

(3) The effectiveness of the role of community participation the effectiveness of the limited research method lacks experience evidence

Although the theoretical foundation of integrating Peking Opera culture and abandoned art is established, it still requires experience and evidence to support its effectiveness in stimulating public consciousness and cultural heritage. This study aims to provide empirical data through experimental methods and questionnaires to evaluate the impact of the transformation of artworks on environmental consciousness and cultural heritage.

Through this blank research, the following research results are obtained.

4.2 Analysis of the Results of Pilot Research

4.2.1 Letter and Validity (KMO) Analysis

A Cronbach reliability analysis was performed using data from the SPSS and AMOS software to assess the internal consistency of questionnaire items. The following are the findings of the analysis:

Based on the findings presented in Table 4, it can be observed that the coefficient values for each dimension surpass 0.8, so suggesting that the research data exhibits a high level of quality. In the case of the "deleted alpha coefficient," it can be shown that the removal of any question item does not result in a significant increase in the factor coefficient. This suggests that the questions under consideration should not be eliminated. Regarding the concept of "CITC value," it is noteworthy that the analysis items exhibit a CITC value over 0.4, so suggesting a robust association between the analysis items and a considerable degree of trust. In summary, the study data has a value coefficient over 0.8, indicating a high level of data quality suitable for subsequent research endeavors.

Perform valid points according to Table (5) data: Kaiser-MEYER-OLKIN (KMO) sample complete measurement and Bartlett spherical test for evaluating the effectiveness of the data. The obtained KMO = 0.915 indicates that the sampling is high. This indicates that the data is suitable for factor analysis, indicating that the variable contained in the analysis is related and has common potential factors. Bartlett's spherical test is obtained by the approximate derivative = 4090.587, and the degree of freedom is = 153. The associated P value = 0 indicates that the related matrix significantly differs from the unit matrix. This supports the effectiveness of factor analysis data. Overall, the high KMO value and significant Bartlett test indicate that data is suitable for further exploratory factors analysis, indicating that the variables contained in the analysis are suitable for evaluating the basic dimensions or factors of the studied structure.

Table 4 Cronbach Reliability analysis [Source: Author,2023]

Dimension name	name	Total correlation of correction items (CITC)	The alpha coefficient that has been deleted	Cronbach α coefficient
	Q1	0.679	0.690	
Fusion	Q2	0.616	0.757	0.800
	Q3	0.639	0.732	
public participation	Q4	0.665	0.757	
	Q5	0.669	0.753	0.819
	Q6	0.681	0.741	
Public environmental awareness	Q7	0.653	0.743	
	Q8	0.651	0.745	0.809
	Q9	0.668	0.727	

	Q10	0.657	0.737	
Cultural heritage	Q11	0.642	0.752	0.808
	Q12	0.671	0.723	
Artistic expression and transformation	Q13	0.638	0.714	
	Q14	0.621	0.732	0.793
	Q15	0.643	0.709	
Community Involvement	Q16	0.678	0.739	
	Q17	0.650	0.768	0.817
	Q18	0.680	0.737	

Table 5 Effect analysis (KMO): a test of KMO and Bartlett

Kmo value		0.915
	Approximation	4090.587
Bartlett spherical test	*df*	153
	P value	0

4.2.2 Exploratory Factor Analysis (EFA)

The current study looks into the factors that affect the method of factor extraction and the volume of data that is extracted. The results of the factor analysis are shown in Table 6, where it can be seen that a total of four components were extracted. It should be observed that none of the component's eigenvalues are equal to one. The rotational components account for 61.778% of the variation in the data. The outcomes of the exploratory factor analysis offer important new perspectives on potential dimensions or factors that might affect the hierarchical structure. The information provides insightful information about the issue's observed structure and characteristics, enabling a deeper comprehension of the interactions between various factors. The present study utilizes the Varimax method, also known as the maximum square rotation method, to perform a rotation of the research data. This rotation aims to ascertain the underlying relationship between the factors and the research items. The table above presents the factors influencing information extraction of the research item and the corresponding link between these factors and the research item. Based on the data shown in the preceding Table, it can be observed that all research items exhibit a degree value over 0.4. This finding suggests a robust correlation between the research items and the factor under consideration. There exists a strong correlation between factors, which enables the efficient extraction of information.

Table 6 Exploratory factor analysis [Source: Author,2023]

Factor number	Interpretation rate after rotation			Joint degree (public factor difference)
	Characteristic root	Different interpretation rate%%	accumulation%	
1	4.117	22.872	22.872	0.746
2	2.363	13.128	36.000	0.679
3	2.358	13.098	49.098	0.677
4	2.282	12.680	61.778	0.708
5	-	-	-	0.741
6	-	-	-	0.731
7	-	-	-	0.521
8	-	-	-	0.489
9	-	-	-	0.521
10	-	-	-	0.496
11	-	-	-	0.473
12	-	-	-	0.548
13	-	-	-	0.522
14	-	-	-	0.553
15	-	-	-	0.540
16	-	-	-	0.733
17	-	-	-	0.702
18	-	-	-	0.738

4.2.3 Descriptive Analysis

According to the provided data, descriptive analysis is performed to summarize the characteristics of the variable. The Table below gives the sample amount, minimum value, maximum value, average value, standard deviation, and median number of each variable. Description analysis outlines the data distribution of each variable. The sample quantity represents the number of participants contained in the analysis. The minimum and maximum values indicate the scope of the observed response. The average value represents the responses, indicating the data concentration trend. Standard deviation provides information about dispersing or variability about the average response around the average. Middle numbers represent the intermediate value of the response; let us understand the central value of higher and lower values. These descriptive statistics help understand the distribution and characteristics of variables and provide the basis for further analysis and interpretation of data. As shown in Table (7).

Table 7 Descriptive analysis: Basic indicators [Source: Author, 2023]

name	average value	Standard deviation	Middle number
public participation	3. 27	1. 03	3. 33
Community Involvement	3. 27	1. 02	3. 33
Cultural heritage	3. 28	1. 01	3. 33
Artistic expression and transformation	3. 30	0. 97	3. 33
Public environmental awareness	3. 31	1. 01	3. 33
Fusion	3. 33	1. 00	3. 33

Trust analysis, validity analysis, exploratory factor analysis, and descriptive analysis are all part of the pre-investigation process. Trust analysis, validity analysis, and exploratory factor analysis are all part of the pre-investigation process, and descriptive analysis. By checking the consistency of measurement and the reliability of research tools or data sources, researchers can lay a solid foundation for their subsequent analysis and interpretation. Essence Effect analysis: The validity analysis at the pre-investigation stage ensures that subsequent research is accurately measured and the expected structure and variables related to the participation of Peking Opera culture are obtained. The analysis of the exploration factor of the pre-investigation helps to understand the complex relationships and models existing in the data. It guides the focus and explanation of subsequent research. In the process of pre-investigation, through descriptive analysis, the researchers have a comprehensive understanding of the characteristics of the data. This analysis helps summarize and present vital descriptive statistics, such as mean, standard deviation, or median, related to Peking opera culture's participation in waste art. This analysis helps to establish a robust research framework, choose appropriate research methods, determine relevant factors and variables, and explain the research results related to the participation of Peking opera culture. Ultimately improve the quality and effectiveness of subsequent research results.

4.3 The Results of the Analysis of Non-Heritage Cultural Weights

In weight analysis and expert interviews, the weight of the intangible cultural heritage is determined by seven experts. This method ensures a comprehensive and multi-dimensional assessment of the

importance of cultural heritage. The higher the weight experts give, the higher the public's attention to the relevant cultural heritage.

4.3.1 Two or Two Comparison Matrix Numbers with a RI of 1-10

The provided list represents a 9 -point table for two or two comparisons in the hierarchical analysis method (AHP). According to the relative importance or influence of the two elements, each level on the scale corresponds to different meanings and is represented by CI and CJ. The following briefly explains the scale: as shown in Table (8).

Table 8 9 importance levels and their assignments [Source: Author, 2023]

Scaling	meaning
1	The impact of CI elements and CJ elements is the same
3	CI elements are slightly stronger than CJ elements
5	CI element is stronger than CJ elements
7	CI elements are significantly stronger than CJ elements
9	CI elements are stronger than CJ elements
2, 4, 6, 8	The influence of CI elements over CJ elements is between the two adjacent levels above
1, 1/2, …, 1/9	The ratio of CI elements to CJ elements is the countdown to the above CIJ

Values 2, 4, 6, and 8 represent the intermediate comparison between adjacent levels. For example, if the importance of CI is twice the CJ, it assigns it to 2. The countdown 1 1/2…, 1/9 represents the above comparison. They are used to maintain consistency in two or two comparisons. In the hierarchical analysis method, the decision makers use this scale to evaluate the relative importance or impact of different standards or alternative schemes and allow structured comparison and quantification of preferences.

The Table provides the judgment matrix's random index (RI) value from 1 to 10. The random index is a reference value used in the hierarchical analysis method (AHP) to evaluate the consistency of two or two. According to the provided data, the RI of the judgment matrix of the 1-10 order is shown in Table (9):

Table 9 RI with a matrix order of 1-10 [Source: Author, 2023]

Order	1	2	3	4	5	6	7	8	9	10
RI	0.00	0.00	0.52	0.89	1.12	1.26	1.36	1.41	1.46	1.49

Ri = 0 in the table n = 1,2 because the positive and anti-matrix of the 1,2 levels are always consistent, which means there is no need to judge the consistency of the matrix. These RI values can be used as the benchmark for two or two consistencies of the decision-makers.

4.3.2 Calculation Steps

1. Construct a judgment matrix.

2. The computing right of the matrix is large.

(1) Betterize the judgment matrix for each column.

$$M_{ij} = \frac{X_{ij}}{\sum_{i=1}^{n} X_{ij}} \quad (j = 1, 2......n)$$

Among them, to judge the elements in the matrix, i is to judge the number of rows of the matrix, J is the number of columns of the judgment matrix, and n is the order of the judgment matrix.

Add the matrix after the normalization processing.

$$C_i = \sum_{j=1}^{n} X_{ij} \quad (i = 1, 2......n)$$

Seek weight.

$$W_i = \frac{C_i}{\sum_{i=1}^{n} C_i}$$

3. Consistency test.

1) Calculate the maximum feature value of the judgment matrix.

$$\lambda_{max} = \sum_{i=1}^{n} \frac{(XW)_i}{nW_i}$$

Calculate consistency CI indicators.

$$CI = \frac{\lambda_{max} - n}{n - 1}$$

Calculate consistency CR indicators. If CR <0.1, it means passing the consistency test.

$$CR = \frac{CI}{RI}$$

4.3.3 Evaluate the Importance of Cultural Elements

The data represent two or two comparative matrices of five cultural heritage indicators: folk stories, performance art, rituals, traditional craftsmanship, and musical instruments. The value in the matrix reflects the importance or preferences of each indicator relative to other indicators. Through data, researchers can observe the following points:

1. The diagonal element of the matrix is one because each indicator is entirely comparable to itself.

2. The value of the corresponding element on the diagonal line below the diagonal line because it is more symmetrical.

By performing calculations on the matrix, it has been determined that the maximum feature value is 5.042. This value represents the highest value within the principal feature vector. Typically, the CR value is below 0.1, indicating that the matrix successfully satisfies the consistency test. The value of the Consistency Index (CI) for the judgment matrix of order 5 is 0.011, while the reference value from the Random Index (RI) check table is 1.120. Hence, it can be observed that the CR (consistency Ratio) value of 0.009 is less than 0.1, indicating that the matrix exhibits satisfactory levels of consistency. The examination and computation of the magnitude of the revenue are congruent.

As shown in Table (10).

Table 10 Evaluate the importance of cultural elements [Source: Author, 2023]

index	Folk story	Performance art	Etiquette celebration culture	Traditional crafts	Instrument
Folk story	1	0.75	1.00	1.18	0.82
Performance art	1.33	1	1.22	1.20	1.78
Etiquette celebration culture	1.00	0.82	1	1.20	0.92
Traditional crafts	0.85	0.83	0.83	1	1.13
Instrument	1.22	0.56	1.09	0.89	1
λmax=5.042，CI=0.011，CR=0.009					

Table (11) shows that in the indicators of cultural factors, the most important thing is performance art, weighing 25.43%.

Table 11 Cultural Factor Weight Sorting [Source: Author,2023]

index	Weights	Sort
Folk story	0.1860	3
Performance art	0.2543	1
Etiquette celebration culture	0.1936	2
Traditional crafts	0.1822	5
Instrument	0.1840	4

4.3.4 Evaluate the importance of different traditional performance art and culture

Through the importance of the above evaluation of cultural elements, the most important thing is the performing arts. Now there will be two or two comparative matrices in the cultural elements of performance art: Peking Opera Culture, Cantonese Opera Culture, Sichuan Opera Culture, Kunqu Culture, Shao Opera Culture, Huangmei Opera Culture, Shao Opera Culture, and Shadow Play. The value in the matrix reflects the importance or preferences of each indicator relative to other indicators. Through data, researchers can observe the following points:

The diagonal elements of the matrix are one because each cultural heritage indicator is entirely comparable to itself.

The value of the corresponding element on the main diagonal line indicates the countdown value on the diagonal because it is symmetrical.

The computation of the matrix results in a maximum feature value of 8.136, indicating the highest feature value of the major feature vector. Typically, the consistency test is deemed successful for a judgment matrix when the Consistency Ratio (CR) score is below 0.1. The computed CI value for the 8-order judgment matrix is 0.019 in this instance, while the reference RI value from the check table is 1.410. Consequently, the consistency test confirms that the CR score of 0.014 0.1 for the research judgment matrix meets the required criteria, signifying its essentiality. As seen in Table 12.

Table 12 Evaluate the importance of different traditional performance art and culture [Source: Author,2023]

index	Peking opera culture	Cantonese opera culture	Sichuan opera culture	Kunqu culture	Shao Opera Culture	Huangmei Opera Culture	Shao Opera Culture	shadow play
Peking opera culture	1	1.5	1.6	1.5	1.36	1.18	1.36	1.6
Cantonese opera culture	0.67	1	0.75	1.45	0.87	1.27	0.83	0.75
Sichuan opera culture	0.63	1.33	1	0.92	0.92	0.92	1.4	0.67
Kunqu culture	0.67	0.69	1.08	1	1.13	0.81	1.22	0.67
Shao Opera Culture	0.73	1.15	1.09	0.89	1	1.2	1.9	0.71
Huangmei Opera Culture	0.85	0.79	1.09	1.23	0.83	1	1	0.83
Shao Opera Culture	0.73	1.2	0.71	0.82	0.53	1	1	0.92
shadow play	0.63	1.33	1.5	1.5	1.4	1.2	1.09	1

λmax=8.136，CI=0.019，CR=0.014

From Table (13), it can be seen that in the indicators of different traditional performance art and culture, the most important thing is Peking Opera culture, weighing 16.86%.

Table 13 Performance art and cultural weight sorting [Source: Author,2023]

index	Weights	Sort
Peking opera culture	0.1686	1
Cantonese opera culture	0.1139	6
Sichuan opera culture	0.1154	5
Kunqu culture	0.1090	7
Shao Opera Culture	0.1287	3
Huangmei Opera Culture	0.1157	4
Shao Opera Culture	0.1048	8
shadow play	0.1438	2

According to the two or two comparisons, the data shows that Peking Opera Culture occupies the highest weight in the given cultural heritage indicators, surpassing Cantonese opera, Sichuan opera, Kunqu, Shao opera, Huangmei opera, Shao opera, and shadow opera. The highest weight of Peking Opera culture shows that, compared with other indicators, experts believe that Peking Opera

culture is valuable. The importance and influence of Peking Opera as an intangible cultural heritage. Therefore, researchers choose Peking Opera Culture as a further discussion theme, marking the potential impact and correlation of Peking Opera in the context of inspiring public environmental awareness and cultural heritage through scrap art.

By integrating Peking Opera's cultural elements into scrap art, the researchers have a rich history and unique symbolic significance of Peking Opera culture. Researchers can effectively stimulate public awareness and cultivate cultural heritage awareness by using the intervention of Peking opera culture and art and environmental consciousness to Establish a meaningful connection between them.

4.4 Campus Students' Old Objects and Peking Opera Cultural Transformation Workshops:

This workshop aims to allow students to explore and understand Peking opera culture through the art of old things and stimulate their environmental awareness of the inheritance and understanding of traditional Peking Opera culture. The workshop aims to cultivate creativity, hands-on ability, and appreciation of traditional art forms while emphasizing the importance of environmental sustainability. Details are as follows:

4.4.1 Art Practice Appreciation:

Students will gain knowledge related to opera and production experience and understand this aesthetics while linking broader art history and culture.

Cultural protection and inheritance: The workshop aims to instill students' awareness of protecting cultural heritage. Students can contribute to maintaining this traditional vitality and correlation with contemporary society by participating in traditional art forms like Peking Opera.

4.4.2 Environmental awareness:

Through using old artworks, students will learn how to reuse, recycle and utilize, and other materials that are regarded as waste. This is consistent with the broader environment and sustainable development goals and teaches students about the knowledge of waste management and resource protection.

Stimulate creativity and innovation: Students are encouraged to innovate and make traditional forms adapt to the contemporary environment while interacting with traditional art and Peking Opera. This may include new Peking Opera interpretation technologies or using new waste.

4.4.3 Community participation:

This workshop is a platform for community participation and collective learning. Together with teachers and community members, students will participate in a sharing experience to promote mutual understanding and community development.

The workshop aims to combine art appreciation, cultural protection, environmental protection awareness, creative thinking, and community building with the theme of Peking Opera as the theme to provide a comprehensive educational experience.

Workshop process:

Step 1: Introduce and understand the background of the workshop

Welcome and introduce.

Overview of Peking Opera Culture, historical significance, and Challenges in contemporary society. Highlight the connection between Peking opera culture, old-fashioned art, environmental awareness, and cultural heritage.

Figure 39 Workshop Introduction

Source: Author,2022

Step 2: Teaching process

Students may know about the art of old objects but do not understand what aspects of the specific old objects include. At the same time, for the direction of the art of old objects, they show the use of old artworks that combine Peking opera elements to emphasize the use of recycled or reused materials. Discuss the environmental benefits of the art of old things, such as reducing waste and promoting sustainable development.

Let students find recyclable materials, such as fabric waste, paper, and other discarded items.

Guide students to perform artistic creations and let them create their old things with the inspiration of Peking Opera culture.

Encourage students to use the provided materials to integrate traditional Peking opera (Xu, 2012)elements, such as characters, clothing, or symbolic patterns, into their artworks. Emphasize the importance of creativity, self-expression, and exploration of artistic creation(Dandan, 2020).

Step 3: Workshop art creation practice process and results

Figure 40 Creative practice process

Source: Author,2022

Figure 41 Workshop practice work

Source: Author,2022

Interactive display: Waste Materials Art and Peking Opera Culture

Figure 42 Interactive display 1

Source: Author,2022

Figure 43 Interactive display 2

Source: Author,2022

Figure 44 Interactive display 3

Source: Author,2022

Step 4: Reflection and discussion

Promote the group's discussion, and reflect on the experience of creating old things in inspiration to create old things. Encourage students to share their ideas, insights, and inspiration behind their works. Explore the significance of the art of old things in promoting environmental protection awareness and cultural heritage. Exploring how the art of old things contributes to the revival of Peking Opera culture and attracts new audiences. The workshop provides students with practical experience so they have a deeper understanding of the art of the old things and the Peking opera culture.

The following are the cognitive changes of several students before and after participating in the workshop.

Table 14 Changes in students before and after attending the workshop [Source: Author,2023]

serial number	Student Name	Perceptions prior to attending the workshop	Cognitive changes after attending the workshop
1	Ai Jiahao	He has a basic understanding of waste material art and Peking Opera, but he sees them as different, unrelated fields. He knows the appeal of waste material art and has a cursory understanding of Peking Opera as a traditional art form, but he lacks depth in both areas.	There was a shift in his perception, recognizing the potential synergy between the art of waste materials and Peking Opera. The student began to see how old materials could be repurposed as physical representations of Peking Opera characters, thus giving them more possibilities for mutual intervention. This in-depth understanding made him more aware of the environmental value of recycling and the cultural importance of Peking Opera.
2	Wu Xinyu	She has a rudimentary understanding of Peking Opera culture and characters, but sees waste material art as an isolated field that focuses only on aesthetics.	Her perspective shifted. The student began to see Peking Opera characters as more than just characters in a play, but as conduits for expressing broader themes of history, culture and society. Similarly, scrap material art was no longer just about aesthetics; it became a tool for storytelling and preserving culture. This shift in understanding

serial number	Student Name	Perceptions prior to attending the workshop	Cognitive changes after attending the workshop
			reveals to students the broader meaning and social value of both fields.
3	Long Xiaolan	She has a cursory interest in the art of old things, but sees Peking Opera as an outdated art form with limited relevance to modern life.	The workshop triggered a shift in her perception. The use of waste material art in the portrayal of Peking Opera characters made the art form more relatable and approachable, demonstrating its continued relevance. She also developed a new interest in sustainable practices of reusing old materials and is interested in experimenting in other areas of life and culture.

In short, the workshop has changed the students' understanding of the art of old things and Peking Opera so that they can see the inherent value and interconnection of these two fields. This transformation deepened their appreciation of these themes and promoted the understanding of environmental sustainability and cultural protection.

Figure 45 Reflection and Discussion 1

Source: Author,2022

Figure 46 Reflection and Discussion 2

Source: Author,2022

Participants participated in traditional customs and cultural elements through the workshop, stimulated their artistic expression, and cultivated cultural appreciation. The creative process shows the trainees integrate cultural heritage into the creative journey experienced in the works, thus producing works that reflect cultural values and narratives. Collective discussions and exchanges allow students to show and share their old-fashioned artworks. Encourage students to explore the intersection of art, culture, and environmental consciousness outside the workshop. Through this workshop, students can participate in hands-on, creative activities, deepen their understanding of Peking opera culture, and cultivate a sense of responsibility for the environment. Through creating waste material art, students can express their creativity and contribute to protecting and promoting Peking opera culture while exploring sustainable artistic practice. The workshop fulfilled objective research RO1: In order to deepen the public's awareness of the value of environmental protection and traditional culture, the workshop participants combine the Peking opera culture with the art form of waste materials.

Figure 47 Exhibition display

Source: Author,2022

4.5 The Results of the Art Research of Beijing Opera Culture Invision of Waste Materials

4.5.1 Choose the Overall Requirements:

Finding the old material related to Peking Opera culture and roles and the potential of transformation, which is in line with the principle of environmental sustainability, such as reducing waste or being able to promote reuse. In addition, it includes revitalizing Peking Opera culture and improving environmental protection awareness. As shown in the table (15):

4.5.2 Select the Type of Waste Material:

Table 15 Detailed list: Detailed list and description of the selected old materials. [Source: Author,2022]

Serial number	Types of old things	picture	Intervention with Peking Opera	illustrate
1	Abandoned metal		Metal waste can be combined with the character in the character of Peking Opera	There are many types, and some can be recycled and re -used. However, some scattered and smaller metals have the possibility of forgotten and discarding.
2	Paper		Because the texture is soft and plastic, it can be used in different Peking opera characters.	Waste paper is one of the more common old materials in life, and most of them can be recycled. However, many families will discard a lot of paper, including courier cartons in one year.
3	Abandon		The waste fabric texture is soft and plastic. It is mostly used in the decoration of clothing and accessories。	A very common category in the family. Old clothes and other waste fabrics are difficult to recover. Most of them are discarded, polluting the environment, and slower decomposition.

Serial number	Types of old things	picture	Intervention with Peking Opera	illustrate
4	plastic		Plastic can be used in local decoration,	A common type of waste in life, most of the plastic products can be used for recycling, but the discarded waste plastic is not a small number.
5	Glass		Because of special materials, glass is mostly used in decoration and accessories after certain processing,	A common waste material in life, it is difficult to recover and is dangerous。
6	Sawdust		The texture of the wood is soft and can be used in different character performance.	Wood debris is not very common in modern urban life. Generally, it is not recycled. The treatment is mostly incinerated and discarded.
7	Other life waste		This type of old objects is wide and can be applied as needed.	There are other scattered waste products in life, and they account for more, but they are not listed here due to space problems.

The choice of materials is primarily everyday old things in life. Most of these old objects are more common in people's lives, which provides convenience for people to better acquire and use these old materials.

4.5.3 Standards for selection of waste materials

First look for the appropriate materials based on the objects you want to create, choose the material as much as possible with the creative object in terms of character and gender, and showing Peking opera characters in a more intuitive form. Old objects are everywhere in our lives that the old things we choose should be based on the first category that the general public can get in good contact and acquisition. Researchers are prepared by collecting waste materials in life and preparing for the next production.

Figure 48 Relationship diagram of old material materials and creative results.

Source: Author,2022

In intervening in the art of Peking Opera, the choice of old things is critical. We are committed to a more precise table and adequately explained to guide our choices to ensure that our goals are achieved effectively and maintain the integrity of the project.

First, we look for everyday old items from daily life. This makes objects related to participants and echoes our extraordinary intentions in ordinariness. Using items that are usually discarded or ignored, we aim to increase people's awareness of the inherent potential of ordinary waste.

Secondly, ease of operation is an essential factor. The objects we choose can easily make, changed, or reuse without advanced skills or tools. This standard is essential to ensure that our participants can actively participate in the creative process and feel accomplished.

Security is another crucial aspect of the selection process. We ensure that the items we choose will not constitute a danger to our participants and ensure the safety and pleasant experience of participants.

Figure 49 Introduce some waste materials.

Source: Author,2022

The convenience of old material materials is another critical factor. Our goal is to be available at any time, which can be obtained with minimal efforts to reduce the impact on the environment and the complexity of the project-related logistics.

Finally, we chose old things that are easy to integrate with Peking Opera. This is very important for strengthening the connection between the materials we choose and the cultural background of Peking Opera, thereby further enhancing the participants' understanding and appreciation of this rich and subtle art form.

Our choice process comprehensively considers practicality, security, logic, and art to ensure that the old items we choose for the project seamlessly integrate the goal of integrating the old art into the Peking opera culture. The project's practical and aesthetic requirements have made significant contributions to our broader goals for our broader goals to revitalize Peking Opera culture and improving environmental awareness.

4.5.4 Character selection

Determine characters: This project chooses the four traditional roles of "Sheng" "Dan" "Jing" and "Chou" in Peking Opera. It is determined according to the primary representative role of Peking Opera. "It refers to female characters," net "refers to a person with an outstanding personality, and" Chou" "refers to funny drama characters. These four characters represent the most extensive representatives of Peking Opera culture. Different characters and characteristics in the performances and their characters can be found in these characters. Therefore, these characters reflect the extensive cognition and needs of the public, which can represent and depict the life and culture contained in Peking Opera.(Xu, 2012)

Understand the character attributes: We understand the significance of these characters in Peking Opera and the elements they bring to the story. For example, "Sheng" is the leading male role, often shaping the authoritative and upright image, while "Chou" brings humor and relaxation with its comedy attributes.

Character selection and positioning: We make the final choice of the characters. This must consider public preferences and how these characters interact in our project environment. We also consider how to effectively use the waste materials we choose to express these roles while stimulating the public's environmental awareness and cultural heritage.

Role development: After Selection, we started making these characters in our project environment. This means using old materials to represent and reiterate each character's character. We

have considered how to use the old materials we choose to show the best role and give full play to the advantages and potential of each material type.

Therefore, the character selection process carefully combines public interest with the inherent attributes of these traditional characters and our project mission. The traditional "Sheng," "dan," "Jing," and "Chou" characters prove the long-lasting charm and adaptability of Peking Opera. We strive to regain its attractiveness in a novel and environmentally friendly way.

4.6 Peking Opera Culture Involved in the Creative Results of the Art of Old Things

In the project research, integrating waste materials art and Peking opera characters created a meaningful synergy, enhancing character figures and resource reuse. This chapter introduces research results. The data comes from the experimental results. Analyze and summarize these data to form verification information of various prototype models. There are three parts in total.

Part 1: Perform the preliminary drafts according to the cultural content and design of Peking Opera and repeatedly adjust the character image of the work.

The second part: build a single character for the skeleton to form a prototype of a character model.

The third part: Combined with the work of the first two parts, find suitable waste materials, combine the character model with the art of waste materials, control the body and artistic control of the combination process, and finally, innovatively design.

4.6.1 Preliminary Draft and Creative Thinking

Through the composition of the decoration and personality of Peking opera characters, the researchers have made the main innovative design based on the appearance and character characteristics and character characteristics of" Sheng," "dan," "Jing," and "Chou" character characteristics.
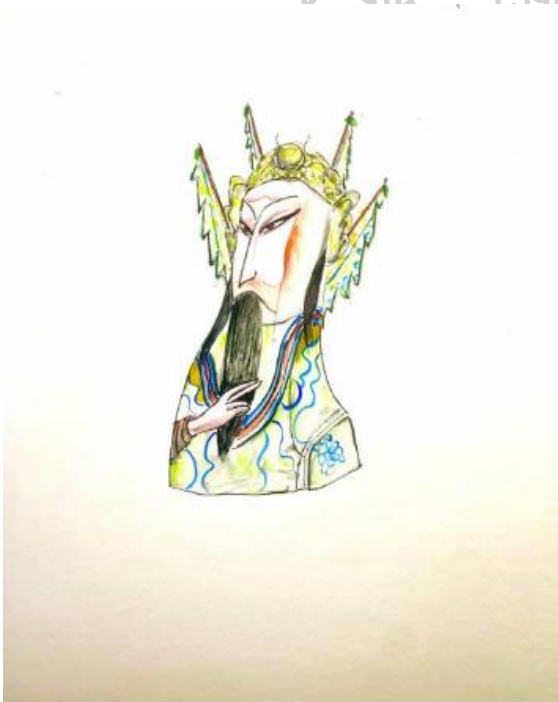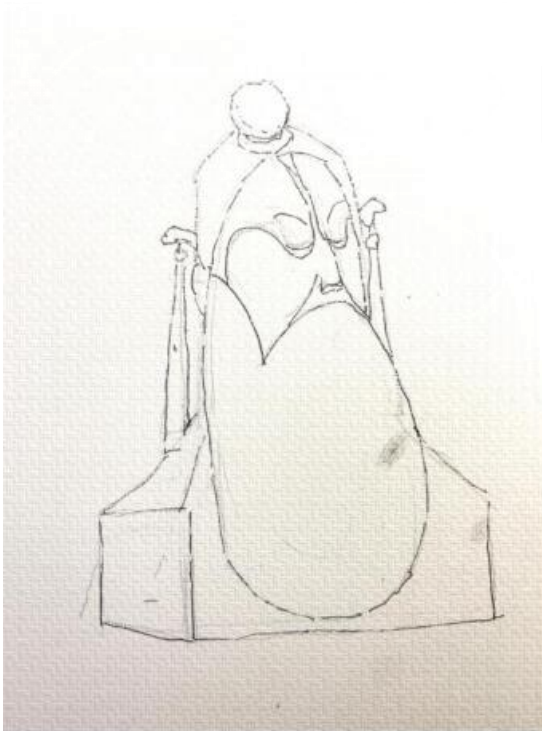
Figure 50 Drawing of the role of Peking Opera characters

Source: Author,2022

Through the abovementioned research, the researchers conducted integrated research on waste materials, character characteristics, Peking opera clothing, makeup, and other information. They guided the latest creation based on this. In this creative process, the researchers will combine the four main characters of the Peking Opera, "Sheng," "Dan," "Jing," and "Chou," to create in detail and reflect on the theme of environmental protection and cultural heritage. The significance of the character's symbol. The concept of connection between the four central characters of Peking Opera, waste materials, environmental protection, and cultural heritage.

4.6.2 Character 1 —— "Sheng"

Figure 51 The creative process of the role of Peking Opera "Sheng"

Source: Author,2021

Figure 52 Peking Opera "Sheng" character work display

Source: Author,2021

Wu sheng (decent man): The use of old metals as a decent male character conforms to these characters' typical character and combat character. As a solid and elastic material, metal symbolizes the masculinity and martial arts of martial arts characters. At the same time, it represents a lofty and glorious character and adheres to the principle of justice and integrity. Its durability and toughness reflect the toughness and brave nature of these characters, thereby providing tangible representatives for their defining characteristics. In order to express these qualities, the art of waste material with symbolic power, elasticity, and traditional values is included in the character's design.

In order to add a unique touch to the character, a beard will be used to use plastic bags. Plastic bags can be carefully cut and shaped, with a beard similar to traditional styles, representing the

age and wisdom of the character. This innovative use of waste materials increases visual interest and enhances themes of recycling and environmental consciousness. The "relying on the flag" flag on the back can have traditional themes or symbols that represent the role of loyalty or heroic nature, adding dynamic elements to the character's appearance during the performance.

4.6.3 Character 2 —— "Dan"

Figure 53 Show the role of Peking Opera "Dan"

Source: Author,2021

"Dan" (female character): Dan's character is suitable for soft materials, such as cloth, paper, and plush materials. Resonate with the traditional image of these characters to highlight the feminine temperament of the character and create a visually striking element.

The softness of the material adds tactile charm and exquisite elegance to the design. These materials are usually associated with women's temperament, which can make complex designs, echoing the aesthetics and complexity of female characters in Peking Opera. The flexibility and versatility of cloth and paper can also represent the adaptability and elasticity of these characters. Using waste fabrics and paper on clothing and incorporating soft hair materials into the headwear, the body proportion is exaggerated to highlight the slim figure. The character design can achieve unity between characters and

materials. This creative method not only shows the versatility of waste but also enhances the characteristics of the character and the importance of sustainable practice in the cultural background of Peking Opera.

4.6.4 Character 3 —— "Jing"

Figure 54 The creative process of the "net" character of Peking Opera

Source: Author,2022

Figure 55Show the role of Peking Opera "Jing"

Source: Author,2022

"Jing" (a person with an outstanding personality): The role of "Jing" mainly plays male characters with character, quality, or appearance different from general and outstanding characteristics. The selection and shape of the character's material can best highlight their personality. Choose can be different according to the specific character of the character described. For example, a vibrant, loud name or character may be associated with bright colors or conspicuous materials, and a solemn, severe name

or character may be associated with a more calm, lower-key material. The shape is also based on dignified,

rigorous, and realistic figures. This can highlight the character's emotions that can highlight the character.

4.6.5 Character 4 —— "Chou"

Figure 56 The creative process of the "Chou" role of the Peking Opera

Source: Author,2022

Figure 57 Show of the role of the Peking Opera "Chou".

Source: Author,2022

"Chou" (funny character): "Chou" horns are famous for humor and fun. In order to ensure the "Chou" character stand out and avoid similarities to other roles, it avoids the angular and corner modeling methods. The shape of the rules increases some whimsical and enhances the character's charm. The roundness of the body creates a unique outline and makes the character recognize it immediately.

The "Chou" character is filled with plastic foam and waste tape. Plastic boards can provide structure and stability, while waste tape has flexibility and an easy shape. By using these materials, you can bring exaggerated forms to the character,

In terms of facial features: the faces of the "Chou" character can be designed with exaggerated and comedy characteristics. This can include a big nose, large ears, or naughty smiles. The white shape color of the face highlights the joy and naughty nature of the character, thereby increasing the overall comedy effect.

In summary, the synergy between materials and characters always creates the entire work. It strengthens the character's image, embeds recycling, and reuses narratives in the character's shape. By matching different materials with a specific role, the project highlights the connection between the material attributes and character characteristics, thereby creating a rich, layered experience, surpassing direct performance. In this way, the audience is encouraged to perceive materials and characters in new and environmentally friendly methods, thereby deepening their understanding of Peking Opera and sustainable practices.

4.6.6 Extension Research

Based on the completion of "Sheng," "Dan," "Jing," and "Chou", the exploration of the ductility of painting work on the shelf will continue to carry out an extended research stage. At this stage, the potential of discarded materials is more deeply excavated, and painting is particularly emphasized as the primary medium. The purpose is to create a visually attractive form containing the cultural elements of Peking Opera.

Based on the early work, the extension research further explores the technology and possibilities of Peking opera figure paintings with the expressive and symbolic use of waste materials. The focus is still on the collage, where the abandoned materials are carefully selected, reused, and layered

on the canvas. This method allows combined of different materials, textures, and colors to inject depth and significance and connect with the rich heritage of Peking Opera.

In addition to collage, extension research also explores innovative methods that break through the boundaries of traditional painting technology. This may involve experiments on other materials, such as objects, fabrics, or hybrid media elements, to enhance the visual impact and ability to tell stories in artworks. Through the inspection of technology, methods, and creative processes, plasticity research shows the multifunctional and artistic possibilities of abandoned materials in the field of painting on the shelf. We aim to inject a sense of historical, traditional, and environmentally friendly consciousness into these paintings by transforming waste materials into expressive visual performance. It captures Peking Opera's essence and conveys information about sustainable development and environmental awareness.

Throughout the research stage, inspiration and sources of materials are still rooted in the intangible cultural heritage of Peking Opera. The cultural significance, narrative and visual aesthetics of Peking Opera continue to guide the choice and arrangement of waste materials to ensure the harmonious integration of art and heritage.

Promotion and research affirm the value and value of the previous stage. It aims to build the creative process used in obtaining insights and further improvement technologies, methods, and the ductility of painting works on the shelf. By expanding the scope of exploration and breaking through artistic expression, we aim to deepen our understanding of how to transform waste materials into a solid visual expression form that resonates with the audience and contributes to protecting and promoting the non-material cultural heritage of Peking Opera.

Through subsequent extension research, we will explore the technologies, challenges encountered, and the artistic results obtained by creating expressive and symbolic Peking opera figure paintings. Ultimately, this study aims to contribute to the sustainable development of art and cultural heritage more widely through the ability to change waste materials and convey profound information through painting media.
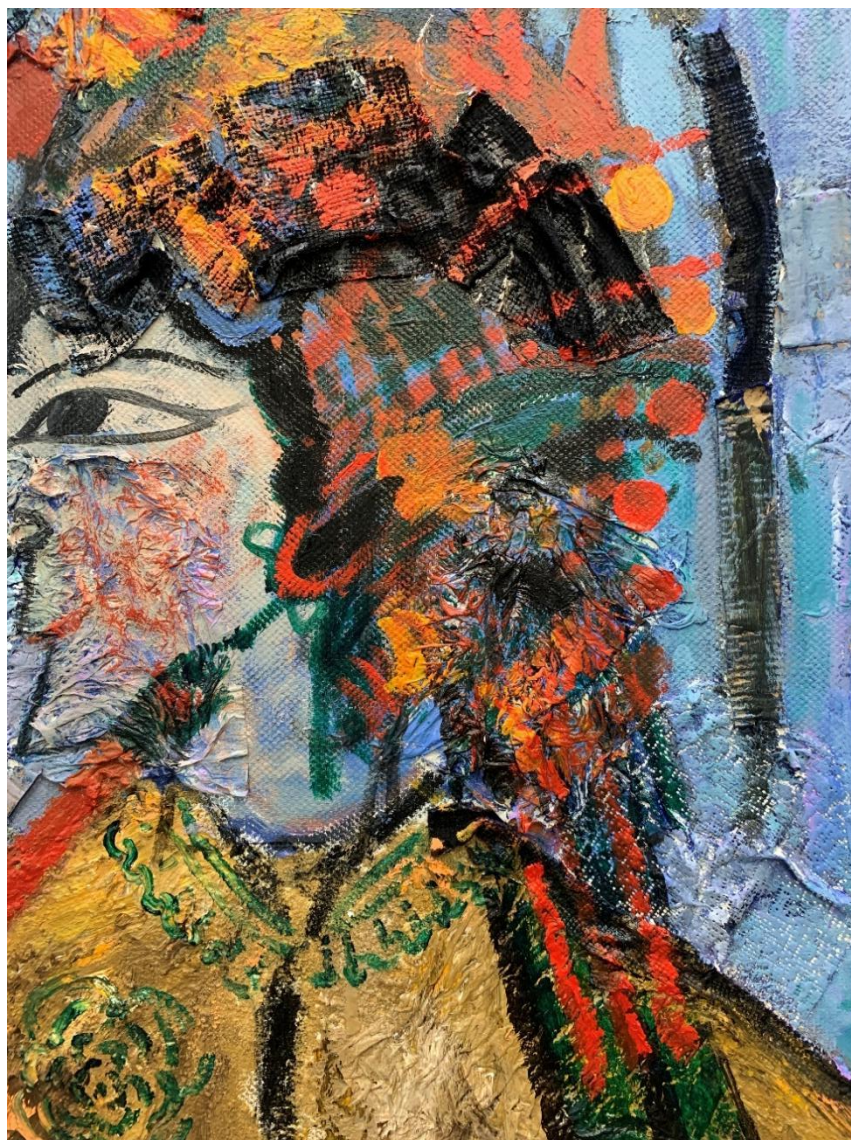
Figure 58 Local display

Source: Author,2022
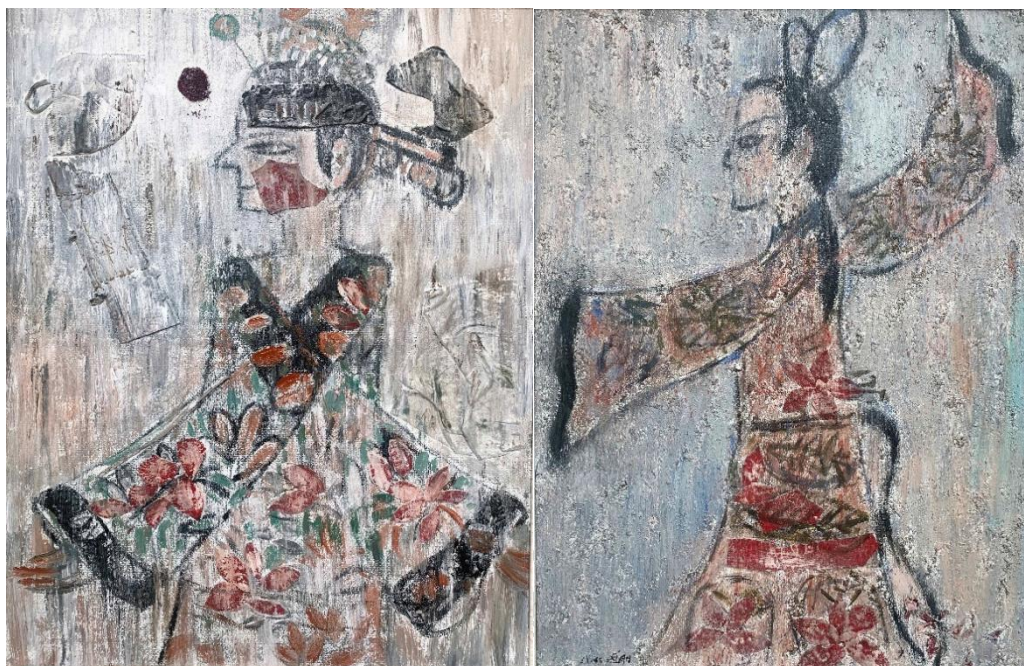
Figure 59 The work completes Figure 1

Source: Author,2022

Figure 60 The creation process of the work

Source: Author,2021

Figure 61 works complete Figure 2

Source: Author,2022

Figure 62works complete Figure 3

Source: Author,2022

Figure 63 Creative process, sketch, etc.

Source: Author,2021

Figure 64 Preparation and production of waste materials in the early stage

Source: Author,2021

In summary, this study is not only aimed at showing the artistic possibilities of waste materials but also emphasizes the importance of exploration of expression forms in other artistic creations

in other artistic creations. By using abandoned materials to advocate the reuse and recycling of resources, it advocates a more artistic and environmentally friendly artistic expression.

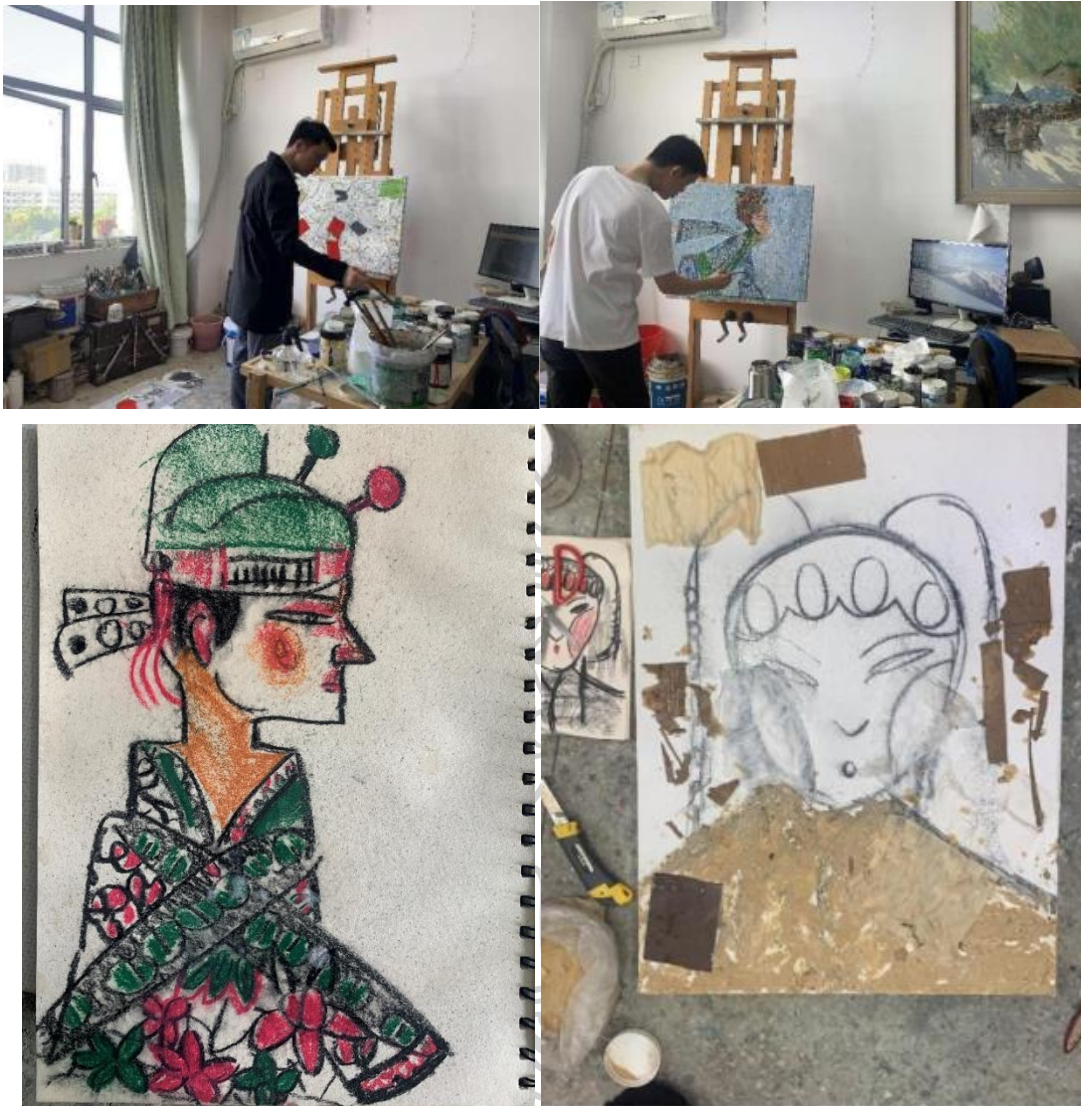Through this inductive study, we want to display the potential of the waste of waste into a striking visual art as proof of the long-lasting cultural heritage of Peking Opera. Combining the art process with the exploration of intangible cultural heritage contributes to the revitalization and promotion of Peking Opera culture and, at the same time, cultivates a deeper understanding of the value of sustainable development and environmental consciousness in artistic practice. Through the creation of the above works, the research objective RO2 has been accomplished: creating a series of artistic works by using Peking Opera culture to intervene in the art of waste materials.

4.6.7 Final Results Display Scene

Figure 65 The final display effect of works

Source: Author,2021

Figure 66 Creative Symposium and photo

Source: Author,2021

4.6.8 Community Display of creative results

The purpose of displaying in the community is to show the effective use of waste materials and promote environmental protection. The display of these works aims to attract people's attention to the intangible cultural heritage of Peking Opera, as well as the importance of environmental protection and the promotion of sustainable practice. Through the questionnaire survey during the community display period, you can collect valuable insights into the audience's perception and reception of the work.

During the community display, community members will have the opportunity to explore the exhibition at their own pace, encouraging them to observe the intricacies of the works and the specific details of the materials, but also fostering a deeper appreciation of the intangible cultural heritage and reflection through the messages conveyed by the waste materials and the Peking Opera culture. In addition, questionnaires were able to gather feedback from visitors on their impressions, level of participation, and the effectiveness of the display in promoting public awareness of environmental protection and concern for Peking Opera's cultural heritage.

In the subsequent chapters, the data collected from the questionnaire will be analyzed and discussed to clarify the public's views, feedback, and suggestions to promote further the integration of waste materials and Peking opera culture in the community.

Figure 67 Community display of the results of the work

Source: Author,2023

Figure 68 The investigation process of the questionnaire

Source: Author,2023

4.7 Test the assumption results through the theoretical framework model

4.7.1 Measurement model analysis

Based on public and social participation, SPSS and AMOS were used in this study to conduct questionnaire analysis on the theoretical research model Evaluate the fitting of the model by analyzing the measurement model. The fitting indicator CMIN/DF, RMR, RMSEA, GFI, AGFI, NFI, TLI, CFI, RFI, and IFI. The researchers' analysis results of the data are as follows: $\chi 2$ test shows that under 120 freedoms (D.F.), its value is 131.347, and the corresponding P value is 0.226, indicating that the observation data is consistent with the model proposed. $12/df = 1.095$, $\chi 2/df < 3$ It indicates a good fit. The value of the fitting superiority index (GFI) is 0.972, indicating that the proportion of the model accounted for a large proportion is very large. The approximate error (RMSEA) = 0.014, RMSEA <0. indicates the fit is satisfactory. The equity (RMR) balance = 0.031, and RMR <0.05, indicating that the difference between the observed and predictive coordinated differential matrix is relatively small. Comparative fitting index (CFI), specification fitting index (NFI), Took-Lewis Index (TLI), adjustment synthetic index (AGFI), cumulative fitting index (IFI), simple fitting superiority index (PGFI), and the simple specification fitting index (PNFI), of which GFI, CFI, NFI, TLI, IFI, AGFI are more significant

than 0.9. Although PGFI and PNFI have not reached the standard, they have reached the acceptable range. Compared with the model as a whole, It is acceptable to obtain it by the overall model fitting index. Data is shown in Table (16).

Table 16 Model fitting indicator [Source: Author,2023]

Common indicators	χ2	df	p	Cardi freedom ratio d2/df	GFI	RMSEA	RMR	CFI	NFI
Judgment standard	-	-	>0.05	<3	>0.9	<0.10	<0.05	>0.9	>0.9
value	131.347	20	0.226	1.095	0.972	0.014	0.031	0.997	0.968
Other indicators	TLI	AGFI	IFI	PGFI	PNFI				
Judgment standard	>0.9	>0.9	>0.9	>0.9	>0.9				
value	0.996	0.961	0.997	0.682	0.759				

This study adopts a standard evaluation measurement model (Fornell & Larcker, 1998), and the data is shown in Table (17) and Table (18):

Belief analysis is expressed in Cronbach's Alpha coefficient, showing that the items in each factor have satisfactory internal consistency. These results are consistent with previous Studie which have proved measurement tables' reliabilities. The Cron Bach 's Alpha coefficient (0.690 ~ 0.801) exceeds the 0.7 recommendation threshold, confirming the measurement project's reliability.

Regarding validity, the average variance extraction (AVE) value indicates the degree of the factor capture observation variable variance. The obtained AVE value (0.561 ~ 0.601) exceeds the commonly recommended threshold of 0.5, indicating that the convergence efficiency is better. These results support this point o: this the selected factors effectively measure the potential concepts.

The correlation between the discrimination validity from medium to height (range from 0.350 to 0.775) is obvious, which indicates that these factors represent different dimensions. This discovery is consistent with previous studies, and the research emphasizes the importance of ensuring the complete differentiation between factors.

This time, they are verifying factors analysis: analysis of verification factor analysis (CFA) analysis (CFA) analysis (CFA) analysis for 6 factors and 18 analysis items. The AVEAVE value corresponding to 6 components is 0.599, Aveave> 0.5, the C.R. value is 0.817, and the C.R. value is all greater than 0.7, indicating that the analytical data has strong aggregation (convergence) efficacy.

Analyzing data from Peking opera culture intervention in scrap art shows good results regarding trust, validity, differences, and verification factors. Belief analysis shows good internal consistency, and Cronbach's Alpha coefficient is satisfactory. The validity assessment confirms the convergence of the measurement model, indicating that the selected factor effectively measures the underlying structure. The correlation between the factor has a medium and high reapproving each factor's significance factor. Finally, the verification factor analysis indicates that the measurement model is good at the data, and the selected factor structure is verified. These discoveries provide a solid foundation for further exploring the relationship between Peking Opera culture and the public environmental protection consciousness through the culture of scrap art inheritance.

Table 17 KiMo and Bartlett test [Source: Author,2023]

KiMo value		0.915
Bartlett spherical test	Approximation	4090.587
	df	153
	P value	0

Table 18 Analysis of the reliability, validity, distinction, and verification factor analysis [Source: Author,2023]

	Fusion	public participation	Public environmental awareness	Cultural heritage	Artistic expression and transformation	Community Involvement	AVE	CR	Cronbach α
Fusion	0.758						0.574	0.801	0.800

	Fusion	public participation	Public environmental awareness	Cultural heritage	Artistic expression and transformation	Community Involvement	AVE	CR	Cronbach α
public participation	0.424	0.775					0.601	0.819	0.819
Public environmental awareness	0.516	0.459	0.765				0.586	0.809	0.809
Cultural heritage	0.485	0.504	0.543	0.765			0.585	0.809	0.808
Artistic expression and transformation	0.469	0.493	0.543	0.546	0.749		0.561	0.793	0.793
Community Involvement	0.377	0.35	0.458	0.417	0.413	0.774	0.599	0.817	0.817

4.7.2 Assuming test results

From Table (19), we can see that using relevant analysis to study the integrated scrap art and public participation of Peking opera culture, public environmental protection, cultural heritage, artistic performance and transformation, community participation in a total of 5 related relationships, use Pearson related coefficients to indicate related coefficients to represent corresponding coefficients The situation of relationship. Specific analysis can be seen:

Peking Opera's cultural integration of scrap art and public participation, public environmental protection awareness, cultural heritage, artistic performance, and transformation, all five items of community participation, are all significant. Moreover, the correlation coefficient value is

greater than 0, which means there is a positive correlation between integration and public participation, public environmental protection awareness, cultural heritage, artistic performance and transformation, and community participation in a total of 5 items.

Table 19 Related analysis [Source: Author,2023]

	average value	Standard deviation	Fusion	public participation	Public environmental awareness	Cultural heritage	Artistic expression and transformation	Community Involvement
Fusion	3.331	1.000	1					
public participation	3.271	1.029	0.424**	1				
Public environmental awareness	3.308	1.007	0.516**	0.459**	1			
Cultural heritage	3.283	1.008	0.485**	0.504**	0.543**	1		
Artistic expression and transformation	3.295	0.969	0.469**	0.493**	0.543**	0.546**	1	
Community Involvement	3.272	1.021	0.377**	0.350**	0.458**	0.417**	0.413**	1

Use the provided data to check the hypothetical inspection and whether the path coefficient is significant. The results show that the coefficients of each path are statistically significant at a significant level of 0.05. Therefore, we can draw the following conclusions and provide evidence for it, according to the diameter analysis results of Table (19) and Figure (20):

The standardized path coefficients of Peking Opera culture integration of scrap art, artistic expression and transformation, community participation, public environmental awareness and cultural inheritance were 0.67 (P<0.000), 0.53 (P<0.000), 0.28(P<0.002) and 0.19 (P<0.032), respectively. It shows that the hypotheses (H1, H2, H4, and H10) are satisfied. The research proves that the fusion of

Peking Opera culture and the discarded art has a significant positive impact on artistic expression and transformation, community participation, public awareness of environmental protection and cultural inheritance, among which the fusion of Peking Opera culture and the discarded art has the most significant impact on artistic expression and transformation, followed by the fusion of Peking Opera culture and the discarded art has a more significant impact on community participation. The standardized path coefficients of public participation and public environmental awareness and cultural inheritance were 0.15 (P<0.011) and 0.27 (P<0.000), respectively, indicating that the hypotheses (H5 and H6) were satisfied. The research confirms that public participation has a significant positive impact on public environmental awareness and cultural inheritance. The standardized path coefficients of community participation and cultural inheritance and public environmental awareness were 0.15 (P<0.005) and 0.21 (P<0.000), respectively, indicating that the hypotheses (H7 and H8) were satisfied. Research has confirmed that community participation has a significant positive impact on cultural inheritance and public awareness of environmental protection. The standardized path coefficients of artistic expression and transformation and public environmental awareness and cultural inheritance are 0.33 (P<0.000) and 0.35 (P<0.000), respectively, indicating that the hypothesis (H3 and H9) is satisfied. The research confirms that artistic expression and transformation have a significant positive impact on public environmental awareness and cultural inheritance.

Table 20 Assuming the test results [Source: Author,2023]

	Independent	Relationship	Dependent	Std. estimate	Unstd. estimate	S.E.	C.R.	P	Result
H1	IPOSA	-->	AET	0.671	0.660	0.060	10.919	***	Supported
H2	IPOSA	-->	CPP	0.533	0.585	0.063	9.321	***	Supported
H3	AET	-->	PAEF	0.327	0.338	0.071	4.776	***	Supported
H4	IPOSA	-->	PAEF	0.282	0.287	0.092	3.110	0.002	Supported
H5	P.P.	-->	PAEF	0.147	0.138	0.054	2.548	0.011	Supported

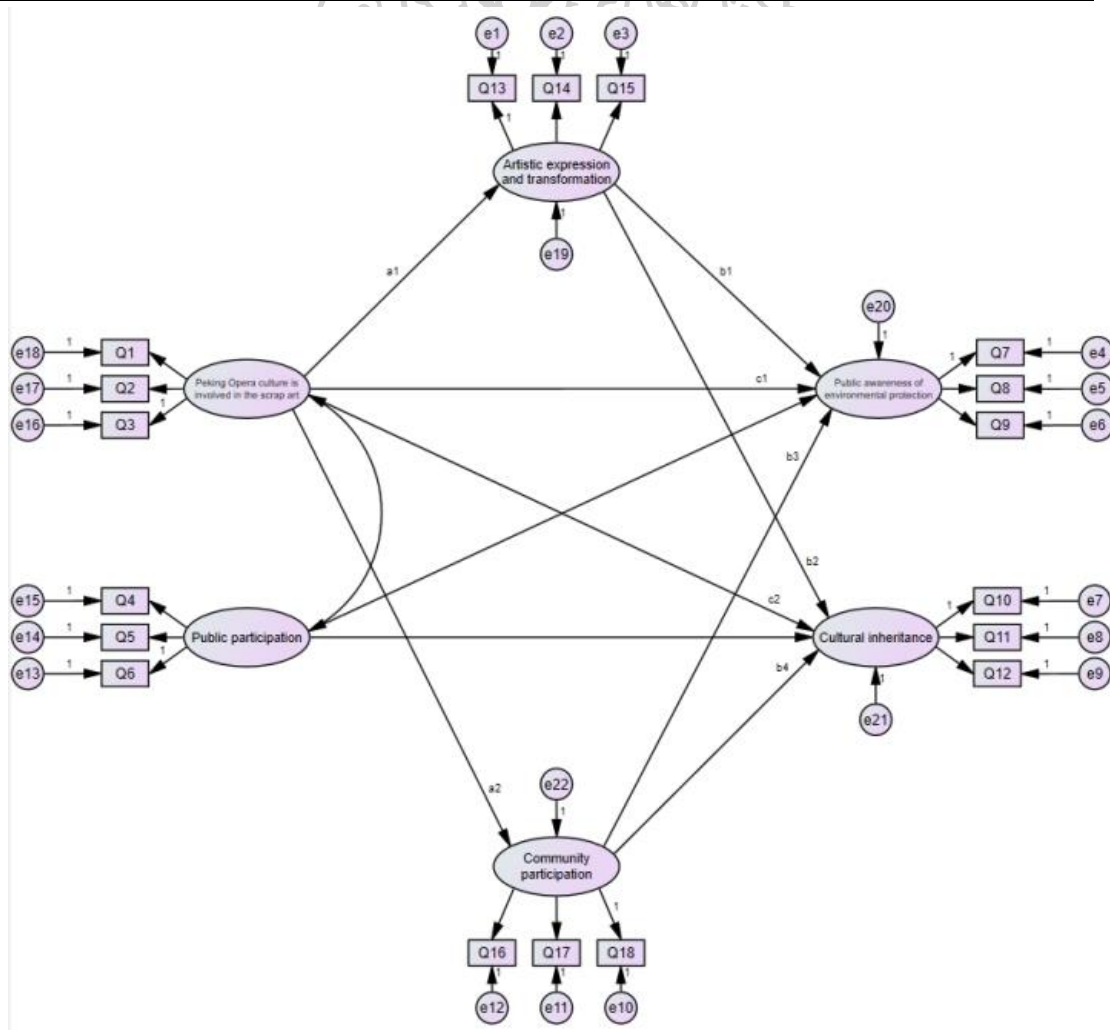|	Independent	Relationship	Dependent	Std. estimate	Unstd. estimate	S.E.	C.R.	P	Result
H6	PP	-->	CI	0.266	0.252	0.056	4.460	***	Supported
H7	CPP	-->	CI	0.151	0.141	0.050	2.802	0.005	Supported
H8	CPP	-->	PAEF	0.213	0.197	0.050	3.950	***	Supported
H9	AET	-->	CI	0.355	0.369	0.073	5.081	***	Supported
H10	IPOSA	-->	CI	0.671	0.200	0.093	2.147	0.032	Supported

Figure 69 Theoretical framework model

Source: Author,2023

4.7.3 Test the results of the intermediary effect

The analysis of data results shows that the relationship between different factors has significant direct and indirect effects between tables (21). First of all, "Peking Opera Culture Integration scrap art" has a direct positive impact on "public environmental consciousness" ($\beta = 0.282$, P = 0.008), indicating that Peking Opera culture integrates scrap art to improve public environmental awareness. Similarly, "Peking Opera Culture Integration scrap art" also has a direct positive impact on "cultural heritage" ($\beta = 0.195$, P = 0.024).

The indirect effect of "artistic expression and transformation" was further explored. Studies have found that "Peking Opera Culture Integration scrap art" has a significant indirect impact on the realization of "artistic expression and conversion" through "public environmental awareness" ($\beta = 0.219$, P & L.T.; 0.001), indicating that Peking opera cultural integration of scrap art has an expression and the influence of the transformation is part of the intermediary role of the public environmental consciousness. Similarly, "Peking Opera Culture Integration scrap art" also has a significant indirect impact on "artistic expression and transformation" through "cultural inheritance" ($\beta = 0.238$, P = 0.001). In addition, the indirect impact of "social participation" is also significant. Studies have found that "Peking Opera Culture Integration scrap art" has a significant indirect impact on "public environmental consciousness" on "social participation" ($\beta = 0.113$, P = 0.001), and " Peking opera cultural integration scrap art" The indirect impact of "social participation" ($\beta = 0.080$, P = 0.008).

The overall effect of indirect paths is significant, indicating that the intermediary role of " Peking opera culture integrates waste art" plays a vital role in the relationship between various factors. These discoveries provide empirical evidence for the overall impact of the artistic expression, social participation, and theme "Peking Opera Culture Intervention in the Gong wan Culture Intervention: Stimulating the Public Environmental Protection Awareness and Cultural Heritage" of the Peking opera culture involved in old objects, cultural heritage, and public environmental consciousness. Support. This research model analysis and evaluation realized the research target RO3: evaluating the impact of Peking opera cultural intervention on the public's attitude, actions, beliefs on the public's attitude, action, and beliefs on environmental protection and cultural heritage.

Table 21 Intermediary effect test [Source: Author,2023]

Parameter	Estimate	Lower	Upper	P	Result
Direct effect (public environmental awareness ← fusion)	0.282	0.083	0.511	0.008	Supported
Direct effect (cultural heritage ← fusion)	0.195	0.019	0.426	0.024	Supported
Indirect effects (public environmental awareness ←, Art expression, and conversion ← fusion)	0.219	0.108	0.384	0.000	Supported
Indirect effects (cultural heritage ← Art expression and conversion ← fusion)	0.238	0.110	0.388	0.001	Supported
Indirect effects (public environmental awareness ← community participation ← fusion)	0.113	0.047	0.221	0.001	Supported
Indirect effects (cultural heritage ← Community participation ← fusion)	0.080	0.021	0.170	0.008	Supported
Total effects (public environmental awareness ← , Art expression, and conversion ← fusion)	0.502	0.334	0.674	0.001	Supported
Total effects (cultural heritage ← Art expression and conversion ← fusion)	0.433	0.291	0.607	0.001	Supported
Total effects (public environmental awareness ← community participation ← fusion)	0.395	0.191	0.598	0.002	Supported
Total effects (cultural heritage ← Community participation ← fusion)	0.275	0.084	0.477	0.003	Supported

4.8 Summary of this chapter

This study explores the integration of Peking Opera's non-heritage in the art project and its impact on the creative process and artistic achievements. The study solves the research gap in this field and is based on pilot research to improve the research method. The analysis of the selection proportion

of intangible cultural heritage reveals its significant impact on the creative process and the final art, which enhances their authenticity and depth and clearly completes three research goals.

Assume that the test confirms the positive impact of integrating intangible cultural heritage on the quality and significance of art. The research results emphasize the value of cultural heritage in the workshop to protect traditions, promote artistic expression, and create culturally significant artworks. The creativity proposed by Peking opera characters shows the successful integration of waste material art into the design process. In general, the works of Peking opera culture participating in the waste can prove that it is a successful effort to revitalize the non-heritage culture of Peking Opera and improve the awareness of environmental protection. By carefully selecting waste, the consistency of the character and the appropriate material, and the creativity of design effectively integrate the harmonious integration of traditional art and sustainable practice.

In addition, this chapter helps to more widely understand the potential of old art in promoting cultural heritage and environmental consciousness. These findings emphasize the importance of establishing a meaningful connection between the use of waste in traditional art, cultural genetics, and environmental sustainability. The process of successfully integrating waste materials into the non-heritage of Peking Opera has paved the way for further exploration and innovation in art and cultural protection.

Chapter 5 Discussion

Based on data analysis, Peking opera culture intervened in scrap art, stimulated the public's environmental awareness and cultural heritage, and achieved remarkable research results. In this discussion, we will explore the explanations of these findings in depth, compare them with previous research, obtain further inferences, highlight the value of our research, and make suggestions for future research.

Table 22 Visual presentation of findings [Source: Author,2023]

Overview of research objectives	Research objective 1 was to deepen public awareness of the value of integrating environmental protection and traditional culture. By combining and displaying the Peking Opera culture with the art form of waste materials, the workshop participants, the objective is to convey the value and significance of environmental protection and traditional cultural heritage to the public;	Research Objective 2 is to create a series of artworks utilizing the culture of Peking Opera as a means of intervening in the art of waste materials. The aim was to explore the incorporation of Peking Opera elements into waste materials and transform them into artworks of academic value. By adopting this approach, the researchers aim to demonstrate the potential of waste material art in guiding audiences and conveying messages of environmental protection and cultural heritage;	Research Objective 3 is to assess the impact of the works in displaying and community influencing people's attitudes and actions towards environmental protection and cultural heritage. This objective includes assessing the impact of the Peking Opera artworks in shaping public perceptions and behaviors toward environmental awareness and cultural preservation. To assess the effectiveness of the intervention in terms of positive changes in public attitudes and increased responsibility for environmental and cultural sustainability.
Interpretation of results	The results of the study show that the integration of Peking Opera culture and waste material art has a direct positive impact on the public's environmental awareness and cultural heritage	As a mediating role, public perception inversely affects how artworks are presented, represented, and transformed. At the same time, and more importantly, it affects the expected outcome.	Overall, the findings provide empirical evidence of the positive impacts of integrating Peking Opera culture into waste material programs. They suggest that such integration can increase public awareness of environmental protection and contribute to preserving and promoting cultural heritage.
Research limitations	Limitations on the scope of the study	Limitations of the research methodology	Limitations of available evidence

study finds	There is an obvious gap in research on the integration of Peking Opera culture and waste material art forms	Insufficient awareness of how the integration of Peking Opera culture and outdated art can effectively stimulate public awareness of environmental issues and cultural heritage	The role of community engagement in promoting environmental awareness and cultural heritage through the combination of Peking Opera culture and the art of old materials is an area for further exploration.
Next steps in the research program	There is a need to further investigate the long-term impact of the artistic fusion of Peking Opera culture and waste materials on environmental awareness and non-heritage culture	Evaluating the effectiveness of integrated practices in addressing environmental issues and protecting cultural heritage in the long term, and understanding the long-term viability and outcomes of these interventions can inform future strategies and interventions.	Exploring the role of other cultural elements in conjunction with waste materials contributes to a deeper understanding of the impact of cultural interventions on the environment and the sustainability of cultural heritage.

5.1 Overview of Research Objectives

The researchers finally clarified the three research goals based on the above research. The first research goal was to deepen the public's awareness of the value of environmental protection and traditional culture. Combination of materials art. By combining these two different forms, the purpose is to convey the value and significance of environmental protection and traditional cultural heritage to the public; the second research goal is to use Peking opera culture to intervene in the art of waste materials to create a series of artworks. This project explores the possibility of incorporating Peking opera elements into waste materials into artworks with visual impact. By adopting this method, the researchers aim to show the potential of waste art in attracting audiences and conveying environmental protection and cultural heritage information; the third research goal is to evaluate the artistic works of Peking opera culture intervention in waste materials. It also affects the public's attitude and actions toward environmental protection and cultural heritage. This goal includes evaluating the impact of the public's views and behaviors on environmental consciousness and cultural protection. Through the questionnaire survey, the researchers aim to evaluate the effective transformation of intervention measures in the positive change of public attitude and promote the effectiveness of environmental and cultural sustainability responsibility.

5.2 Results Explanation

The results of the study show that the integration of Peking Opera culture and waste art has a direct positive impact on the public's environmental awareness. Public awareness of environmental issues can

be effectively raised through the display of publicity. Similar to how Peking Opera culture and old art have been incorporated, this shows how Peking Opera culture plays a crucial role in preserving and advancing cultural heritage. Additionally, research demonstrates that cultural legacy and public environmental awareness play an intermediary function. Through the intermediary variables of public environmental awareness and cultural legacy, the combination of Peking Opera culture and ancient art indirectly influences the performance and transformation of art. It also indirectly affects social participation through the same intermediary variables. These findings emphasize the importance of public environmental awareness and cultural heritage in promoting artistic expression and social participation. In general, the research results provide empirical evidence for the positive impact of the Peking opera culture on the scrap art project. They show that this integration can improve the public's environmental protection awareness and help protect and promote cultural heritage. The intermediary role of public environmental awareness and cultural heritage further emphasizes their crucial role in promoting the results of the expected results. These findings help us understand the potential interests and influences of Peking Opera culture to participate in the art of waste materials, especially in stimulating the public's environmental protection awareness and cultural heritage.

5.3 Further Inference

Researchers have further inferred and concluded the integration of Peking opera culture and scrap art. Integrating these two forms not only improves the public's awareness of environmental protection but also promotes the inheritance of culture. A bridge between the past and the present is supported to encourage the rehabilitation and safeguarding of cultural heritage by fusing the traditional components of Peking Opera with the creative expression of old things. This fusion of the Peking Opera's visual allure with the essence of scrap art's province is a potent tool for raising awareness of environmental issues. Information on environmental protection is easier to accept and engage the public through this combination. Integration of trash art and Peking opera culture also benefits cultural heritage. Traditional art forms are infused with representational forms, preserving and revitalizing cultural heritage. Research helps to ensure the relevance and importance of traditional cultures in today's society and encourages a deeper appreciation and understanding of traditional cultures. Integrating Peking opera culture and the art of old things has produced many benefits, including environmental awareness, cultural heritage, and

artistic innovation. Using these two forms of power, we have created a platform for dialogue, creation, and promoting sustainable practice. This study highlights different art forms' colossal value and potential for social improvement.

5.4 The Limitations of Research

Limitations of research will be encountered in the process of research. This research has the following three limitations:

（1）When writing a research paragraph, there may be certain restrictions to consider. Some restrictions related to writing research paragraphs include the following:

Restrictions on the scope of research: The research paragraph may be limited by the scope of research. Due to time, resources, or data restrictions, paragraphs may only cover some aspects or perspectives of the research theme.

（2）Limitation of research methods: Paragraphs may be limited by the method used in research. Different research methods have advantages and disadvantages, which should be recognized in paragraphs. For example, if research only depends on self-reporting data, there may be limitations related to potential deviation or inaccuracy.

（3）Limitation of evidence: Research paragraphs may be limited, and quality restrictions on evidence of evidence proposed or arguments that are supported. If there is enough reliable data, the depth and breadth of the research paragraph will be limited.

It is essential to solve these restrictions transparently and honestly in the study paragraph. By recognizing and discussing these limitations, researchers can show their consciousness and provide a more comprehensive understanding of the results and influence of the research.

5.5 Research finding

The following research findings are attained in light of the study gaps and findings:

First, there needs to be more investigation into blending Peking Opera culture with antiquated art forms. Existing research must adequately understand the potential advantages and difficulties of merging these cultural aspects. Additional studies in this field might clarify the prospects and effects of such integration.

Second, more research is required to determine how efficiently Peking Opera culture and old art may be combined to raise public awareness of environmental problems and cultural heritage. More in-depth research is needed to determine how this integration influences public perception and promotes cultural preservation.

The researchers highlight the need for further research into how cultural aspects of these convergences affect cultural heritage and public awareness.

Finally, community involvement in fostering environmental consciousness and cultural legacy is a field worth more research because of the fusion of Peking Opera culture and ancient art. This study emphasizes the limitations of this field of study and the value of research community participation. Practical strategies to encourage public engagement, environmental awareness, and sustainable development can be created by understanding the scope of community involvement and its effects.

These results show the gaps in our current understanding and emphasize the value of more investigation into the interaction between Peking Opera culture and antiquated artistic traditions. The results highlight the need for a deeper comprehension of the possible advantages, difficulties, and community involvement to fully harness the transformative potential of these cultural aspects to raise environmental consciousness and preserve cultural heritage.

5.6 Ideas for additional research

The following recommendations might be made while thinking about additional research into the aesthetic fusion of Peking Opera culture and waste materials:

Continuity of effect: It is vital to look into the long-term effects of environmental awareness and cultural protection of Peking opera culture and waste products. This study can investigate how these comprehensive practices continue and change to show their influence and persistence.

Sustainable assessment: Research must be conducted, and the impact of the observed effects must be assessed. Research may involve assessing the effectiveness of integrated approaches to long-term solutions to environmental problems and the preservation of cultural heritage. Understanding these interventions' long-term feasibility and outcomes may benefit future strategies and interventions.

Communication channels: Different communication channels for investigating environmental information can provide valuable insights. This study can explore the most effective way to explore the

public, attract public participation, improve public awareness, and promote environmental and cultural conservation. Comparison and analysis of different communication methods can provide information for future promotion.

The role of other cultural elements: Combining the role of other cultural elements with Peking opera culture will help more deeply understand the impact of cultural intervention on environmental and cultural sustainability. This study can examine the effectiveness and influence of various cultural practices and traditional integration on enhancing the measures designed for environmental protection and cultural heritage.

Through further research on these fields, we can better understand the integration of Peking opera culture and the art of waste materials. Its long-term impact and its potential for promoting environmental awareness and cultural protection.

In summary, the researchers' research shows that the intervention of Peking opera culture intervenes in scrap art and positively impacts the public's environmental consciousness, cultural heritage, artistic expression, and social participation. The research findings add to the body of knowledge by highlighting the importance of cultural intervention and by offering concrete implications for raising environmental consciousness and promoting cultural protection.

In conclusion, this study examines how Peking opera culture and waste materials can be integrated with environmental protection and cultural heritage preservation. The research aims to identify knowledge gaps and lay the theoretical groundwork for this singular integration. The findings highlight the need for more study on Peking opera culture and out-of-date art integration, which calls for a deeper comprehension of how public consciousness and cultural legacy influence outcomes and the significance of community participation. One theoretically significant aspect is the possibility of cultural intervention to advance environmental awareness and cultural preservation. Recognizing research constraints, such as the absence of specific study methodologies in the empirical evidence, is crucial. Future studies should examine the long-term effects of this integration, assess its durability, and look into the contribution of other cultural aspects to accomplishing environmental and cultural objectives.

This work merges waste iron art with Peking opera culture to conserve the environment and preserve cultural heritage. Research questions concentrate on locating the theoretical gap and filling in the

information gaps to further our comprehension of this singular integration. The findings draw attention to the need for more research on integrating Peking Opera culture and trash art, the significance of public awareness and cultural legacy, and the importance of community involvement in achieving desired outcomes. One theoretically significant aspect is the possibility of cultural intervention to advance environmental awareness and cultural preservation. However, more specialized research techniques are required to address research limitations, including experience and evidence. Future studies should examine the long-term effects of this integration, assess its sustainability, and investigate the contribution of other cultural components to environmental and cultural objectives.

Appendix

A Reference Guide

The Goal of the Research Guide

The goal of the Peking Opera Cultural Intervention in the Art of Used Materials: Stimulating Public knowledge of Environmental Protection and the Task of Cultural Inheritance study guide is to raise public knowledge of environmental protection and values. This handbook intends to give a detailed description of the research process as well as a comprehensive framework for researchers interested in cultural interventions that make use of recycled materials. The guide may also serve as a reference for those seeking to replicate similar interventions in non-heritage cultures, promoting a deep connection between cultural heritage and environmental stewardship. It is divided into the following main steps:

1. Preliminary pilot study

Sorting out knowledge gaps and establishing a theoretical foundation through a literature review, and conducting a pilot study through the establishment of a theoretical foundation, the researcher will apply preliminary exploratory data analysis using SPSS software and statistical techniques related to Structural Equation Modeling (Amos) to the data collected.

This process allows for the weighting and prioritization of Peking Opera culture in the context of analyzing the weighting of non-heritage cultural factors. This provided a quantitative assessment of the importance and significance of Peking Opera culture relative to other factors

1.1 Research Design

The research guidelines define the research design, emphasizing a mixed-methods approach to obtain qualitative and quantitative insights. It justifies the choice of design based on the research objectives.

1.2 Data collection

Data collection methods were elaborated, including surveys, interviews, and arts assessment. The rationale for the selection of each method is provided to ensure that comprehensive data is obtained.

1.3 Sample selection

The process of selecting different participants, artworks and intervention programs in order to create a representative sample for the study.

1.4 Data analysis

Expert scoring and data analysis techniques such as hierarchical analysis were used to determine the weighting and prioritization of the Peking Opera culture in order to provide feedback for assessment from the data collected.

1.5 Determination of research themes

The weighting analysis and expert scoring of traditional non-heritage cultures and data analysis were conducted to determine the weighting and prioritization of Peking Opera culture. This provided a quantitative assessment of the importance and significance of Peking Opera culture relative to other factors, which assisted in the decision-making process and resource allocation related to cultural heritage preservation and promotion.

2. Pre-workshop Experimentation

2.1 Develop an artistic conceptualization framework

Develop a conceptualization framework for the transformation of Peking Opera culture into art. Explore the integration of Peking Opera elements with the artistic expression of waste materials. The framework establishes guiding principles and themes for workshop participants in the creative process.

2.2 Selection of used materials and characters

Collect and prepare used materials suitable for the researcher's practical creation: Identify and collect a variety of used materials, such as discarded fabrics, papers, plastics, scrap metals and other materials suitable for use in artistic creation. The materials should be cleaned, organized and prepared in a way that ensures their safety and availability for artistic purposes.

2.3 Workshop Practice

Instruct them to use these waste materials to create Peking Opera culture-inspired art. Encourage students to combine traditional elements of Peking Opera while experimenting with various techniques, such as collage and innovative ways of mixing materials, to conceptualize and expand the expression of Peking Opera artistic styles in a free creative environment.

2.4 Organize exhibitions or showcases

display the transformed paintings and provide a platform for participants to present their work to the public. Share the participants' artistic journey, interact with the audience and receive feedback and appreciation for their creative efforts.

2.5 Documentation Photographically record the last crop.

In order to safeguard the knowledge acquired during the workshop and the artistic accomplishments of the participants, images of the artwork are captured with detailed explanations and statements provided by the artists. The aforementioned documents provide a concise overview of the outcomes of the workshop and can serve as a point of reference and promotion in subsequent endeavors.

2.6 Introspection and Assessment

The evaluation of the workshop's outcomes, challenges, and advantages was conducted by both participants and researchers as an integral component of the reflection and assessment procedure. The reflection process encouraged both individual and group learning, enabling participants to enhance their understanding of Peking Opera culture and environmental conservation. Additionally, it provided a platform for exploring potential breakthroughs in creative work. Furthermore, participants were capable of gaining valuable insight regarding their artistic progress.

3. The creative procedure

Following the successful completion of the experimentation phase, the subsequent stage of creative practice commenced, wherein waste materials were utilized to translate Peking Opera culture into the medium of painting art. This phase includes the dissemination and promotion of the creative product, as well as further exploration and refinement of the artistic process. The sequential stages of the creative practice process are outlined as follows:

3.1 Supplementary preparation before the inception

Artists persistently engage in the refinement and evolution of their artistic skills by drawing from the experimental stage, with the aim of assimilating the cultural elements of Peking Opera into the realm of painting. In order to enhance artistic expression and optimize the aesthetic impact of

the artwork, it may be necessary to engage in more experimentation with various techniques, materials, and subject matter.

Analysis between characters and materials

serial number	Material selection criteria	Character Selection	Character Attributes	Character Styling	Corresponding waste material properties
1		Sheng	Decent male, hero.	neat and tidy	The use of old metal as a material used by decent male characters is in line with the typical personalities and combat roles of these characters
2	(1) from old and used items that are easy to find in everyday life. (2) Ease of being molded by the design is an important factor. (3) Avoidance of physical danger to the researcher from the chosen material.	Dan	female role	Focus on the lines	Suitable for soft materials such as cloth and paper, plush materials, etc. to emphasize the femininity of the character and create visually compelling elements.

serial number	Material selection criteria	Character Selection	Character Attributes	Character Styling	Corresponding waste material properties
3		Jing	Men of unusual character, qualities or appearance, with distinguishing features	The dignified, austere, and figurative character modeling is dominant	More subdued, understated material to emphasize the character's personality, emotions
4		Chou	Funny Drama Characters	Avoiding an angular stylistic approach, the design is dominated by a rounded sphere, an unconventional shape that adds some whimsy and enhances the character's comedic charm	Soft plastic is easy to mold into exaggerated and comedic feature designs. This includes large noses, oversized ears or mischievous grins. Thus adding to the overall comedic effect

3.2 The preliminary stages of generating ideas and concepts involve the creation of minor drafts, followed by more refined drafts, primary drafts sketching, and seeking creative inspiration. The selection of cultural materials for the Peking Opera is a dynamic and contemplative procedure that derives inspiration from both traditional and contemporary situations. The characters in Peking Opera originate from diverse origins and are often shaped by the findings, goals, and desired impact of previous research investigations. The research findings offer valuable perspectives on current environmental concerns and cultural peculiarities. To ensure the research issue's direct relevance and accurate representation of the study findings, the development of characters is undertaken.

Small Draft: The initial inquiry encompasses the analysis of several conventional components of Peking Opera, the formulation of basic character concepts, and the identification of unique characteristics including colors, attire, facial expressions, gestures, and roles. The process of characterization in Peking Opera encompasses the examination and application of diverse sources of inspiration, including traditional archetypes, historical figures, and symbolic representations derived from the opera repertory.

Draft: refinement and enrichment

In the draft stage, it is essential to concretize and enrich the inspirations and ideas from the previous small drafts to lay the groundwork and prepare for the next step of defining a concrete program.

Formal draft: finalizing the image

Formal drafts define the final form of the characters to be created, and their setting process is attuned to the research objectives. At this stage, the cultural elements of Peking Opera are carefully selected to resonate with the intended audience. The choice of characters, roles, narratives, and even the nuances of makeup and costumes are carefully designed to effectively communicate the research intent and cultural message.

Emotional Connection: The character's image through the display will surely bring the viewer a certain emotional identification. Through the shape, material, color, and image, it reflects the commonality of the connection between Peking Opera and the public's emotions and promotes the public's understanding of the culture of Peking Opera and the environmental issues.

Process of drawing small drafts

Small manuscript	Experimental draft	Manuscript	Emotional connection
			The characters are designed to evoke emotional resonance in the audience. Their shapes, materials, colors, and images reflect Peking Opera's

Small manuscript	Experimental draft	Manuscript	Emotional connection
			communal connection with the public's emotions and promote the public's understanding of Peking Opera culture and environmental issues.

3.3 Creation of artworks:

The researcher has created a series of artworks that embody the artistic fusion of Peking Opera culture and waste materials. The artwork should show innovative interpretation and re-imagination of traditional Peking Opera elements through the utilization of waste materials.

3.4 Organize exhibitions and gallery art activities with public participation.

Showcase the created artwork to the public in the community. Select venues suitable for different audiences, including art professionals, cultural enthusiasts and the general public. Exhibitions should highlight the unique fusion of Peking Opera culture and waste material art, and convey the message of environmental protection and cultural heritage.

3.5 Documentation and publicity:

Document the creative process, the exhibition and the audience's response through photography. Produce promotional materials to disseminate information about the artwork, artistic methods and project objectives.

3.6 Test hypothesis results

Determine the theoretical framework model for the research hypothesis, complete the final questionnaire and analyze the collected data and validate the results. The researcher selected the

community to participate in this survey. In order to improve accuracy, data selection is based on residential neighborhoods in Nanchang High-Tech Zone. The survey object was residents aged 18-40 years old in Nanchang High-tech Zone. The questionnaire consisted of 18 questions, and the questions were recognized as valid by expert review. A total of 550 questionnaires were distributed and 506 questionnaires were recovered, with a recovery rate of 92%. The data that was obtained was analyzed utilizing statistical methods such as SPSS software, structural equation modeling (Amos), as well as correlation and regression analysis. The outcome was confirmed using factorial data analysis. The findings of the study provide empirical proof that the cultural intervention of Peking Opera has positive effects on the aesthetic production of vintage goods. Based on statistical data, the implementation of this integration has the potential to enhance the general public's awareness of environmental protection and contribute to the promotion and preservation of traditional culture.

3.7 Evaluation and Introspection

Consider input and responses from the general public, scholars, and industry professionals as researchers reflect on the creative practice phase. Analyze the success of the artistic strategy in raising people's awareness of the environment and their cultural heritage. Determine the researcher's strengths and weaknesses, then apply learning to future creative attempts.

4. Finality

4.1 Research guide's executive summary

An overview of the information in this guide's last section emphasizes its process and importance as an integrated model of cultural intervention using trash to preserve the environment and spread culture.

4.2 Prospective Research Lines

This guide covers potential avenues for future research and strategies to strengthen and broaden the model. This research manual offers a thorough road map for academics using cultural aspects to intervene with waste products to advance cultural values and environmental awareness. It encapsulates the research process, theoretical framework, methodology, implementation steps, and

model replication to provide research ideas for those interested in promoting meaningful cultural interventions.

B Exhibition site

The process of creating a work, exemplified by the work "Sheng"

steps	Step-by-step details	photograph
Step 1	Sorting out scrap materials and theater and cultural literature and making sketches	
Step 2	Finding suitable waste materials at the waste disposal site based on preliminary research results	
Step 3	Skeleton made of steel wire according to the sketch	
Step 4	Shape and weld the tin together according to the skeleton and sketches	
Step 5	Adjustments to detail areas	
Step 6	Adjustment and coloring of body parts	
Step 7	Final assembly and display	

C content workshop

| Category	Works	Content	Other
Works of some members of the workshop		Workshop members individually search for suitable waste materials and combine them with elements of Peking Opera to create their artwork. Each person's work needs to be discussed as a group, and in the process, they need to make themselves understand whether it can accurately express the significance of this practical process or not.	

Category	Works	Content	Other
Workshop Site		The workshop is a hands-on venue where each participant will complete their work.	

Category	Works	Content	Other
On-site discussion		After completing the work, we have a group discussion in the gallery and present the work to the public and others.	

Category	Works	Content	Other

Artwork Collection Certificate
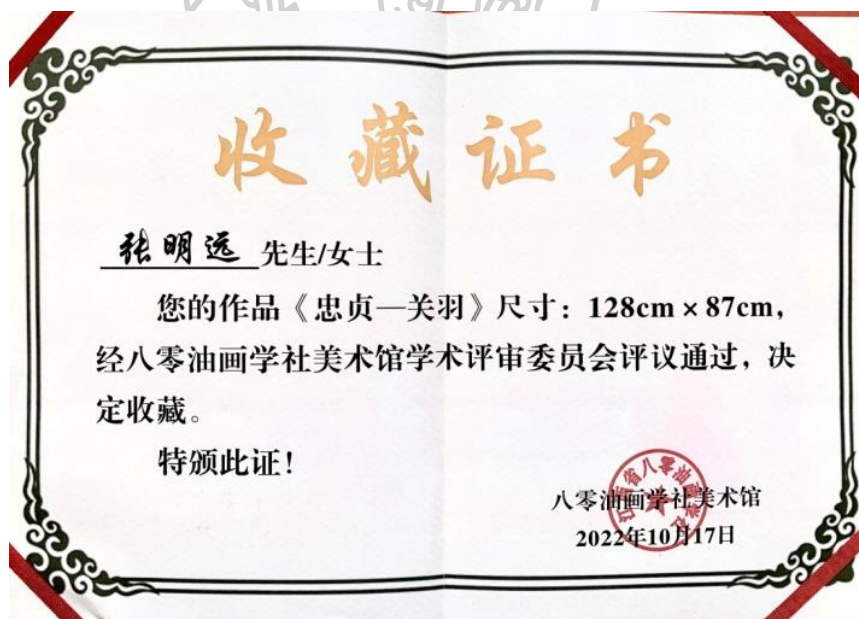
D visit and discuss

Invitation letter

The PHD Research Program of the Silpakorn university

Name of doctoral student: Zhang Mingyuan

Teacher Advisor: Supachai Areerungrueng

13 Apr, 2023

Subject: Invitation to be an inspector of research tool quality

Dear

Mr. Mingyuan Zhang is a graduate student ID 620430046 at Silpakorn University and is studyingfor Doctor of Philosophy (Design) at Graduate School, Silpakorn University. Currently, he isconducting his thesis study entitled: The Involvement of Peking Opera Culture in Scrap Art: Stimulating Public Awareness of Environmental Protection and Cultural Inheritance . In this regard, like to invite you to inspect the quality of research tools for the student.Your kind assistance and academic contribution is much appreciated.

Opening time: 19:00 PM, 13 Apr-13 May, 2023
Exhibition time: May 13 -- 20, 2023
Exhibition venue: 1962 Cultural and Creative Industry Park, No.762. Jiofang West Road, Qingyunpu District, Nanchang City, Jiangxi Province

Interviews and research

Expert interview		Jiangxi famous literary critic, vice-chairman of Nanchang Critics Association, folklore researcher, important contribution to traditional non-heritage culture
		Vice Dean of the School of Art and Design, Nanchang University of Aviation, Professor, mainly engaged in sculpture, traditional non-heritage culture research
		Teacher of Jiangxi Modern College, famous painting artist, director of Jiangxi Artists Association, important research on color and modeling
		Famous folklore theorist and researcher who has made important contributions to traditional folklore culture

Questionnaire survey

Picture content includes expert interviews and outcome feedback questionnaires, respectively

Receipt of documents by publishers

NO 67.36/742

Faculty of Fine and Applied Arts
Thammasat University
99 moo 18 Paholyothin Road,
Klongluang, Patumtanee
Thailand 12121

22 September, 2023

Dear Mingyuan Zhang,
Acceptance of Manuscript for Publication

Regarding your submission of an academic article for publication in the Fine and Applied Arts Journal, Thammasat University. I am pleased to inform you that your manuscript titled "Peking Opera Culture Fused with Scrap Art: Raising Public Awareness of Environmental Protection" has undergone thorough review by our editorial team and external peer reviewers. I am delighted to announce that your work has been accepted for publication in The Fine and Applied Arts Journal, Thammasat University, with the following details:

Journal Title : The Fine and Applied Arts Journal, Thammasat University
ISSN (Print) : 2822-0447
ISSN (Online) : 2822-0439
Volume : 17, No.1 (2024): January – June.
Your article will be made available to the worldwide Public at https://so05.tci-thaijo.org/index.php/fineartstujournal.

We would like to express our appreciation for your valuable contribution to our journal and the broader academic community. Your dedication to research and scholarship is evident in exceptional quality of your work.

Once again, congratulations on this significant achievement. If you have any questions or require further information, please do not hesitate to contact us at Fineartsjournal@tu.ac.th.

Sincerely,

Dr.Jarunee Areerungruang

Editor, The Fine and Applied Arts Journal, Thammasat University

Email: Fineartsjournal@tu.ac.th.

BANGKOK UNIVERSITY

ที่ มกท(ว)/วพ.022/2566

27 มิถุนายน 2566

เรื่อง   ตอบรับการจัดพิมพ์บทความวิจัย
         ในวารสาร BU Academic Review

เรียน   Mingyuan Zhang
         Supachai Areerungrueng

        ตามที่ท่านได้ส่งบทความวิจัย เรื่อง "Evaluation of the Regeneration Value of Industrial Heritage: A Case Study of Nanchang 699 Cultural and Creative Park, Jiangxi" เพื่อลงพิมพ์เผยแพร่ในวารสาร BU Academic Review นั้น กองบรรณาธิการได้พิจารณาและเห็นสมควรนำบทความวิจัยของท่าน ซึ่งผ่านขั้นตอนการพิจารณาจากผู้ทรงคุณวุฒิ 3 ท่าน เป็นที่เรียบร้อยแล้ว ลงพิมพ์เผยแพร่ในวารสาร BU Academic Review ปีที่ 22 ฉบับที่ 1 เดือนมกราคม – มิถุนายน 2566

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