

Faculty of Applied and Creative Arts

Creative Merchandise Design for Tourists based on Luoshan Shadow Puppet Elements through Visual Rhetoric

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Creative Merchandise Design for Tourists based on Luoshan Shadow Puppet Elements through Visual Rhetoric

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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ABSTRACT

The main aims of this study are to establish systematic methods for designing creative merchandise of Luoshan shadow puppet by incorporating a visual rhetorical approach as a guiding tool for designers. This study considers the unique features of Luoshan shadow puppet and applies the principles and methods of visual rhetoric (VR) to enhance their visual expression and market competitiveness. In Luoshan shadow puppet creative merchandise design (LSPCMD), visual rhetoric (VR) methods help designers convey their products' storytelling, artistry, and cultural connotations. This study also addresses the issue of neglected innovations in Luoshan shadow puppet creative merchandise. Mixed research method is the research method used in this study. To assess the feasibility of visual rhetoric in influencing these types of merchandise design, survey data are obtained from Intangible Culture Heritage (ICH) experts, academicians, designers, and users of creative merchandise in China. A design practice involving creative children's dinner plate is applied using Luoshan shadow elements after conducting semi-structured interviews and surveys in the form of a questionnaire. This is followed by a second questionnaire to validate the results of design practice. It is found that visual rhetoric (VR) has a significant influence on the design situation, design creativity, and design method of Luoshan shadow creative merchandise through visual rhetorical situations (VRS), visual rhetorical structures (VRST), and visual rhetorical strategies (VRSG). These findings expand the knowledge of sustainable design research for such goods by considering how visual rhetoric (VR) influences these merchandise designs. The findings provide designers insights into design inspirations and creative directions within visual culture. Finally, the study presents limitations and suggestions for future research. Recommendations include: (a) highlighting the characteristics of traditional shadows, (b) creating visual impact, (c) considering the

user experience, and (d) paying attention to sustainability. In conclusion, this thesis offers a comprehensive reference to local staff designing merchandise using visual rhetorical methods.

Keywords: Luoshan shadow puppet, creative merchandise design, visual rhetoric, design inspirations, design strategy

Reka Bentuk Barangan Kreatif untuk Pelancong Berdasarkan Elemen Boneka Bayang Luoshan Melalui Retorik Visual

ABSTRAK

Matlamat utama kajian ini adalah untuk mewujudkan kaedah sistematik untuk mereka bentuk barangan kreatif boneka Luoshan dengan menggabungkan pendekatan retorik visual sebagai alat panduan untuk pereka. Kajian ini mempertimbangkan ciri unik boneka bayangan Luoshan dan menggunakan prinsip dan kaedah retorik visual (VR) untuk meningkatkan ekspresi visual dan daya saing pasaran mereka. Dalam reka bentuk barangan kreatif boneka bayangan Luoshan (LSPCMD), kaedah retorik visual (VR) membantu pereka bentuk menyampaikan konotasi bercerita, kesenian dan budaya produk mereka. Kajian ini juga menangani isu inovasi yang diabaikan dalam barangan kreatif boneka bayangan Luoshan. Kaedah kajian campuran merupakan kaedah kajian yang digunakan dalam kajian ini. Untuk menilai kebolehlaksanaan retorik visual dalam mempengaruhi jenis reka bentuk barangan ini, data tinjauan diperoleh daripada pakar Warisan Budaya Tak Ketara (ICH), ahli akademik, pereka bentuk dan pengguna barangan kreatif di China. Amalan reka bentuk yang melibatkan pinggan makan kanak-kanak kreatif diterapkan menggunakan elemen bayangan Luoshan selepas menjalankan temu bual separa berstruktur dan tinjauan dalam bentuk soal selidik. Ini diikuti dengan soal selidik kedua untuk mengesahkan keputusan amalan reka bentuk. Didapati bahawa retorik visual (VR) mempunyai pengaruh yang signifikan terhadap situasi reka bentuk, kreativiti reka bentuk, dan kaedah reka bentuk barangan kreatif bayangan Luoshan melalui situasi retorik visual (VRS), struktur retorik visual (VRST), dan strategi retorik visual (VRSG). Penemuan ini mengembangkan pengetahuan penyelidikan reka bentuk mampan untuk barangan tersebut dengan mempertimbangkan bagaimana retorik visual (VR)

mempengaruhi reka bentuk barangan ini. Penemuan ini memberikan pandangan pereka tentang inspirasi reka bentuk dan hala tuju kreatif dalam budaya visual. Akhir sekali, kajian ini mengemukakan batasan dan cadangan untuk penyelidikan masa depan. Syor termasuk: (a) menyerlahkan ciri bayang tradisional, (b) mencipta kesan visual, (c) mempertimbangkan pengalaman pengguna, dan (d) memberi perhatian kepada kemampanan. Kesimpulannya, tesis ini menawarkan rujukan komprehensif kepada kakitangan tempatan mereka bentuk barangan menggunakan kaedah retorik visual.

Kata kunci: *Boneka bayangan Luoshan, reka bentuk barangan kreatif, retorik visual, inspirasi reka bentuk, strategi reka bentuk*

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LIST OF ABBREVIATIONS

ICH	Intangible Cultural Heritage
IP	Intellectual Property
LSP	Luoshan Shadow Puppet
LSPCMD	Luoshan Shadow Puppet Creative Merchandise Design
LSPCM	Luoshan Shadow Puppet Creative Merchandise
PSAs	Public Service Advertisement (PSA)
RO	Research Objective
RQ	Research Question
UNESCO	United Nations Educational, Scientific and Cultural Organization
VR	Visual Rhetoric
VRS	Visual Rhetorical Situations
VRST	Visual Rhetorical Structures
VRSG	Visual Rhetorical Strategies

CHAPTER 1

INTRODUCTION

1.1 Research Background

This research aims to study the innovative design strategy and communication effect of Luoshan shadow creative merchandise by applying visual rhetoric (VR) concepts and methods. It explains how these concepts are applied to the design of Luoshan shadow puppet creative merchandise (LSPCM). Specifically, this study investigates consumers' psychological and cultural needs. More specifically, the design of creative merchandise is a process of cultural creation, which uses symbols of non-material culture to construct the culture of those products. It is a concentrated display of the cultural spirit, cultural symbols, and unique temperament characteristics embedded in a city. An image of urban culture could be presented through intangible heritage and cultural images extended by creative merchandise. Therefore, more and more regions are combining how to showcase the city's culture and shape its image with their cultural industry development strategies. In many countries, artistic elements are skilfully integrated into what they offer, providing a sophisticated and enjoyable shopping experience while paying great attention to accurately extracting iconic cultural elements as well as cultural and natural features that attract visitors to purchase actively.

To clarify how this research has progressed, the researcher has reviewed a representative selection of works by the country's predecessors. From these works, it can be concluded that several issues existed in the Luoshan shadow puppet creative merchandise design (LSPCMD). The researchers' vision of creative merchandise research has become very broad, and more often, cross-disciplinary, and comprehensive research

with multiple disciplines having been conducted (Chen, 2017). For example, Zhao (2020) suggested a method that combines 3DP technology with the study of cultural and creative product design systems. Using 3DP rapid prototyping technology can help designers conduct innovative research more effectively on cultural and creative merchandise design systems. Many small and medium-sized design agencies have also emerged in China. Designers are more flexible in their approaches to design, and the products have good visual communication. However, many things could be improved. For instance, creativity is needed in the design of Luoshan shadow creative merchandise. This means that the products are not only similar, but also needs more innovation. Furthermore, "*The Creative Economy*" by John Hawkins (2008), a British researcher of creative and cultural industries, first proposed the concept of "cultural and creative industries." In Towse's book *Cultural Industries (Third Edition)*, he combined the research methods of political economy with those of cultural sociology, cultural studies, communication studies, and social ethics to systematically explore the latest research in industrial development.

In recent years, the revenue growth of China's creative design services industry has been notable. Particularly in 2022, China's cultural industry continued to expand significantly, with its scale reaching a substantial increase, and revenue surpassing 16.5 trillion Yuan. The proportion of cultural wholesale and retail sectors accounted for 17.6%, representing an increase of 0.3 percentage points from the previous year, while the proportion of cultural manufacturing sectors stood at 31.4%. This development highlights the significant role of the cultural industry in the economy and its contribution to economic growth. As the cultural and creative industries have become a popular area of society, a large number of designers have begun to explore the field of intangible cultural heritage (ICH), attempting to explore how to integrate and apply the genes of cultural and creative

merchandise design at three levels: instinct, action, and reflection of cultural design. With the in-depth development of a large number of practices, John Robert, head of cultural and creative development at the British Museum, said: “The principle that we followed was to avoid making creative merchandise with cheap consumer textures and to avoid losing their cultural, natural character through fashionable design.” He emphasized keeping the natural character or authenticity of the culture in a merchandise design, which should highlight its accurate extraction of all iconic cultural elements.

In addition, there is an emphasis on creative merchandise to provide for people’s spiritual and cultural needs. British scholars said that creativity characterizes both cultural and creative industries, which has transformed the UK from a conservative image to a creative leader. Howkins (2008) agreed and believed that creative merchandise should be personal, original, meaningful, and able to generate value. In other words, cultural and creative merchandise should emphasize individual creativity and design concepts as well as rely on divergent thinking and individual creative abilities within individual brains.

In contrast, more attention is being paid to higher-level spiritual and psychological consumption as traditional, simple material consumption no longer matches people’s needs. Xie (2020) claimed that consumers choose personalized, non-mainstream products that incorporate the designer's feelings and offer space for customers’ imagination. However, various single-category cultural and creative merchandise currently do not benefit from a large consumer base and need more vitality. Many creative merchandise need a cultural heritage of different regions and times, and they cannot create a new version of the historical heritage.

A redesign of the Luoshan shadow creative merchandise is an artistic form deeply rooted in both local tradition and modern life. It is genuinely avant-garde in form because this art allows for various theoretical and symbolic resources to be absorbed, ranging from traditional folk art to contemporary design. Literature from the creative products field is extensive and extends to animation, products, and souvenirs. Research in each field is extensive, and it has been suggested for innovative design practices combined with digital animation (Qian, 2018). Taking Luoshan shadow puppet (LSP) as an example, Yang (2022) explained how to protect the cultural and creative brands of intangible cultural heritage (ICH) from three aspects: copyright, trademark, and patent. Usually, as each consumer has different preferences for cultural and creative products, many designers would adopt targeted designs according to different consumer groups' needs, for example, books and picture books, toys, and intellectual development products for children. Zhang (2019) suggested that heritage and innovation could be perpetuated and promoted through digital means and innovative design. Furthermore, He (2017) proposed a concept and approach from modern design to explore how LSP could be applied in modern digital animation design, which promotes an innovative development of combining the intangible heritage of regional ethnic culture with animation technology. These design behaviours provide a high-level mapping for this study. These areas and their dimensions are contextual factors that could enhance an innovative merchandise design for the Luoshan shadow play.

However, there is a lack of core competitiveness in a series of Luoshan shadow puppet creative merchandise (LSPCM). He (2021) pointed out that Xinyang's cultural and creative products were limited to souvenirs sold at tourist attractions, which account for a small proportion of the overall cultural industry and have a low value-added product. Yan et al. (2012) also believed that it is common for cultural and creative souvenirs from tourist

attractions in Xinyang counties to take the form of scenic texts and pictures printed directly on final merchandise. There is no difference between these merchandise, and they also have problems such as the lack of types and design substance.

Finally, the majority of those working on creative merchandise design for Luoshan shadow are professionals in graphic design, product design, and other related disciplines. These designers need an in-depth understanding of the cultural heritage in their education and training. Many designers are used to imitating what is already available. While designers usually use superficial visual elements in design works based on traditional Chinese graphics and concepts, those who dig deeper into their cultural connotations are still few (Yang, 2018). Meanwhile, studies by scholars on Luoshan shadow as a creative merchandise of intangible cultural heritage have mainly focused on the aesthetic, artistic and communication perspectives, with little systematic elaboration from a rhetorical perspective. There are also a small number of works to study its communication effect and design expression effect.

In a nutshell, this study used rhetorical theory to explore product design to demonstrate creativity and design thinking in Luoshan shadow puppet creative merchandise. A design methodology is constructed and applied to the practice of this study by applying a visual rhetoric principle. There is still great potential for developing creative product design around Luoshan shadow play, whose development could bring a broader scope for it to combine with innovative development of the times in practice and reveal a new cultural connotation.

1.1.1 Luoshan Shadow Puppet

Luoshan shadow puppet (LSP), originating from Luoshan County in Xinyang, Henan Province, China (Figure 1.1), is a traditional folk art with distinctive local characteristics. Its history can be traced back to the Ming and Qing dynasties. As an art form that uses leather puppets as media and presents dramatic performances through light projection, Luoshan shadow puppet has integrated rich local culture and folk beliefs throughout its historical development. The meticulously crafted puppets, made from animal hides, are carved and painted to depict characters, while the stage design combines curtains and lighting to showcase the emotional and dramatic movements of the puppets through the interplay of light and shadow (Figure 1.2). The repertory of Luoshan shadow puppet includes historical stories, folklore, and mythological tales. Common performances include "The Yang Family Generals," "The Cases of Judge Bao," and "The Legend of Yue Fei," which not only recount the legends of heroic figures but also reflect the social context and values of the time.



Figure 1.1: The Location of Luoshan Shadow



Figure 1.2: The Figure of Luoshan Shadow

As an important traditional culture, Luoshan shadow puppet (LSP) carries rich historical and cultural connotations, making it significant for the study of Chinese folklore and artistic development. However, with the diversification of modern entertainment forms, Luoshan shadow puppet (LSP) faces challenges in preservation and transmission. Consequently, relevant organizations are committed to protecting and preserving this valuable art form through measures such as product design, performances, and research, ensuring its continued development and dissemination.

1.2 Statement of the Problem

A critical issue is that innovation and integration of modern design elements have not been achieved on the basis of respecting and preserving traditional art forms. Although design suggestions for these merchandise are readily available (He, 2021). Yang states that the design of such creative merchandise involves aspects of culture, functionality, innovation, and technology (Yang, 2023).

Case studies on creative merchandise related to Luoshan shadow puppet clearly demonstrate that a lack of effective design methods negatively impacts both innovation and

market acceptance. To address this issue, designers should strive to incorporate diverse creative ideas and perspectives to inspire design innovation. Additionally, it is essential to skilfully integrate modern design elements while preserving the traditional artistic characteristics of Luoshan shadow puppet (LSP), ensuring that the merchandise embody both traditional charm and contemporary aesthetic and functional requirements.

In a conference interview with Associate Professors Dong Ying and Xiang Jun from Xinyang College, it was announced that previous designs of creative merchandise related to Luoshan shadow puppet (LSP) have not been successful. Current case studies reveal that some merchandise suffer from overly conservative or imitative designs, lacking innovation, which results in a lack of market competitiveness and appeal. Due to the absence of innovative elements, many Luoshan shadow creative merchandise lack uniqueness and struggle to differentiate themselves in a highly competitive market. Additionally, designs that fail to incorporate innovative elements do not effectively meet consumers' functional needs and aesthetic expectations.

Moreover, through a literature review, the researcher found that scholars have shown interest in the innovative design of Luoshan shadow puppet creative merchandise. This study applies visual rhetoric to the innovative design of Luoshan shadow creative merchandise and explores the use of visual rhetoric techniques in creatively applying imagery, colour, and form. This research represents an exploratory study that combines visual rhetoric theory with the design of Luoshan shadow puppet creative merchandise. It aims to summarize and refine design methods and strategies for effectively utilizing visual rhetoric in the design of Luoshan shadow puppet merchandise, ensuring that this unique traditional culture is neither overlooked nor forgotten.

In general, Luoshan shadow creative merchandise, like those sold in most regions, have the following problems:

i. simple imitation, copying of elements, low style recognition.

ii. insufficient cultural connotation and original design creativity.

iii. low comprehensive quality.

iv. imperfect product communication strategy and design evaluation system.

These problems show many areas for improvement in the innovative design and cultural continuity of Luoshan shadow creative merchandise. Therefore, after clarifying some core concepts and problems of Luoshan shadow creative merchandise, a comprehensive and systematic deconstruction, and analysis of the redesign strategy for Luoshan shadow creative goods from a rhetorical perspective is carried out in this study.

Given these issues, it is crucial to help Luoshan shadow puppet creative merchandise retain unique value. Integrating visual rhetoric methods can effectively merge traditional art with modern elements during the design process. Additionally, incorporating visual rhetoric (VR) into merchandise design allows for a better consideration of users' emotional and cognitive needs, thereby providing a richer experience and greater satisfaction during both the use and appreciation of the products.

Analysis reveals that there are significant gaps in the innovative design of Luoshan shadow puppet creative merchandise. These gaps include insufficient alignment with market demands, a lack of innovative design methods, inadequate exploration of design theories, insufficient case studies, and limited cross-disciplinary collaboration, which could

potentially lead to a loss of important value. Therefore, there is an urgent need to seek new, systematic design methods and practices to address these gaps, aiming to enhance the market adaptability, innovation, and cultural value of Luoshan shadow creative merchandise effectively.

1.3 Aims of the Research

This study analyses and summarizes the creative merchandise design methods used on Luoshan shadow puppet elements from a visual rhetorical perspective. It aims to identify rhetoric visual elements in creating merchandise of Luoshan shadow puppet characters for tourist attraction and improve user satisfaction with Luoshan shadow creative merchandise. Besides that, it also establishes a new design approach to creative merchandise based on Luoshan shadow elements and to measure its feasibility.

1.4 Objectives of Research

The objectives of this research are to:

i. To examine the significance of Luoshan shadow puppet elements for the development of creative merchandise.

ii. To analyse the Luoshan shadow puppet elements for the development of creative merchandise by incorporating visual rhetoric characteristics.

iii. To propose a new design approach of the creative merchandise products from Luoshan shadow puppet elements by incorporating visual rhetoric characteristics.

1.5 Research Questions

To achieve the objectives of this study, the following research questions were formulated:

RQ1: What is the significance of Luoshan shadow puppet elements that can be developed for creative merchandise?

RQ2: Why are the Luoshan shadow puppet elements can be developed for creative merchandise by incorporating visual rhetoric characteristics?

RQ3: How are the Luoshan shadow puppet elements can be enhanced as a new design approach for creative merchandise by incorporating visual rhetoric characteristics?

1.6 Scope of the Study

This study is limited to Luoshan shadow puppet (LSP) in Xinyang, Henan, focusing primarily on the exploration of innovative design for this region-specific form of shadow play. Although Luoshan shadow puppet, as a local intangible cultural heritage, has a profound historical background and cultural value in Xinyang, Henan, its unique artistic style and expression may also vary in different regions. The task of this study is to outline the design methods for Luoshan shadow puppet merchandise based on visual rhetoric theory and methods. The focus of this research is on Luoshan shadow puppet merchandise, representing an innovative field that integrates traditional art with modern design.

1.7 Significance of the Study

The significance of this study lies in the development of creative merchandise based on Luoshan shadow puppet (LSP) through the application of visual rhetoric (VR) design methods, thereby enhancing the design quality and meeting consumer needs. As a traditional Chinese ICH, Luoshan shadow puppet, with its unique artistic expressions and cultural connotations, still holds substantial potential in the modern market. However, traditional designs often struggle to attract contemporary consumers, particularly in the

context of constantly evolving aesthetic and functional demands. This study aims to integrate visual rhetoric (VR) theory with the artistic elements of LSP, using innovative design approaches to preserve and promote this valuable cultural heritage while enhancing its market competitiveness by offering consumers more appealing and functional merchandise. This research also contributes to providing a reference for the creative merchandise design of other intangible cultural heritages.

This study would add to new knowledge, method, and practice in the design field. Specifically, this study would combine visual rhetoric (VR) with the Luoshan shadow creative merchandise design, which is not found in existing studies. Besides that, this study would examine the methods and effects of visual rhetoric (VR) in the application of Luoshan shadow creative merchandising, thus suggesting new approaches to the field. It will promote an innovative development and creative transformation of Luoshan shadow puppet and solve its design problem of homogenization for creative merchandise.

This study is important because it can develop a dual focus on both artistic aesthetic and practical value of the merchandise, which in turn expands its scope of use for the Luoshan shadow creative merchandise.

In conclusion, the results of this study will benefit the heritage of Luoshan shadow art and Luoshan shadow artists, and manufacturers of creative merchandise. It will offer designers new design ideas and provide strong support for the sustainable development of Luoshan shadow creative merchandise in the long run..

1.8 Research Framework

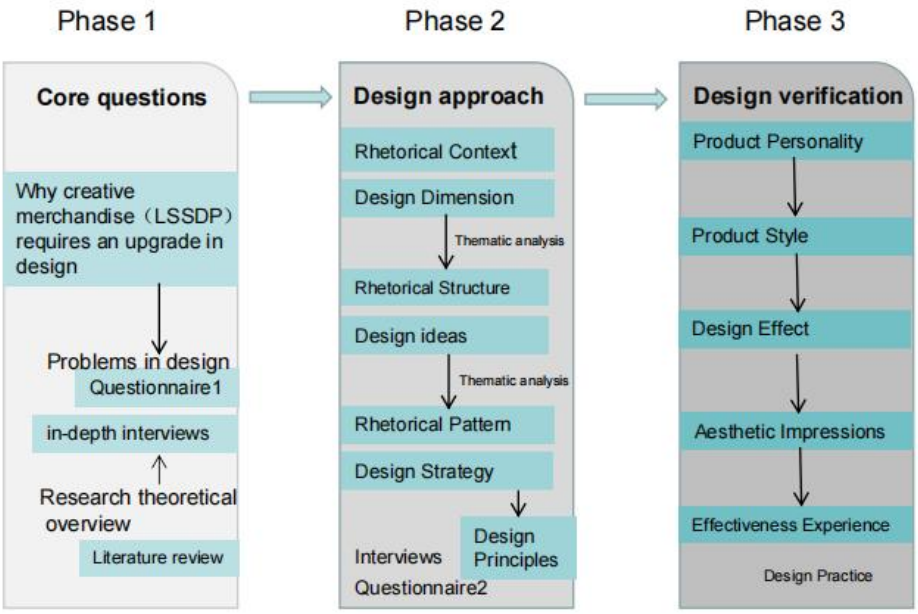


Figure 1.3: Research Framework

This study consists of three phases: problem identification, design method, and validation (Figure 1.3). The purpose of the first phase is to gather all available information and identify a significant problems through interviews and questionnaires. This phase also reviews the background and research theories related to creative merchandise design for Luoshan shadow.

The second phase aims to examine design patterns and highlight the influence of other scholars. It also focuses on data collection and analysis, as well as creative merchandising practices and processes. By combining qualitative and quantitative methods and using case studies, this phase explores how visual rhetoric (VR) impacts the design of Luoshan shadow creative merchandise and proposes a framework for its influence on such designs.

Phase three aims to validate the role of visual rhetoric plays in the design of these creative goods, with a focus on the findings and results of this study.

1.9 Theoretical Framework of the Study

The social world is constituted by what people are freely conscious of in their rhetorical practices (Mateus, 2021). However, people often confine their understanding of 'rhetoric' to the ornamentation of language and words and generally focuses only on what is persuasive and attractive about the expression of speech. It has been shown that vision and rhetoric are intrinsically linked. The visual rhetoric is to demonstrate how the perceptual visual symbolic content has a rational expressive utility (Figure 1.4).

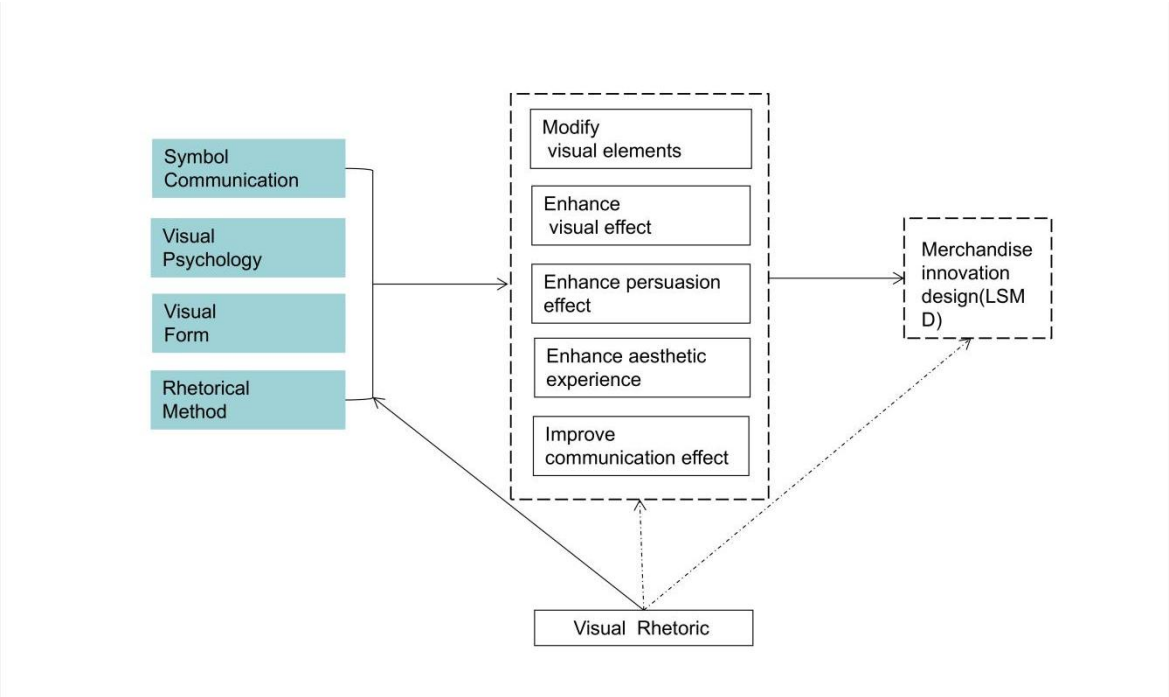


Figure 1.4: Theoretical Framework

1.9.1 Rhetoric

The main features of rhetorical theories in the rhetoric literature are activities, effects, and regularities. Aristotle was a well-known philosopher who was a prominent

figure in early rhetoric. His theoretical monograph, “Rhetoric,” claimed that rhetoric is “an art of speaking.” It was a period in which rhetoric emphasized its function and method of persuasion, using speech and debate to achieve what was persuasive. Nowadays, there is a better understanding and appreciation of rhetoric. Many scholars believed that modern rhetorical activity allowed for more accurate and vivid speech acts of verbal expressions. Another view is that modern visual rhetoric has allowed for means, methods, or laws that enhanced how language is expressed, such as a relatively new mediation and particular turn. Besides that, other scholars considered rhetoric as a science that studies the objects of research, such as rhetorical activity, rhetorical methods, and rhetorical laws. In general, rhetoric focuses on rhetorical activities and how they enhance the expressive effect of words or sentences.

1.9.2 Visual Rhetoric Theory

Visual rhetoric (VR) is a recent area of rhetorical research that arises from the visualization of linguistic rhetoric. Since the 1960s, there has been an unprecedented boom in visual culture. This visual language is gradually expanding, and the concept of visual rhetoric (VR) is increasingly appearing across various fields of art and design..

1.9.2.1 Image Rhetoric Theory

Image rhetoric was first proposed by Barthes (1964) and Durand (1970), who extended the research perspective of rhetoric to image and object. Figurative rhetoric involves transforming linguistic art form into a visual art form to achieve optimal visual impact and communication.

In 1964, Barthes proposed a semiotic perspective in expressing the symbolic meaning of visual images in image rhetoric, which led to it being a visual rhetorical

phenomenon. Furthermore, Barthes (1964) specified that these three elements,- linguistic information, direct reference to the image, and intentional reference to the image, - could constitute a complete image, where intentional reference to the image refers to the image rhetoric.

In 1970, Durand put forward the visual turn of language rhetoric research in his article, “Rhétorique et image publicitaire.” Following this, in “Rhetorical figures in the advertising image,” he empirically studied thousands of advertising pictures through typical comparisons and contrasts to argue for a variety of verbal characters in traditional language rhetoric to be expressed in advertising pictures.

Barthes (1964) and Durand’s (1970) research on visual rhetoric started from the performance of advertising images. Their analysis and research results of image rhetoric provided a good starting point for future generations to study visual rhetoric. However, their research was limited to such traditional rhetorical research framework systems as persuasive effects, rhetorical devices, and textual forms. It did not involve factors outside those structural systems of images, such as its rhetorician communicator, receiver (viewer), reception context, period context, and medium.

1.9.2.2 Visual Rhetoric Theory based on Semiotics.

Following the theoretical framework of semiotics, Professor Bonsiepe (1965) formally introduced the concept of visual rhetoric. He believed that all but a few purely informative designs are inseparable from rhetoric in visual communication. Through research and argumentation, Kinross (1985) proposed that:

> That kind of pure information design also needs the component of visual rhetoric because pure information design has the effect of persuasion and

unobstructed characteristics in rhetoric to express the designer's design intention and win the participants' trust.

Kinross (1985) claimed that visual rhetoric (VR) is closely related to information design. This was further pointed by Buchanan (1985) that design could also be considered a visual artistic expression. Its purpose is to communicate and achieve the effect of persuasion and persuasion through communication. Therefore, there is a need to develop a set of rhetorical theories on vision for design art. Following on from the practice of visual rhetoric, a group of operational models of visual rhetoric (VR) in poster design were explored by Ehses (1984). It focused on inspiring and invoking various visual rhetorical expressions through a two-stage process of idea formation and sophistication of poster design. The poster design was completed through idea formation and sophistication, which referenced and inspired various visual rhetorical expressions.

Today, there is a comprehensive perspective of visual rhetoric research. It is often studied through interdisciplinary synthesis, finding traces of visual rhetoric across various fields and moving beyond the traditional focus areas such as television, architecture, advertising film, interior design, photography, and painting. Visual rhetoric has extended its scope to include the integrated rhetoric of linguistic symbolism and visual image transformation.

1.9.2.3 Visual Communication Theory

Moriarty (1994), an American visual communication scholar, believed that visual communication is a communication activity that converts ideas and information into visual forms and helps complete the function of visual perception. Wang (2018) also argued the same point as Moriarty (1994) and claimed that visual communication is an interdisciplinary discipline involving many fields and characterized by a vast and

decentralized academic branch. Most are distributed in psychology, semiotics, aesthetics, communication, history, image philosophy, and other fields. There are four components in visual communication studies: visual cognition, visual representation, visual rhetoric, and visual aesthetics. In "*Visual Persuasion - The Role of Image in Advertising*," Paul Messaris (1997) discussed how images are implicitly characterized in visual persuasion, focusing on three aspects of participants' interpretation of visual messages: image, mind, and reality. Furthermore, Lester's (2000) "Visual communication: Images with messages" studies visual communication by analysing how people reflect on their organs of perception, the principles of visual perception, visual value orientations, and new media. Michell (1994) developed what is known as the 'image turn' theory, a study of visual representation in visual communication. A shift towards images has led scholars to recognize the importance of images in how information is communicated and received.

From a communication point of view, graphics and images are more visual and graphic communication symbols than words, while moving images are more realistic and intuitive visual symbols than static images. Visual symbols with authenticity and intuition contain visual language that can effectively convey information and attract viewers as much as possible (Sun, 2023). People today live in an age of wealthy information resources, where visual communication gradually moves away from language as a symbolic form of communication. It has the advantage of authenticity and image, which could quickly attract people's attention, satisfy users' visual needs, influence their visual cognitive ability, and act on their visual cognitive process.

From pictures and images to multimedia screen communication, visual communication has gone through a phase where it has gradually become closely related to

people's lives. Due to the attention economy, these visual elements have become ubiquitous, densely presented, and prevalent in all areas. They capture users' attention and are gradually taking over as a part of society's cultural life.

This study was successfully carried out by using the theory mentioned. Based on these theories, a questionnaire survey was conducted on the cognitive level, preferred style, and willingness to communicate of those respondents for the Luoshan shadow creative merchandise, and informants were selected for in-depth interviews to summarize the respondents' psychological needs and characteristics. Meanwhile, using the appropriate rhetorical methods could help Luoshan shadow creative merchandise through innovation and design practice, ultimately improving these merchandise to be accepted by consumers and promoting more sustainable development.

1.10 Structure of the Thesis

This study is divided into six chapters (Figure 1.5). Each chapter includes an introduction, a brief description of what the chapter is about, and a summary.

Chapter 1 is the introductory chapter. It outlines the background and conceptual basis of this study as well as provides an overview of the research objectives, questions, significance of this study, and a theoretical framework.

Chapter 2 is the literature review. It first introduces the history and characteristics of Luoshan shadow, and then introduces the influencing factors and design methods of Luoshan shadow puppet creative merchandise design. This chapter follows with a literature review of visual rhetoric, including concepts, expressions, and applications of visual rhetoric.

Chapter 3 is the research methodology which contains an overview of the methods used in collecting and analysing the data. The main contents of this chapter include research design, theoretical support, data collection, data analysis methods, and research procedures.

Chapter 4 is the results and findings of this study. It presents an overview of this research data and responds to the study questions based on these findings.

Chapter 5 discusses the research findings and relates the findings on visual rhetoric affecting the Luoshan shadow creative merchandise design with relevant literature.

Chapter 6 concludes with a detailed description of the recommended contributions of this study. Additionally, this section describes the limitations and future research directions.

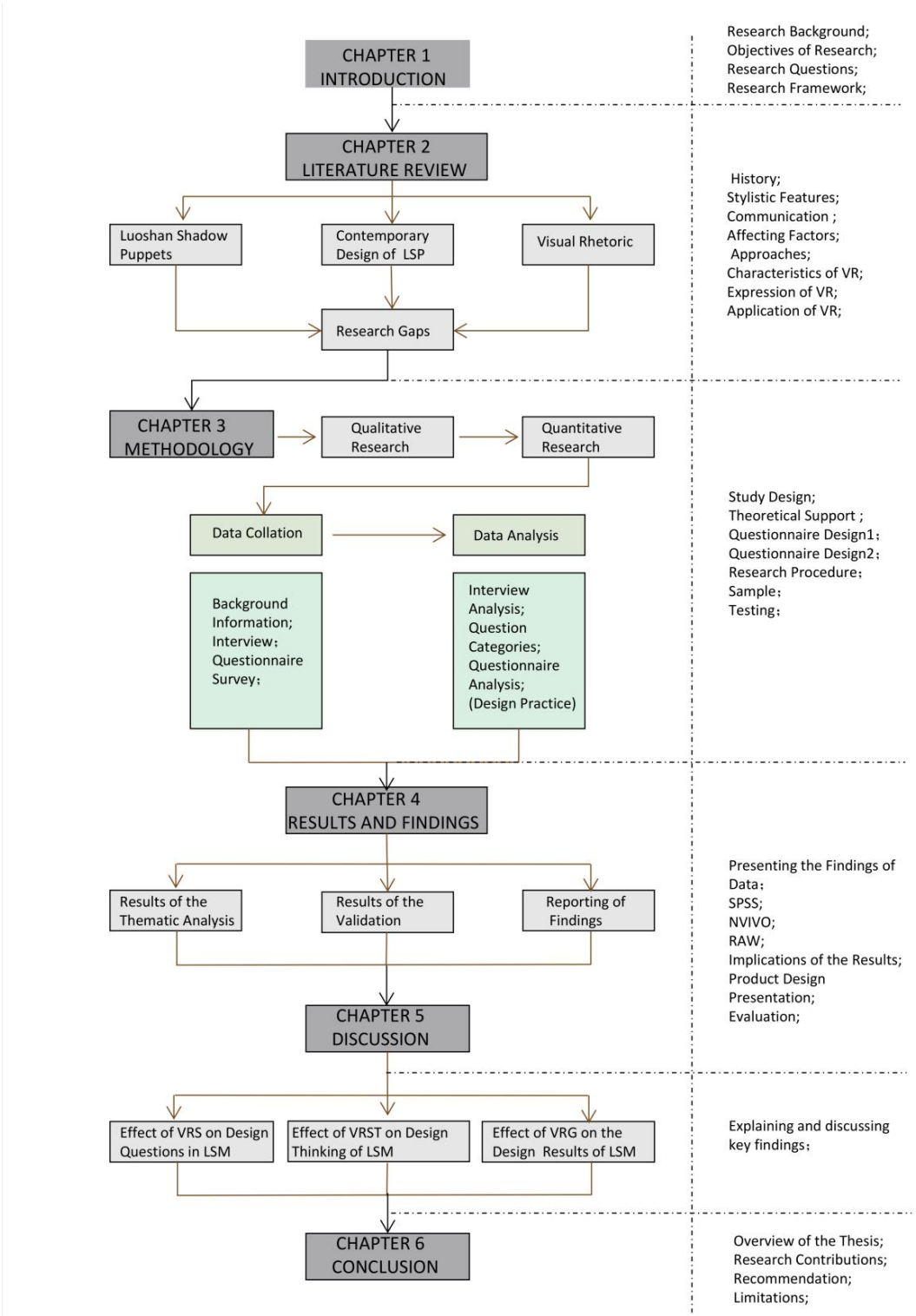


Figure 1.5: Thesis Strcture

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The literature review draws on various writings by folklore artists, researchers, and designers. This study reviewed the kinds of literature on Luoshan shadow, creative product design for Luoshan shadow, and visual rhetoric (Figure 2.1). Reviewing past theories related to creative merchandise design can help researcher understand and examine the shortcomings of creative merchandise concerning design and communication, which can prepare them for sustainable future development of creative merchandise design in Luoshan shadow.

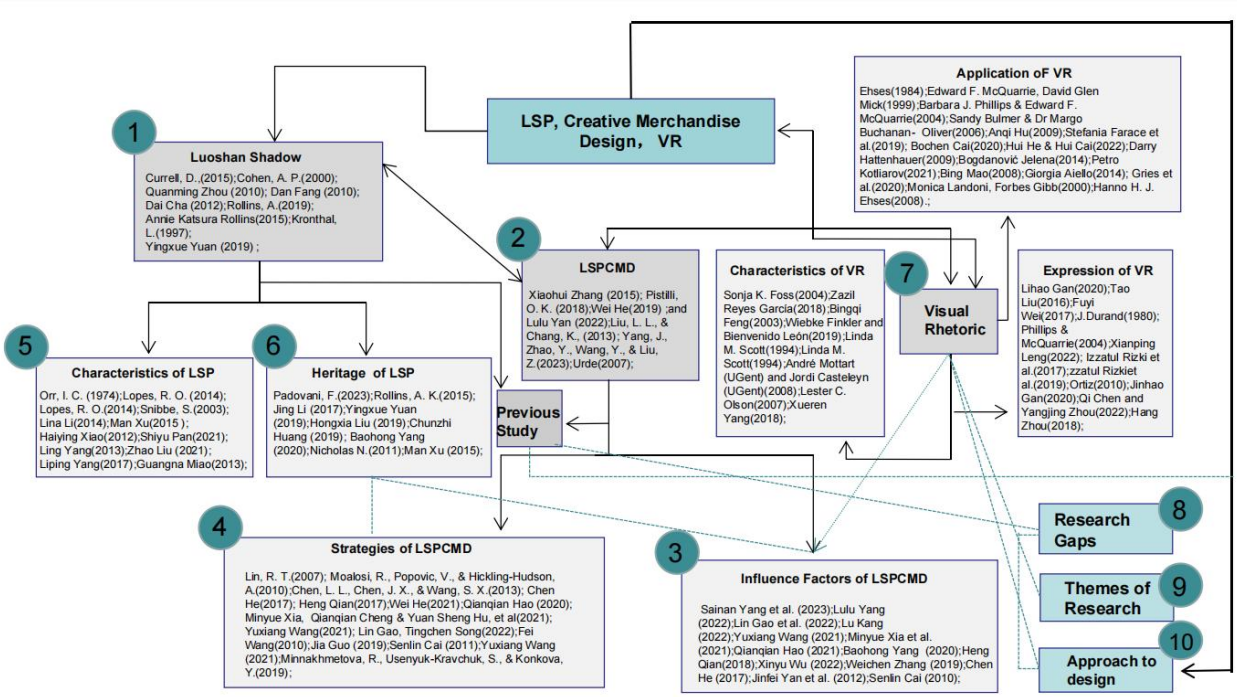


Figure 2.1: Research Framework

2.2 Global Vision of Luoshan Shadow Puppet

Shadow puppets are called differently in different countries. In France, shadow puppets are called ombres chinoises, meaning 'Chinese shadows.' In Turkey, it is called Karagöz, representing the hero of Turkish shadow puppet theatre. In Malaysia, shadow puppets are called wayang kulit. In China, it is called Piying xi (Currell, 2015). Shadow puppets from different regions have a long history, creating unique cultural values (Wan et al., 2011).



Figure 2.2: Luoshan Shadow Puppets

The Luoshan shadow puppet (LSP) explored in this study is one of the well-known shadow puppets in China. It is an ancient folk art with a unique charm, which uses silhouettes of characters made of cowhide or cardboard to act out stories from folk plays (Figure 2.2). It originated in Hebei during the Ming Dynasty in China, as stated in the book "*Luoshan County Chronicle*" : From the Jiajing period of Ming Dynasty (1552 to 1566), Luoshan shadow puppets began to flourish and grow in the Luoshan County of Xinyang City. Guanghui Chen (2018), who is a representative inheritor of LSP, said that LSP originated in the late Ming and early Qing dynasties; because of its proximity to Hubei and

Anhui, it has brought together a rich cultural heritage with all the essence of the three provinces' artistic characteristics.

Some scholars are still interested in studying what happens in a Luoshan shadow, even though its entertainment function has deteriorated. Luoshan shadow play has recently fallen into a difficult situation, such as financial difficulties, inheritance problems, and reduced market demand, and its cultural entertainment function is gradually dying out (Yuan, 2019). Nowadays, there are old and young shadow play inheritors, and most of those involved in shadow play are over seventy years old. Shanniu, another inheritor, mentioned that in a few more years, the Luoshan shadow art might be lost; therefore, there is an urgent need to conserve and preserve the Luoshan shadow art. This should include the efforts and co-operation of all those involved especially those in literature, music, and crafts to create audio-visual materials to be passed on to the future generations. The next section of this chapter focuses on what makes the Luoshan shadow art unique, highlighting its stylistic characteristics and current state of transmission, including (i) artistic characteristics, (ii) development in contemporary art, (iii) communication, and (iv) value.

2.2.1 The History of Luoshan Shadow Puppet

There has been a number of research on the history of shadow puppets in various countries. The earliest shadow puppets originated from China in 121 AD. Many scholars agreed that shadow puppets originated from the East and still exist as an art form (Currell, 2015). The tradition of Chinese shadow puppets, especially, has a long history (Nicholas, 2011) and there are several hypotheses about the origin of this shadow puppets. Kronthal (1997), for one, believed that it came about during the reign of Han Wu Di (140-86 BC).

The history of Luoshan shadow puppet originated much later than those of the Han Dynasty (202 BC-220 AD). According to the Xinyang Regional Records (1990), Luoshan shadow was introduced to Luoshan from Luanzhou in Hebei during the Jiajing period of Ming Dynasty (1368－1644), with a history of more than 450 years. It is less historical than the Han dynasty shadow puppets as described by Kronthal. According to Yang (2020), it has been a long process of self-protection and development from when the shadow was introduced to Luoshan during the Jia Jing period of Ming Dynasty to when it was named a national intangible cultural heritage. Due to the lack of historical documents, details of how Luoshan shadow puppet was passed down and developed before the middle and early Qing dynasties are absent.

Furthermore, over many generations of shadow masters since its beginning, Luoshan shadow has developed into a very matured genre with a full range of characters and beautiful forms. An important contributor to the Luanshan shadow was Xiangzhan Guo (1840-1912), a shadow artist of the late Qing dynasty, who personally travelled to Luanzhou to learn the art from Shansu Ding, a court shadow artist, and returned to his home-town with the shadow art of the time (Fang, 2009). He reformed the shadow art after returning home, gradually reducing what was originally a 90cm high shape to 50cm, making it lighter and more suitable for the mountains of Jianghuai. Subsequently, many Luoshan shadow artists were often invited to perform out of town and trained many shadow artists for Hubei, Anhui, Zhumadian, Nanyang, and many other places.

As lifestyles changed and the forces of increasing globalization exerted pressure on the environment that nurtures the long-standing tradition of shadow puppets, much attention has been paid to its survival since the early 1900s (Rollins, 2019). From the

1920s to the 1950s, it was popular in Dawu, Hong'an, Guangshan, Xixian, and Zhengyang in the mountainous areas from Luoshan to northern Hubei. A series of measures was taken by the Xinyang City Government in the 1950s and 1960s to protect, restore, and organize shadow puppetry, which led to some development. For example, in 1964, the Luoshan shadow artists began to absorb the singing styles of Beijing opera, Henan opera, Hua Gu opera, and folk ditties, gradually conforming to a popular aesthetic standard and performing serials such as "*The Red Seed*." However, in the following 1970s, Luoshan shadow play was severely destroyed, and performances were forced to be banned for various reasons.



Figure 2.3: Yulun Chen and Luoshan Shadow Social Inheritance Exchange Base
(Source: https://www.meipian.cn/2htep4zf)

The declining master-apprentice system of Chinese shadow puppetry raised urgent questions about how best to ensure transmission to new generations (Rollins, 2015). Chen (2017) discovered that since the 1980s, there has been a shortage of performers in the Luoshan shadow play (Figure 2.3). According to Chen, at present, many people in Luoshan county are engaged in shadow play, but due to low income, it is a problem how to pass it on. In 2007, the shadow art was approved by the government as one of the first provincial intangible cultural heritage protection projects in Henan Province as a means to preserve it and pass on its heritage. In 2008, the State Council announced it as a national intangible

cultural heritage protection project, and in 2011, it was listed as an intangible cultural heritage project of humanity by UNESCO.

Although there is an abundant amount of literature which confirms the age of shadow puppets, there is, however, still lack of comprehensive and in-depth research which explores the art of shadow puppets. Specifically, current research predominantly addresses the technical evolution, regional variations, and cultural impacts of shadow puppetry, with less emphasis on its innovative developments in contemporary society, the cross-disciplinary integration of its artistic forms, and its emotional resonance with modern audiences. Consequently, despite the widespread acknowledgement of shadow puppetry's historical and temporal significance, there is still a gap in systematic exploration and analysis of its role as an art form in the current cultural and social environment, as well as its potential for future development.

2.2.2 The Visual Features of Luoshan Shadow Puppet

Numerous researchers in the field of Chinese shadow transmission have observed that its unique shape and colour characteristics creates visual aesthetics. Furthermore, some scholars viewed the study of craftsmanship and stylistic features of Luoshan shadow puppets as conducive to discovering their visual cultural values. These characteristics include shape, craft, and colour.

In the study of the visual characteristics of Luoshan shadow puppet, existing literature has extensively explored aspects such as puppet design, colour usage, and craft techniques. The two-dimensional nature of puppet design was one of the significant visual features of Luoshan shadow puppet (Kang, 2022). These puppets were predominantly crafted using paper-cutting techniques, exhibiting intricate designs and distinctive regional

characteristics. Research indicated that the design of Luoshan shadow puppets not only reflected exquisite craftsmanship but also embodied local cultural symbols and aesthetic values. For example, the decorative details and design of the puppets often incorporated paper-cutting elements, which enhanced their visual distinctiveness and regional uniqueness (He, 2021).

Moreover, research on colour usage indicated that the colour choices and applications in Luoshan shadow puppet were characterized by their vividness and layered quality. Colour was not only used to enhance dramatic effects but also held cultural symbolic significance. Literature pointed out that traditional dyes and colouring techniques rendered the colours in shadow puppetry with a rich regional hue and emotional expression. Through careful colour coordination, shadow puppetry effectively conveyed dramatic emotions and cultural information (Li, 2014).

2.2.2.1 Shape

Chinese shadow puppets are usually small and delicate, emphasizing on decoration (Currell, 2015). They are flat shapes made of transparent leather. Moreover, shadow-making has different regional styles, as evident from the colours, physical characteristics, designs, or techniques used to cut the figures (Lopes, 2014). However, Luoshan shadow puppets also share some similar characteristics, such as the overall shape of shadow figures, with its exquisite knife work and production techniques which gives the viewer a sense of simplicity (Liu, 2021). Several studies have been conducted on the characteristics of shadow puppets and these characteristic indicators included flat features, decorative features, and formal beauty.

A typical feature of Luoshan shadow puppets is the flatness of their shapes, which is also a shared characteristic of all Chinese shadow puppets. Most puppet traditions use a stylized side (Lopes, 2014) whereby it is mainly two-dimensional in shape and performance, and the shadow puppet is a two-dimensional silhouette. The performance of shadow puppet is limited by the flat screen, which can only be a flat puppet, that if it leaves the plane, the image is blurred and disappears. Li (2014) explained that in the process of shadow creation, a reasonable layout of space using points, lines, and surfaces, together with clever colour, allows the shadow shape to appear as a visible flat image in two-dimensional space. Xu (2015) also explained how the two-dimensional flatness of the puppet is determined by the materials used to produce it and its performance style. Meanwhile, in terms of modelling, the Luoshan shadow is clear and concise in outline, with compact, vivid, and powerful lines, rugged simplicity, natural simplicity, and intense expressiveness. In the LSP, the puppets were typically flat, with their bodies lacking a three-dimensional sense and being presented in a two-dimensional manner. This flatness allowed the puppets to be clearly projected onto the screen in the light and shadow, while also rendering their images visually simpler and clearer. Additionally, the outlines of the puppets' shapes were typically simplified, featuring smooth lines and a high degree of generalization (Liu, 2021). This simplification made each puppet's image easily recognizable and ensured that clear contours were maintained in the projection of light and shadow. Complex details were often omitted to ensure that the puppets' features remained visible even in dim lighting. Research indicated that due to their flatness, the puppets produced relatively clear and well-defined images when projected. The projection effects of the light and shadow were directly influenced by their two-dimensional nature, which enhanced their visual impact on the screen (Pan, 2021).

Li (2014) analysed the flatness, imagery, and symbolism characterized by the Luoshan shadow shape from three perspectives. Firstly, folk artists used points, lines, and face space to create a reasonable layout so that the shadow shape presents a flat image in two-dimensional space. Secondly, the imagery of Luoshan shadow shape does more than pursue realism. However, based on capturing the main personality characteristics of the shadow image, folk artists use highly generalized and abstract artistic techniques to express their imagination. Finally, the symbolic feature of Luoshan shadow shape is used to express the individual characteristics of the shadow through allegorical patterns.



Figure 2.4: Luoshan Shadow Figure

Several researchers have researched what caused the flatness characteristics of the shadow puppets. Some researchers have conducted in-depth investigations into the causes of the planar characteristics of shadow puppet, suggesting that these features are not only

rooted in its traditional modes of representation and production techniques but are also closely tied to its historical development and cultural background. Studies indicated that the planar characteristics of shadow puppet primarily include its two-dimensional visual representation and the planar design of the puppets (Figure 2.4). These features are intrinsically linked to its origins in ancient Chinese handicraft traditions. The shape of shadow characters and the layout of scenes must be flattened to accommodate the effect of a flattened curtain performance. Pan (2021) reiterated that the richly programmed shadow forms were closely related to the local preferences and lifestyles of Luoshan and that the shadows were shown in a frontal aspect, with the artist decorating and altering specific facial details.



Figure 2.5: Luoshan Shadow Character Shape

Another essential feature of Luoshan shadow puppets is the decorative character of their shapes, which is more visually intense than what can be seen on a flat surface. This decorative quality is manifested through the intricate and vibrant designs of the puppets, which are often elaborately carved and painted with symbolic patterns and detailed motifs (Figure 2.5). For example, the phoenix, clouds, flowers, grass, and other patterns added to shadow people's costumes represent the identity of the characters or express good prayers. the style of Luoshan shadow art is also characterized by simplicity of face, exaggeration of

art, simplicity of life, subtlety of symbols, and elegance of decoration (Yang, 2013). Instead of simply pursuing realism, folk artists used highly generalized and abstract art techniques to make the shadows highly imaginative, based on the most critical individual features of the shadow images.

Chinese shadow puppet is characterized by its strong decorative qualities. The puppets are often intricately crafted with elaborate designs, featuring vibrant colours and detailed patterns that enhance their visual appeal. The puppets in Luoshan shadow were typically decorated with vibrant colours. Common colours included red, blue, green, and yellow, with strong colour contrasts that made the puppets more prominent in light and shadow. Additionally, the costumes of the puppets were typically adorned with intricate patterns, including floral designs, geometric shapes, and cloud motifs. These patterns often held decorative and symbolic significance, and sometimes incorporated traditional auspicious symbols to convey good fortune and wishes. Although the details of these patterns were presented on the flat surface of the puppets, they displayed rich visual effects during projection (Liu, 2021). With decorative patterns and bright colours, Luoshan shadow shapes reflect decorative solid features and brings a rustic decorative feeling. Yang (2013) found that the style of Luoshan shadow art is characterized by simplicity of face, exaggeration of art, simplicity of life, subtlety of symbols, and elegance of decoration.

Following a detailed description of what the decorative patterns of Luoshan shadow are like, Fang (2009) stated that :

> There are many abstract patterns in addition to figurative ones, such as dragons, phoenixes, flowers, and plants. For example, the geometric seawater pattern with repeated, continuous, and symmetrical arrangement under the trouser leg of the civil official's python robe with a diagonal line as the main body, the semi-circle pattern at the trouser leg of the female character, the cloud pattern, sun pattern, and fire pattern on the civil and

> military officials' hats. Locks patterns in the armour of a military general. (p.19)

These graphics are highly decorative and have auspicious meanings. Moreover, these graphics can also change and enrich the shape of shadow figure, highlight the artistic characteristics, play a role in reminding and leading a visual experience, and form a strong visual centre.

Apart from its flatness and decorative features, the Luoshan shadow puppet modelling has a strong sense of formal beauty. Swiderski (1984) stated that Chinese shadows have a different stylistic aesthetic while Li (2013) explained that in addition to the flat and symbolic features of the Luoshan shadow, its overall shape is ancient and rugged. She argued that this feature follows a law of formal beauty, giving the shape with a repetition, gradation, contrast, and rhythm of an extreme sense of formal beauty. The shape of Luoshan shadow is rough and simple, unlike the straightforward and clumsy but delicate shapes of Shaanxi and Tangshan shadows in China, and their form is quite aesthetically pleasing (Pan, 2021).

Liu (2021) believed that, as one of the most representative and excellent traditional folk cultures in southern Henan, the stylistic features of Luoshan shadow have a sense of simplicity, complemented by symbolic patterns and rich colours extracted from the daily life and traditional concepts of Luoshan people, reflecting its decorative solid features:

> The Luoshan shadow modelling also reflects a formal beauty mainly reflected in the beauty of external morphological elements. A unique stylistic feature is formed through the flexible use of various elements, such as face painting and costumes. (p.27)

The above features also emphasized the flexible use of points, lines, and surfaces to rationalize the space layout and form a visually flat image. Wang (2021) mentioned that most Chinese shadows focused on fine carving and hollowing, while the most significant difference between Luoshan shadow and other shadows in China lied in the production of shapes, which focused on the topography of shape, with less carving and hollowing compared to other shadows. In the image making of Luoshan shadow, folk artists do not stick to the authenticity of shadow characters but change the characters' shapes with their subjective imagination. In conclusion, it shows that Luoshan shadow has the same shape as traditional Chinese opera characters. However, it differs from traditional opera characters in its simplicity, simplicity, and decorative solid meaning.

2.2.2.2 Colour

Chinese shadow puppets are distinguished by their vibrant and distinctive colours. The use of bold, intricate colour schemes and elaborate patterns enhances their visual impact, making them stand out in performances (Currell, 2015). The colour of the Luoshan shadow was based on the inheritance of the Luanzhou shadow. It was gradually influenced by regional habits and aesthetic tendencies, which have made its unique artistic characteristics. The application of colour in Luoshan shadow is similar to the costumes and faces of traditional opera characters, which have programmatic solid features. Its unique colour visual aesthetic regulation has a practical significance for understanding regional folk culture and enriching the national expression of modern design (Figure 2.6). Hence, many researchers have conducted in-depth studies on the colour patterns and characteristics of Luoshan shadow puppets (Li, 2014; Yang, 2020).



Figure 2.6: Colour of Luoshan Shadow Puppet
(Source: The Little Red Book App)

In China, shadow puppets are brightly coloured and different from what is found in other countries (Lopes, 2014). Several studies have specifically investigated the colour characteristics of Luoshan shadow, and these researchers have identified five primary colours: red, yellow, green, white, and black (Pan, 2021). These shadows use relatively complementary solid colours, which are bright and vibrant, creating a strong contrast. Yang (2020) mentioned that regional culture makes the colour connotation of Luoshan shadow prosperous and stable. Artists often choose colours according to the needs of residents, making colours of Luoshan shadow generally bright and warm, rich, and vivid, pursuing solid contrasts while paying attention to harmony and unity. The author claimed that the general colour style of Luoshan shadow is warm and bright, and the colouring of faces, character costumes, props, and scenery favours a contrasting, bright, and loud atmosphere, and effect. Furthermore, the puppets in Luoshan shadow were often decorated with vibrant and saturated colours. These colours included red, blue, green, and yellow, which enhanced the visual impact of the puppets, making them more prominent and eye-catching in light and shadow projections. Additionally, research found that the colour design of the puppets frequently employed strong contrasting colours, such as red and

green, or blue and yellow. The use of these contrasting colours increased the visual depth of the puppets, making them stand out more during projection and enhancing the dramatic effect.

Besides that, Miao (2013) argued that although the colouring method of Luoshan shadow is similar to that of traditional Chinese painting, it has its unique colouring habits. Its various images are painted heavily, mainly red, yellow, green, black, and white. Each image of LSP has a primary colour, pursuing the same visual tone and coordination. By controlling the proportional relationship between dominant colour and embellishment colour, folk artists indirectly control how strong the contrast is between the overall colour tone of the shadow people, effectively adjusting the visual effect. In addition to the primary colours, the costumes and decorations of the puppets also featured ornamental colour details, such as gold, silver, or other bright hues. These decorative colours were commonly used to highlight specific details of the puppets, such as headpieces and belts, thereby enhancing their visual appeal and intricacy.

Chinese shadows are intricately carved, have rich and saturated colours. Clark (2006) who studied the comprehensive description of the colour characteristics of Chinese shadow, stated that these colours still stay vibrant after many years. Xu and Pan (2021), on the other hand, provided further analysis of the specific colour scheme characteristics of Luoshan shadow. They discussed the preference of Luoshan shadow artists for a complementary colour palette of red and green, with red and green in both figures. These colours are generally solid, high purity, saturated, and vivid. Matching colours are mainly used, contrasting and harmonizing (Figure 2.7). They noted that the colours of Luoshan shadow are more direct and robust than its shape and texture because colour is an essential

factor in attracting vision, which may render a touching atmosphere and attract attention through a robust contrasting relationship and strengthen the induction of sensuality.



Figure 2.7: Colour of Luoshan Shadow Figure

In general, these analyses of colour characteristics could effectively be applied to the study of the contents of Luoshan shadow creative goods design. They may be adjusted or improved to reflect research questions on these goods' colour directly.

2.2.2.3 Craftsmanship

Chinese shadows are primarily carved in form and line using various tools (Rui, 2018). Various tools are used to make this work, including carving knife, paper, transparent leather, a small hammer, and a roller, and many steps are involved in making it (Currell, 2015). As with most Chinese shadows, making a Luoshan shadow can basically be divided into six processes: (1) skin selection and processing, (2) overdrawing, (3) carving, (4) colouring, (5) fixing, and (6) embellishing. Chinese researchers provided a more detailed account of the production process of Luoshan shadow puppets. In contrast to Currell (2015) general introduction to the global craft of shadow puppetry, Chinese scholars have given a more detailed account of the Luoshan shadow-making process. Zhou (2019) mentioned that folk artists usually soak the cowhide in water for seven days and

waited until the hair could be easily plucked off, then used a knife to scrape the hair and trim the fat. They then put it up to dry, followed by a series of cutting blocks, drawing shapes, carving, hammering flat, colouring, flattening, oiling, connecting, and forming, and with three bamboo sticks, to complete the production of shadow. Liu's (2021) study further analysed the production process of Luoshan shadow. He pointed out that in the selection of materials, calfskin from the Jianghuai region is mainly used as sculpting material, and through more than ten artistic processes such as selecting materials, shaving, peeling, cutting, carving, forging, and flattening, colouring, depicting, baking oil, drying, embellishing, and tying to complete the production (Figure 2.8). They believed that the characteristics of Luoshan shadow craft have influenced other folk arts, especially folk painting, paper-cutting, painting, lacquer art, and zigzagging. The relationship between shadow modelling features and craftsmanship is an essential element in their analysis. This connection highlights how the artistic and technical aspects of puppet creation intertwine to produce the distinctive visual and functional characteristics of shadow puppet.



Figure 2.8: Craftsmanship of Luoshan Shadow Making
(Source: http://mt.sohu.com/20161013/n470171683.shtml)

Analysing the characteristics of Luoshan shadow craft revealed further significance of other arts for shadow modelling reference. In contrast to the Western entry point, Chinese scholars have studied the influence of other arts on the Luoshan shadow art within

Chinese art. Li's (2017) study analysed the borrowings of shadow art from the carving and hollowing process of paper-cutting art. It concluded that each shows the same characteristics, from design patterns to hollowing. There is a mutual influence between Luoshan shadow art and painting art. Zhang (2021) and Li's (2014) studies further corresponded with Li's (2017) view. There are many similarities between Luoshan shadow and painting in terms of stylistic portrayal. The way of decomposing and reconstructing shapes is common between Luoshan shadow and painting in the way of creation. Their views resonated in the studies of Luoshan shadow scholars, who noted that Luoshan shadows have a balance of painting and hollowing and thus have a southern Henan mountain village atmosphere.

Finally, Hou (2014) conducted an extensive study on the Luoshan shadow's production-making process in the background of comparison with the shadow of northern Henan. His research summarized the craft characteristics of Luoshan shadow based on physical verification. According to Hou (2014), the main feature of Luoshan shadow craft is both painting and engraving, which is more painted than engraved in the head stubble part, as only the outer outline of the head and main head ornaments are engraved. In contrast, the details of eyebrows, eyes, mouth, nose, ears, and other features and head ornaments are mostly painted. Overall, the shadow body is more engraved and occasionally hand painted.

Zhang and Shi (2015) on the other hand, argued that four processes are required to produce Luoshan shadow – (1) skin making, (2) over-drafting and hollowing, (3) colouring and fixing the colour, and (4) concatenation. They emphasized the inheritance of tradition in the production process. For example, an artist would treasure the black-and-

white draft of the shadow puppet with the master's inheritance and first place the cut leather on the black-and-white draft, then trace it down with a brush. The sketches need to be meticulously traced with meticulous care and precision. Many scholars have started to study Luoshan shadow's craftsmanship using the relevant cultural anthropology methods. There is also a reorganization reform and innovation of its craftsmanship. Therefore, research on the craft of Luoshan shadow puppets will provide information which could be the reference for this research.

The puppets in Luoshan shadow were typically made from leather, and their shapes and details were sculpted through meticulous hand carving. The carving process often involved intricate pattern and texture design, making the puppets' images more vivid and realistic. The carving skill required the creators to possess a high level of craftsmanship to ensure that every detail of the puppets was precisely rendered. In the production process, structural stability was an important consideration. The design and craftsmanship of the puppets ensured that they would not deform or suffer damage due to frequent movement. The stable structural design allowed the puppets to maintain their shape and functionality during performances.

Although there is relatively limited research on creative merchandise design for Luoshan shadow which focused on the production process, the literatures related to this area contributed greatly to the analysis in this study. Many researchers believed that Chinese shadow artists prefer using manual carving to carve their characters delicately (Hirsch, 2013; Shih & Chiu, 2020). Through this research and design, it is hoped that the people's understanding and awareness of shadow art would be enhanced, and that this ancient folk art would be presented to the audience in a new way. In particular, this

research on the Luoshan shadow craft would provide a valuable reference to research on creative merchandise design.

2.2.3 Communication of Luoshan Shadow Puppet

Shadow puppet has a long history in China. This tradition almost disappeared in the 1960s and 1970s but was revived in the 1980s and is now internationally classified as a form of intangible cultural heritage (Padovani, 2023). It has become a pressing issue to ensure the transmission of the Chinese shadow to the next generation (Rollins, 2015). The literature review on inheritance and communication of Luoshan shadow puppets revealed that there are a number of scholars who took interest in this subject matter, namely Svensson & Maags (2018), Xu (2015), Currell (2015), Fan (2016), Li (2017), Yuan (2019), Liu (2019), Huang (2019), and Yang (2020). These scholars established the foundation for the modern spread of Luoshan shadow puppets.

2.2.3.1 The Current State of the Heritage

Due to many factors, there are still many difficulties faced in preserving and transmitting intangible cultural heritage, and the overall situation could be better. In the olden days, there were two ways of passing on the skills of shadow puppets: firstly, from master to apprentice, and secondly, from ancestor to family. However, since the performance declination has been rapid and astonishing, the number of performers has declined from thousands of troupes in the 19th century to hundreds in the late 1980s to a few dozen in 21st-century China. There are only some opera troupes who are still performing and could make a living entirely from traditional performances (Rollins, 2015). Moreover, the loss of production techniques is a massive crisis in the current development of intangible heritage, particularly those facing a succession crisis and relying mainly on

States and Governments for protection (Maags, 2021). The inability to identify effective bearers to pass on ICH items is also a problem that needs to be addressed in developing and maintaining ICH. Yuan (2019) believed that the heritage of Luoshan shadow puppets has been lost because more than farming is needed to make a living, and young people would rather go out to work. Yang (2015) discussed the separation and gradual disappearance of a single regional shadow merchandise from the southern part of Henan and its replacement by an international design language and modern living concept. Yang (2019) also mentioned that because of changes in performance formats and artists' status, more and more young artists are giving up shadow puppet to pursue other professions, and the old artists who remain have reached retirement age, leaving southern Henan shadow puppetry in an awkward position of having no successor.

In general, the protection and heritage of Luoshan shadow puppet theatre often remain at the level of propaganda, and no diversified protection channels have been established, which naturally leads to significant limitations in developing its heritage.

2.2.3.2 Strategies for Heritage

Most scholars focus on the study of heritage strategies than on the current status of heritage. Since the 21st century, significant official policies and initiatives have been enacted at the national, provincial, and local levels to protect these cultural heritages (Helen, 2016). As the importance of preserving and transmitting intangible cultural heritage gains increasing attention, various innovative methods for its transmission have been proposed.. For example, Zandieh and Seifpour (2020) examined how spatial changes in bazaars can alter their local sense of place, identity, activities, and historical functions, emphasizing the need for urban managers to carefully evaluate the impact of such changes on the tourist experience and the intangible cultural heritage of the region.

Most of these research have studied the government, education, and artists' heritage strategies. These studies provided an in-depth understanding of the strategies and effects employed by various stakeholders in heritage preservation. They demonstrated the importance of integrating government support, educational initiatives, and artistic creation to effectively protect and transmit cultural heritage in the modern context. Through the combination of artists and schools, communities, and tourist attractions, shadow artists show the public, especially the youth, what they can do and how they can perform to cultivate and revive people's attention and understanding of shadow making and performance, and thus enhance the public's appreciation and consumption of shadow (Ying, 2022). Such initiatives can be directly applied to the communication practice of Luoshan shadow creative merchandise.

Yuan (2019) also proposed preserving the shadow play in static form, which could establish a physical preservation carrier and promote the establishment and discovery of Luoshan shadow cultural industry. For example, build a cultural dissemination base, which business projects including shadow opera singing, shadow production, traditional shadow, handicraft sales, exchange, and exhibition of new shadow opera under government funding. However, she did not discuss the transformation of the modern transmission of Luoshan shadow puppets and the current situation. Xu (2015), however, proposed strategies from audience market cultivation and training for professionals and ICH bearers as well as diversified inheritance. Xu (2015) stressed that it is imperative to allow Luoshan shadow puppets to go to market, to encourage diversified creation and heritage, and to combine them with new contemporary technology, new cultural forms, and ways that are readily accepted by the public so that they can meet a modern audience's aesthetic needs and spiritual pursuits. Another study by Liu (2018), proposed that the development of shadow

art should be integrated with the tourism industry. She believed combining Luoshan shadow puppet and tourism, business, and family visits would have unexpected effects (Liu, 2018). In reviewing these studies, they focused more on the inheritance of the shadow repertoire and do not pursue studies of transmission that extend beyond the shadow.

Another critical strategy for the heritage of Luoshan shadow puppets is using modern platforms. Users could build extensive networks around cultural heritage, connecting the past, present, and future using these platforms. Lim et al. (2018) argued that the inheritance of intangible cultural heritage is carried out by providing a tool that allows users to share with others their local knowledge and daily experiences as well as contributions from cultural institutions. Furthermore, a multidisciplinary digital platform that enables the management, preservation, and dissemination of tangible and intangible cultural heritage need to be developed (Koukopoulos & Koukopoulos, 2016). Yuan (2019) advocated multi-dimensional means to promote the spread of Luoshan shadow puppets. She suggested that new media technology should be used to preserve the living heritage of shadow artists. However, her discussion is less about how new technologies have affected the spread of Luoshan shadow and more about the technical aspects of innovation in Luoshan shadow itself.

Xu (2015) explored strategies for the future communication of Luoshan shadow puppets but did not develop a more profound study and discussion, for instance, how to integrate with animation and graphic design. Xu (2015), however, acknowledged how new technologies have driven the spread of the Luoshan shadow and suggested that these shadow elements, combined with modern design techniques and materials, are used in

modern graphic design, product design, and environmental art design. Along this line, Xu (2015) extended Cai's (2010) views on using new technologies to diversify the use of typical symbols in shadow modelling and enhance their communicative nature. Xu (2015) believed that the spread of Luoshan shadow puppets should be combined with new contemporary technology and new cultural forms.

Various studies have assessed the efficacy of new media in communicating cultural heritage. Some researchers have given examples of how new media platforms such as Micro-blogs, Face-book, web-casts, websites, and audiovisual media can transmit cultural heritage in all directions (Liu, 2021; Vassiliadis & Belenioti, 2017). These provided experience for the theoretical and practical exploration of Luoshan shadow propagation. Yang (2021) believed there is still a long way to go in using new media to pass on the Luoshan shadow art.

Liu (2019) summarized earlier scholars' research perspectives, arguing that the current research of scholars on shadow puppet theatre in southern Henan is still in its infancy. Many issues remained to be resolved in areas such as the survival environment, development mode, inheritance concept, and the construction of the master and apprentice team. With the development of on-line platforms and the highly interactive nature of web-casting, cultural heritage continues to expand into new technologies (Boboc, et al., 2022). The Luoshan shadow art follows the pace of the times and attracts more people to enjoy it using the real-time, multi-user nature of live web-casting. It combines new media forms with the art of shadow puppet heritage, expanding the scope of dissemination more broadly and transparently. It also makes it easier for enthusiasts interested in shadow puppetry to learn directly on-line by watching live broadcasts. During the live broadcast, various forms

of interaction, such as comments and pop-ups, are used to provide a ‘face-to-face’ opportunity for the shadow artists and the audience (Yang, 2021).

Cultural heritage transmission using new media, especially digital technology, is essential to researchers' concerns. Some scholars advocate using modern technology to ensure the integrity and transmission of their production process (Rodil, 2017; Yang, 2020). Rodil (2017) proposed considering the digitization of intangible heritage. Furthermore, Ghorpade and Pandey (2023) argued that block-chain can be widely and effectively applied to the global preservation, recognition, and development of intangible cultural heritage. It can be a secure database platform and an efficient and straightforward marketplace platform for genuine ICH practitioners, products, and services. The communication of Luoshan shadow puppets can be combined with the rational use of multimedia, augmented reality (AR), virtual reality, and other digital or IMAX technology to increase the number of innovative cultural and tourism integration projects that are experiential and entertaining (Fan, 2014). Digital technology has enormous advantages in cultural heritage conservation (Biryukova & Nikonova, 2017).

Modern new media and technology have enabled the traditional shadow art form to incorporate modern aesthetic intentions and expand its scope of development through new means of communication. Such flexible and diverse background design and production in advertising, games, video, communication, and other cleverly implanted shadow art is also a new way of dissemination (Zhang, 2014). Many scholars believe these new techniques have broken traditional shadow transmission's time and space limitations and can satisfy public demand for accessing shadow information any-time and anywhere (Wang, 2014). In

the meantime, it also advocated drawing on the experience of new technological developments in other folk arts.

It is appropriate to strengthen the dissemination capacity of Luoshan shadow puppets through artistic research methods. It would help preserve and disseminate Luoshan shadow puppets through government funding, new technology, and education. Therefore, the public can fully utilize platforms such as Face-book, Micro-blog, NFT, and short videos to take advantage of diversified cooperation and comprehensively understand Luoshan shadow art and surrounding cultural and creative merchandise. Further, some researchers suggest enhancing the efficiency of ICH dissemination through regional block technology. This research topic crosses the field of Luoshan shadow propagation. Hence, drawing on the critical elements of studies such as Yang (2020), Li (2016), and Biryukova & Nikonova (2017), questions of creative merchandise development in the study of Luoshan shadow modern communication are then raised.

2.2.4 The Significant of Luoshan Shadow Puppets in the Chinese Community

The significance of Luoshan shadow in Chinese society is reflected in its profound cultural connotations and extensive social impact. According to research by scholars, LSP is a significant intangible cultural heritage in China. Its unique performance style and rich dramatic narratives carry a wealth of historical legends, folk stories, and moral values. Scholars have pointed out that Luoshan shadow showcases local artistic characteristics and reflects core Chinese cultural values such as loyalty, bravery, and benevolence. In the context of cultural transmission and education in China, Luoshan shadow plays a crucial role in conveying and promoting the essence of traditional culture (He, 2021).

Cultural heritage has economic, social, and cultural impacts. Cultural heritage continues to have a profound value in modern society, reflected in its artistic value as entertainment and aesthetics, its historical value as cultural diversity, and its economic value (Lazrak et al., 2014). Pantović et al. (2023) explored the potential of intangible cultural heritage as part of cultural tourism products using Serbian dance as an example. They examined how to transform this cultural resource into an attractive tourism product, aiming to achieve dual benefits for both cultural preservation and economic development. Also, some scholars have researched the functional value, cultural value, and economic value of traditional culture such as Kronthal (2001), Guo (2019), and Fan (2016). Studying the multiple values of Luoshan shadow can provide designers with a wealth of inspiration and materials that can yield benefits in merchandise design.

First, intangible cultural heritage (ICH) has substantial functional values. Studies have shown that the functional value of ICH goes far beyond its status as a historical monument in its own right, and that it continues to play an essential role in modern societies Pan (2021) argued that the artistic value of Luoshan shadow from an aesthetic perspective, has both practical and aesthetic functions and possesses positive social meanings such as cognition, edification, memory, expression, lyricism, and entertainment. Research has found that it carries rich historical information and cultural traditions, and plays a unique role in contemporary society.

In addition, a study by Chen (2014) mentioned that Luoshan shadow puppet acted as a medium with blessings, and people expected to pray to the gods for assistance to get rid of their difficulties by shadow performing. This view of praying to the gods for help to get out of the situation was echoed by Liu (2019), who argued that Luoshan shadow puppet

is closely connected with folk beliefs and festivals, directly reflecting their spiritual and ideological pursuits. It also holds local people's prayers for peace and well-being and their aspirations for a better life in the future.

Second, cultural value is also an essential part of the value of Luoshan shadow puppets. It is vital to study what the past offers for those involved in cultural heritage and humanity (Rouhi, 2017). The quality of people's lives could be improved through valuable storytelling. The historical and cultural values of Luoshan shadow puppets began with Yin (2004), who first used the "cognitive" value of intangible cultural heritage. His analysis focused more on the cultural value of traditional art. However, many other researchers who understood the cultural connotation of Luoshan shadow were analysing its historical value. Focusing on the Luoshan shadow's historical value in Yang's (2020) work was mainly consistent with the previous discussion. In her opinion, there were strong ties between local folk culture and traditional shadow theatre, which reflected fundamental features of folk culture in the Luoshan area. Therefore, studying the survival philosophy of those who live in the Luoshan region is essential to this research.

In a broad ethnographic sense, intangible cultural heritage is a complex whole that incorporates knowledge, beliefs, artistic ethics, laws, and customs (Yan, 2019). It also reflected the daily customs and cultural practices of a society or community. These elements collectively formed the core of that culture and influenced its transmission and development. Guo (2019) emphasized that the intrinsic value of Luoshan shadow play lies in its life value, folklore value, and belief and conceptual value. For hundreds of years, the art of Luoshan shadow has been continuously created, inherited, used, and presented as a living culture, folk culture, ritual performance, and popular concept.

Therefore, Luoshan shadow puppet has profound historical and cultural value like other tangible monuments and cultural relics. Although its dissemination has received limitations, it remains a living historical source for studying anthropology and folklore for many people. Chen (2014) mentioned that the characters in Luoshan shadow provide a rare art design material and a vast display space. This viewpoint reveals the artistic value of LSP and its potential in the field of creative design.

Last, there is an emphasis on involving the Luoshan shadow in production and market circulation; transforming it into a cultural commodity that is widely produced, circulated, and creates economic value in modern life is a common theme in all discussions of its economic value. The economic value of cultural heritage can be defined as the amount of welfare, in both tangible and intangible forms, that heritage creates for society (Ruijgrok, 2006). A particular area of the cultural economy is the heritage economy. Many studies have proven it could bring more excellent value to local businesses and crafts (Throsby, 2019). Liu (2014) argued that contemporary production organization methods and distribution means to make intangible cultural heritage satisfy people's consumption demand and create economic value.

Yan et al. (2012) suggested a market-oriented orientation for the conservation and development of Luoshan shadow puppet to guide the tourism market and promote the economic benefits of scenic spots. For example, they constructed stages in tourist attraction areas and invite their folk artists and inheritors to perform at regular intervals. Guo (2019) also shared the same view as Yan et al. (2012) emphasized commercial packaged performances and local tourism to increase revenue and contribute to local economic development. Combining Luoshan shadow series merchandise and folklore tourism would

form an industrialized development to promote and drive the development of the local economy and tourism.

Zhu (2017) dialectically discussed the relationship between shadow and economics. According to Zhu (2017), the inheritance and development of shadow art are often linked with the economy, which builds and provides an essential platform for the development of shadow. On the other hand, figures of the shadow have a specific economic value in literature, opera, and aesthetics, which could drive economic development. He mentioned regular shows as an effective way for places to attract visitors, bringing in regular income. Zhu's (2017) work would provide helpful insights into the creative merchandise design work of Luoshan shadow.

In short, although Luoshan shadow has excellent values, there are few in-depth studies on its value, especially its economic value. These researchers have noted the intrinsic value of the Luoshan shadow, which is the root of its heritage. Thus, a study on the multiple values of Luoshan shadow puppets will help propose corresponding conservation and communication methods.

2.3 Contemporary Design of the Luoshan Shadow Puppet

Luoshan shadow is a type of folk art, as well as a cultural and economic carrier of traditional villages. This section explores the regenerative conservation of Luoshan shadow's original ecology and strategies for transforming cultural forms of shadow and obtaining a series of creative merchandise to form a cultural and creative industrial chain. The central purpose of this section is to examine strategies for designing creative merchandise before testing visual rhetoric interventions in the creative design work of the

Luoshan shadow. It is also vital to examine the application of existing design methods to the creative products of Luoshan shadow.

2.3.1 Application in Modern Design

Since creative merchandise design of Luoshan shadow is a relatively new research issue, there are few in-depth studies on this topic. However, a small number of relevant studies have also outlined the paths to creative product development of Luoshan shadow. Several studies have shown that design heritage is an essential way of integrating cultural heritage into modern society in the form of design and have started to focus on the use of cultural heritage in product design, graphic design, and animation design (Liu & Chang, 2013; Yang et al., 2023). It provides valuable insights into how Luoshan shadow can build avenues for developing cultural and creative products. Moreover, this was further noted in the studies of Zhang (2015), Pistilli (2018), He (2019), and Yan (2022).

Drawing inspirations from the history of cultural heritage, Pistilli (2018) stated that there is a need to transform their traditions into a competitive tool for brand identity. Qian (2018) referred to practical cases to discuss the innovative design of combining Luoshan shadow art with digital animation. He concluded that a combination of Luoshan shadow and digital animation could give a humanistic spirit to digital animation design with the cultural connotation of traditional art. However, Qian (2018) also mentioned that there was not a mature market operation mechanism for Luoshan shadow culture and creative industry, which meant that some animation companies are not original enough and were still at the low end of the digital culture industry chain and that they processed and produced animations for others and have not yet formed their own brand IP. He (2017) believed that modern animation design means Luoshan shadow art has a strong inherit-

ability based on design aesthetics, such that he studied how to recreate Luoshan shadow art for digital animation.

Apart from that, Li's (2017) study also examined how feasible it was to use Luoshan shadow elements in the interiors of tea houses. It was found that a significant correlation exists between Luoshan shadow play art and classical tea house interior design in terms of artistic expression. Li (2017) argued that a study on the role and influence of Luoshan shadow play art on other art forms was of positive and far-reaching significance to innovation in classical tea-house interior design and inheriting and spreading Luoshan shadow culture.

Furthermore, combining cultural heritage and product design was one way to enhance a product's appeal by creating experiential opportunities, enhancing consumer engagement, and stimulating an emotional response (Ko & Lee, 2011). The concept of local branding has been widely applied within cultural heritage, linking marketing strategies with the appealing aspects of a locality (Daldanise, 202). He (2019) proposed a development idea of Luoshan shadow art's cultural and creative design from both the perspective of modelling and the current situation of local cultural and creative product design in Xinyang. As a first step, He's (2019) viewpoint mentioned the development of Luoshan shadow cultural and creative products relying on the regional economy. Luoshan shadow should be integrated into the local economy with the trend of local development and combined with innovation and development of time in practice. Another was combining with new media culture. He also mentioned that since gaining more support from new generations is necessary for Luoshan Shadow to be revitalized, it became an essential tool for developing Luoshan Shadow's cultural and creative products by

combining it with new media culture. As with Taobao Live and Jitterbug Live, which drive China's jadeite and jade industry, new communication media can often bring new opportunities to the heritage and development of traditional art forms. And finally, the formation of a cultural and creative industry chain. Establish partnerships with famous local brand companies to create an industrial chain of Luoshan shadow cultural and creative products with the help of enterprise sales channels. A broader development scope could be given to Luoshan shadow through the market by integrating it into production practice. Scholars such as He (2019) and Pistilli (2018) drew inspiration from the history of cultural heritage while looking to the future to transform their heritage into a competitive tool for brand identity.

Analysing the creative merchandise design approach of Luoshan shadow further revealed its importance in tourism economic value. According to a study by Yang (2022), the Luoshan shadow is an example of exploring approaches to cultural and creative brand creation of ICH. Developers of cultural and creative brands would apply Luoshan shadow art in their cultural and creative brands to communicate what is most typical of Luoshan shadow history stories, words, and modelling patterns. Moreover, it utilized cultural and creative brands' diversity and inclusiveness to break through its traditional single communication channel and realized vivid three-dimensional cross-media communication.

Yang (2022) also pointed out that the intersection of Luoshan shadow and culture and creative brands could lead to consumption with creative design and promote the commercialization model of culture and creative brands. She also analysed the feasibility and suitability of intellectual property protection for the first time from an intellectual property perspective for Luoshan shadow cultural and creative brand. Yang (2022) argued

that the protection of intellectual property rights of Luoshan shadow cultural and creative brands was mainly to protect authors of cultural and creative product designs from unauthorized or permissible copying, modification, and abuse of their created design results by others. More specific types included Luoshan shadow books, silk fabrics, dolls, jewellery, and companion gifts. They effectively protected cultural and creative merchandise from infringement while increasing the economic benefits created by cultural and creative brands.

Cultural heritage provides various modern design elements and capabilities (Lupo et al., 2011). When carefully considering how Luoshan shadow puppets can be used in modern design, He (2019), Zhang (2015), and Yang (2022) all argued that modern design is a crucial material vehicle for the transmission and dissemination of this traditional culture. Modern design is an essential means of communicating cultural heritage; however, little attention has been paid to using these means to support Luoshan shadow culture transmission in research.

2.3.2 Factors Affecting Luoshan Shadow Creative Merchandise Design

Literature studies showed many factors affecting the Luoshan shadow puppet creative merchandise design (LSPCM), including culture, users, market, technology, aesthetics, materials, price, and function.

According to Hao (2021), the Luoshan shadow creative merchandise design is affected by a variety of factors, such as a traditional culture of Luoshan shadow, target audience needs, market trends and competitive conditions, materials, and production processes, as well as sustainability and aesthetics. Different designers and researchers have focused on integrating these factors over recent years to create creative merchandise with

uniqueness, market competitiveness, and sustainability for Luoshan shadow. This explained why Luoshan shadow creative merchandise design is a complex process. For example, designers needed to understand and respect the traditional characteristics and cultural connotations of Luoshan shadow, and make innovative designs based on them (Gao & Song, 2022). Therefore, designers must consider different factors that need to be considered when defining requirements in different cultures.

A review of relevant literature showed that the factors affecting Loushan shadow creative merchandise design change with the design situation. For example, when designing a traditional-themed Luoshan shadow creative merchandise, traditional features, and cultural connotations would be the main influencing factors, and designers must respect and protect those traditional skills and styles (Hao, 2021). Zhang (2019) believed that when designing a modern-themed Luoshan shadow creative good, market demand and consumer trends may become a dominant factor. Designers must focus on what their target audience needed and preferred to satisfy the modern consumer,s demand for innovation, fashion, and personalization (Zhang, 2019). Moreover, designers must consider specific design situations, such as design scenarios, product functions, and usage environments, to determine appropriate design elements and styles (Wu, 2022).

Table 2.1: Summary of Literature Review Influencing Factors

AUTHOR	CULTURES	USER	MARKET	TECHNICAL	AESTHETICS	BRAND	PRICES	FUNCTIONALITY	MAKINGS
Yang et al. (2023)	√	√						√	
Lulu Yang (2022)						√	√	√	
Lin Gao et al. (2022)	√	√	√						
Lu Kang (2022)								√	√
Wang (2021)	√					√		√	√
Minyue Xia et al. (2021)	√	√		√	√				

Table 2.1: continue

Qianqian Hao (2021)	√		√		√			√	
Baohong Yang (2020)			√	√					
Heng Qian (2018)	√			√					
Xinyu Wu (2022)	√			√	√				
Weichen Zhang (2019)			√	√					
Chen He (2017)					√			√	
Jinfei Yan et al. (2012)			√			√	√		
Cai (2010)	√				√				√

Table 2.1 summarizes the researchers' findings on what influences the Luoshan shadow creative merchandise design through literature combing. Changes in design situations would affect the Luoshan shadow creative merchandise design. Meanwhile, designers must combine various factors according to specific situations to consider creative merchandise suitable to create. Each study has at least two factors of effect, primarily cultural and functional.

This part discussed what factors affect the Luoshan shadow creative merchandise design. Designers must consider these factors comprehensively to create creative merchandise with uniqueness, market competitiveness, and sustainable development of Luoshan shadow.

2.3.3 Approaches of Using the Luoshan Shadow Elements in Modern Design

To date, research on creative merchandise design methods has been extensive, encompassing both subjective approaches such as contextual storytelling, narrative design, empathetic design, and semantic rhetoric, as well as more objective methods like the Analytic Hierarchy Process (AHP), factor analysis, cluster analysis, KANO model, Quality

Function Deployment (QFD), TRIZ, quantification theory, orthogonal experimental design, finite element analysis, shape grammar, shape matrix, and prototype theory. According to the literature, during the "design concept formation and positioning" stage, particularly when gathering user perception information and positioning the product, the more objective Kansei Engineering is the predominant design method. However, in the subsequent stage of "developing cultural and creative product design," subjective design methods are often chosen, as they can imbue creative products with a more emotional appeal (Cheng et al., 2022). For instance, Porncharoen (2024) explored the emotional design of Chinese traditional cultural creative products, arguing that emotional design is not only about meeting functional needs but also about conveying cultural symbols and craftsmanship, thereby eliciting a deeper emotional resonance from users during the product usage experience.

Design could be linked to culture by integrating cultural values in the merchandise (Moalosi et al., 2010). These days, the Luoshan shadow puppet is gradually used in various designs as a cultural symbol with deep connotations. Several designers explored the Luoshan shadow art from a contemporary design concept and approach, refining and summarizing how cultural heritage can be applied to modern design. Cultural heritage uses figurative and abstract symbols to provide material for creative merchandise design. The rich spiritual content embedded in intangible cultural heritage can be fully manifested in the design of creative merchandise, which not only enhances the cultural depth of the merchandise but also boosts their market appeal. By incorporating these traditional elements, designers are able to create products with unique cultural value and artistic charm, making them a crucial component in cultural and creative design (Liang, 2023). Although there is much current research on how shadow elements could be applied in

modern times, only a few research has been carried out on how they can be used in modern design. Several studies have explored cultural heritage through design approaches to the advancement and transmission of traditional culture in modern environments (Gao & Song, 2022; Hao, 2020; He, 2017; He, 2021; Qian, 2018; Wang, 2021; Xia et al., 2021). These studies provide insights into the subject matter of this study.

2.3.3.1 Implantation and Appropriation of Luoshan Shadow Elements

In the design field, a significant subject of cultural design is the identification of aesthetic impressions of national shapes or colours. A direct use of cultural elements means that the most representative symbols, in whole or in part, are attached to the product's surface. These elements can directly resonate with the audience and build public awareness of cultural heritage. He (2017) argued that digital animation creates a plot that combines the original storyline of Luoshan shadow puppets with a recorded shadow performance in an original dialect of a scene, which preserves its original expression of Luoshan shadow art to maximum extent in the design process. Noticeably, several designers used Luoshan shadow elements to express graphic symbols with high artistic values used directly in their works. He (2021) believed that many exquisite characters and floral patterns are available in Luoshan shadow puppets, which could be directly applied to creative merchandise.

However, He (2021) also argued that the structural shape of Luoshan shadow could be directly applied to merchandise design. He mentioned that, unlike some other art forms that could only be printed on a flat surface, products based on Luoshan shadow may be designed using such structural features as an entry point for the design. For example, the shadow album designed by the designer incorporating shadow elements is the direct use of the shape of the shadow (Figure 2.9). The inner pages of the album show colourful images

of shadow puppets, depicting in detail the characters and scenes in the shadows. Also, He (2017) argued that such direct use of shadow elements would need to be combined with unique features and uses of the new vehicle and the production process.

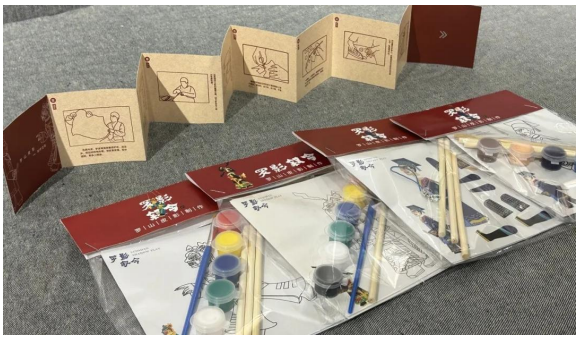


Figure 2.9: Luoshan Shadow Album

Studies by the above scholars emphasized that the direct use of Luoshan shadow in modern art design not only gives modern art design a national character but also represents a culture of shadow art. The use of traditional decorative elements such as colour and pattern in modern design reflects their aesthetic elements or decorative aesthetic beauty with a deeper philosophical and sacred meaning (Shuaib & Enoch, 2014). However, many scholars have noted that in many cases, shadow elements use is not a simple imitation of shape and colour. Guo (2019) mentioned that elements of shadow are extracted from both its essence and its dross to find and explore elements that reflect the contemporary art spirit.

Compared to many previous creative merchandise designs, the design methods for creative merchandise based on Luoshan shadow puppet (LSP) appear relatively limited. This limitation is primarily reflected in the simplicity of design techniques and forms of expression, which often focus merely on the replication of patterns and the reproduction of traditional elements. As a result, these designs fail to fully explore and convey the profound cultural connotations and emotional expressions inherent in shadow puppet.

2.3.3.2 Simplification and Refinement of Luoshan Shadow Elements

Instead of directly applying cultural elements, more research has focused on integrated use, simplification, and refinement. Compared with copying and using graphic symbols, some researchers believed that essential to simplify and refine graphic symbols to build audience perceptions of them than to copy and use them. The content of simplification and refinement also covers the shape, craftsmanship, and colouring rules of Luoshan shadow.

To begin with, the refinement of Luoshan shadow modelling elements is one of the most common ways designers use it. Hao (2021) stated that rearranging and combining various decorative patterns of Luoshan shadow modelling can form a new design language as a carrier for creating a visual identity system. It also deforms and simplifies the shadow pattern to form an abstract geometric form. Simplifying complex patterns also aligns with the modern, fast-paced aesthetic demand. Moreover, combining shadow-shaped elements with modern elements could express a modern aesthetic design with contemporary characteristics. He (2021) agreed that these patterns could be redesigned by adding modern scenes or creating a storyline to make cultural and creative products more contemporary and design oriented.

Qian (2018) conducted more in-depth research and practice on simplifying and refining Luoshan shadow modelling and discovered that this flat style of modelling can be incorporated into the character creation so that the flat characters of digital shadow can be created by appropriately refining and eliminating redundancy and simplifying the complicated decorative effects. Furthermore, Qian (2018) mentioned that the refinement of shadow art elements should pay attention to how to grasp and extract its complicated details and prototype copying would not surprise the audience. In contrast, the details

should be summarized and personalized with modern design concepts based on inherited tradition. In other words, designers must balance core shared values and elements to meet best what users want. This means meeting specific needs through more localized solutions.

Xia et al. (2021) also explored the essence of Luoshan shadow elements extracted from modern design concepts and methods as well as how to apply them to modern creative merchandise design. An influence of what elements are used in the design is evident, from the shape of the subject matter to the arrangement of design to the techniques used in production. Some design works capture the communicative dynamics inherent in symbolic elements, expressing creativity, diversity, harmony, and variety (Asmah & Okpattah, 2013). As Hao (2021) and Qian (2018) argued, these designers add their ideas and design concepts based on the original form of Luoshan shadow skin while boldly imagining, de-constructing, and reorganizing the original patterns, with a sense of visualization in these works. In addition, Shuaib and Enoch (2014) illustrated through case studies how traditional elements can be enhanced and sustained by integrating them into contemporary architectural design as either direct design or adaptive design. They stated that integrating these elements into contemporary design can be achieved in two ways: direct integration and adaptive integration. The designer needs to consider the proportions of shape and size when integrating these elements to ensure that the typicality of those elements is retained (Shuaib & Enoch, 2014). Their views also bring a certain sense of reference to how elements are used in the Luoshan shadow creative merchandise design.

The refinement and application of Luoshan shadow craft in various designs make what was originally a flat expression more three-dimensional and richer. However, it was found that there were still relatively few innovative designs in which the craftsmanship of

Luoshan shadow was directly used as a direct entry point. Qian (2018) mentioned that the use of light and shadow expression of Luoshan shadow hollowing in modern design; just using traditional patterns as scripts, is no longer an exclusive expression of hollowing. He argued that all kinds of patterns in daily life that can be collected for decoration would be displayed through hollowing or different expressions with hollowing effect, which has become a commercial trend of garment technology nowadays.

Hao (2021) also argued that combining traditional expressions with contemporary new modelling language and integrating modern modelling with hollowing technology would give new vitality and meaning to design works and enhance the effect of design. Likewise, He (2021) mentioned combining the movable structural parts of Luoshan shadow elements with those of packaging opening and closing and reworking them in the form of toys. He noted that particular structural forms could be reflected in unique materials and processes, such as metal, leather, fabric, or plastic.

There are also several studies on applying Luoshan shadow techniques in modern design. For example, Guo (2019), a researcher in Tangshan shadow art, proposed to create a visual effect of hollowing and carving in addition to incorporating the carving process used in Tangshan shadow into a costume design. Guo (2019) also stated that traditional craftsmanship attaches particular importance to re-creation, which is not to copy and apply but to make a three-dimensional effect from flat ones, to make an abstract realm from figurative ones, or to use other materials to fill in the hollow parts to form a sense of contrast and backing, to highlight the texture effect of clothing decoration. Her view on this issue gives a vital insight into the meaning of craftsmanship in the creative merchandise design of Luoshan shadow.

Lastly, one of the most critical ways to create changes in human perception and emotion is the application of colour refinement in Luoshan shadow, which has an authoritative power in visual communication as the most popular form in aesthetics. Different types of colour could help designers understand more clearly what ideas they are using in their disciplines (Green - Armytage, 2006). It is one of the most popular forms of beauty, as colour is a significant way of eliciting changes in perception and emotion (Best, 2017). Zhang (2017), built on his viewpoint and mentioned that it should lead from tradition to modernity in modern decorative design to achieve the docking of tradition and modernity. According to the market and specific needs of the works, the traditional colour scheme would be adjusted and improved accordingly to break out of the established "five colours" pattern and make these works highlight a contemporary atmosphere without losing its traditional Chinese meaning. Similar views were shared by Hao (2020) and Zhang (2017). Hao (2020) mentioned combining classic Luoshan shadow with pure colours, sharp colour contrasts, and tones that also tend to be thick with the visual identity system and then adjusting the traditional colour scheme of shadow to make corresponding improvements according to both market and corporate needs, to get out of the established colourful pattern and bring people a different visual experience.

Wang (2021) also iterated about using the colour scheme of complementary and contrasting colours in Luoshan shadow. It is mentioned that all innovations in its colour purity, brightness, and contrast are made to change its original colour and colour scheme, designed to match the aesthetic colour of tea packaging for young people. Likewise, Guo (2019) also maintained that the application of colour in shadow needs to be combined with people's age, gender, period characteristics, natural environment, and economic conditions. On the design practice of application of Luoshan shadow colours, Qian (2018) stated that

the application of Luoshan shadow colours in animation design should not be a direct copy but with a core of formal expression and aesthetic expression, which has both practical and appreciative, representational, allegorical, figurative, and abstract functions and characteristics.

In conclusion, there is a close link between the visual language of cultural heritage and the formal style of modern design. Carefully considering and designing the decorative elements suggests communication through contemplation and a specific emotional expression of sympathy. The preference for patterns and colours for each ethnic group is determined by many unique factors, presenting a synthesis of utility and decoration as well as constantly demonstrating the potential of ethnic decoration, which is introduced into contemporary design practice (Minnakhmetova et al., 2019). Integrating these elements, directly or adaptively, into contemporary design is a way to maintain national heritage values (Shuaib & Enoch, 2014). Many designers have cultural DNA' elements, creating a more convincing design concept (Rodgers & Strickfaden, 2003). These characteristics are common to shadow art and art design, as the flatness, abstraction and exaggeration, symbolism, and decorative features of Luoshan shadow modelling language are intertwined with art design (Guo, 2019). These studies introduce cultural elements, pattern elements, and colour combinations of traditional shadow art and summarize them as decorative elements suitable for modern art design. These studies have been done on the direct use and refinement techniques of Luoshan shadow elements, which provide essential information for visual rhetoric intervention in Luoshan shadow creative merchandise design.

2.4 Positive and Negative Aspects of Luoshan Shadow Puppet: Scholarly and Public Perspectives

Intangible cultural heritage (ICH) is an essential part of human history and cultural transmission, encompassing various forms such as oral traditions, performing arts, social customs, festivals, and traditional craftsmanship. It carries rich historical memories and social values. Under the impact of globalization and modernization, intangible cultural heritage faces challenges in its preservation and transmission, while also continuously adapting and innovating to integrate into contemporary life. The commodification of ICH has threatened its authenticity, making it necessary to adopt sustainable tourism approaches to successfully preserve and promote intangible cultural heritage as a sustainable tourism resource (Kim et al., 2019). As a cultural heritage, LSP also faces similar challenges.

Scholars' evaluations of Luoshan shadow puppet present both positive and negative perspectives, discussing various aspects such as cultural value, artistic expression, and social impact. Literature reviews reveal that most scholars highly commend Luoshan shadow puppet for its role in cultural preservation and transmission. Li (2014) highlighted that Luoshan shadow puppet, as a significant intangible cultural heritage of China, carries a wealth of historical legends and moral values through its unique artistic form and rich dramatic narratives. It plays a crucial role in protecting and transmitting local culture, contributing to the propagation and promotion of traditional cultural values.

However, scholars also express concerns about the commercialization process of Luoshan shadow puppet (LSP). He (2021) argued that with the increasing market demand, traditional elements of LSP may be diluted, and some traditional art forms and content might be simplified or altered during commercialization, potentially leading to a loss of cultural authenticity and integrity. Additionally, Yuan (2019) pointed out that public

interest in Luoshan shadow puppet (LSP) was declining, and the diversification of modern entertainment forms has led to a shrinking audience for traditional shadow puppet, posing a challenge to its continued development.

Resource constraints are also a significant concern for scholars. Despite the notable cultural and artistic value of Luoshan shadow puppet, its development and preservation faced challenges due to inadequate funding and resources. Wei (2018) noted that traditional shadow puppet required substantial material resources for performances and maintenance, such as raw materials for making puppets and props, facilities for performance venues, and actor training. However, due to financial shortages and uneven resource allocation, many local troupes struggled to secure sufficient support, which limited their artistic innovation and long-term development. Additionally, resource shortages potentially affected the transmission and education of traditional skills, risking the loss of key techniques and artistic styles. To ensure the sustainability and vitality of Luoshan shadow puppet, effective measures needed to be taken to address these resource limitations, including increasing financial support, optimizing resource allocation, and encouraging community involvement.

Cultural misinterpretation and simplification are also part of the negative evaluations. Fan (2016) pointed out that commercialization and globalization might lead to a partial representation of traditional culture, thereby affecting its original cultural values and social significance. These negative perspectives provide valuable insights and warnings for the protection and future development of Luoshan shadow puppet creative merchandise.

2.5 Visual Rhetoric

The primary purpose of this section is to bring to the attention of those working in design what has been gained from theory and practice about up-to-date knowledge of visual rhetoric. In 1970, scholars formally included visual images in the study of rhetoric, which until then had been regarded exclusively as verbal discourse (Foss, 2004). Scholars have made significant progress in exploring visual rhetoric's characteristics, applications, and expressions in the past few decades. This section organizes and analyses key visual rhetorical literature to extract design-related approaches. To better understand visual rhetoric,this section also describes some research on visual rhetoric across disciplines and some recurring themes in academic research.

2.5.1 Characteristics of Visual Rhetoric

Visual rhetoric (VR) is a human communication activity that uses verbal, pictorial, and audio-visual symbols as a medium to enhance the visual effect (Liu, 2021). Furthermore, Foss (2004) pointed out that visual rhetoric is “a social function that influences and manages meaning.” It is thus easy to show that this branch of rhetoric, which emerged at the end of the 20th century, overturned the traditional focus on spoken and written language (García, 2018).

Visual rhetoric is a mode of inquiry that connects visual issues to rhetorical theory, which has two main implications. One of them refers to the visual imagery itself - visual communication, and it is an objective study. Visual rhetoric has a more obvious communication motive and is more focused on the purpose of communication (Finkler & León, 2019). Secondly, visual rhetoric (VR) uses images to attract attention and evoke emotion, with an apparent persuasive effect. Therefore, the purpose of visual rhetoric is to

make the communication message be noticed by readers and achieve complete understanding and acceptance. The effect of visual rhetoric (VR) is undoubtedly a priority of research. Its functions include communication, improving the effectiveness of expression and explanation.

First of all, visual rhetoric aims at communication, which achieves the effect of exhortation and persuasion through communication. Rhetoric affects exhortation and persuasion because language expresses people's thoughts and creates an intermediary or means of the world (Dai, 2021). It did not solely rely on the power of text and language but placed greater emphasis on the use of visual elements such as images, colours, and layouts to influence the audience's perception and attitude. Another study conducted by Finkler and León-Anguiano (2019) analysed short videos using visual rhetorical key-frames, assessed their effectiveness as a science communication tool, and highlighted how unexpected and credible use of video could be used in telling science stories. Holiday et al. (2019) argued that video tools are good communication tools. However, these research on how the visual rhetoric of the selfie works from a marketing perspective suggests that it offers marketers a new way to catch the eye of potential consumers. They mentioned that selfies enhance a sense of interpersonal connection between their participants and those affected by the images and generate consumption behaviours with real meaning (Holiday et al.,2018). Besides that, Kostelnick (2020) have introduced visual rhetoric in elementary schools and discovered that it is an ideal tool to focus on a participants' perception and help students learn to communicate effectively.

Secondly, visual rhetoric could enhance the effectiveness of expression and emphasize their prominence. During the 1980s and 1990s, visual rhetoric focused on

specific rhetorical processes and certain media (Olson, 2007). Visual rhetoric transforms an audiovisual symbol of a verbal text into a figurative visual image and a visual image into a verbal symbol. It is a bridge in the middle, bridging abstract linguistic and figurative pictorial images (Yang, 2018). Patton (2020) also believed that the purpose of visual rhetoric is to understand how the various parts of a visual image function and how various meanings function to produce not only symbolic meanings but also meanings for the audience. For example, the image-rich and profound symbolic meaning of visual rhetoric in advertising design conveys product selling points, avoiding any abstraction and dryness of linguistic expressions, and giving vividness and accuracy to advertisements. In particular, the rhetorical style of advertising images has a function and role in strengthening their image, making them attract attention and enhancing their impact.

More scholars have made in-depth case studies on what visual rhetoric can do to enhance expression and emphasize prominence. According to Taragan's (2008) analysis of the Umayyad palace at Qusayr Amra near Amman, Jordan, the builder, the construction act, and the decorative painting are all visual rhetorical expressions that create an image of Umayyad self-glorification. Besides that, Martikainen's (2019) visual analysis of the cover image of Teacher Magazine argued that it also identifies a highly homogeneous type of teacher throughout the image, reinforcing certain social representations of teachers. Zhou (2018) believed that Trump uses multi-modal visual language to create a sense of participation in communication and a sense of reality for voters to face the event itself, to strengthen an emotional infection brought by sensory stimulation, and to shape voters' emotional, political, psychological bias. The above research aligned with Rudong Chen's definition of visual rhetoric, which posited that the configuration and selection of visual elements can enhance the expressive and persuasive power of visual images (Chen, 2005).

Finally, visual rhetoric (VR) has the function of explaining, illustrating, and guiding. According to Cui (2014), visual rhetoric (VR) is an inclusive language, and he analyses how visual rhetoric (VR) is used in news communication, which shows that visual rhetoric (VR) has a visual effect of seeing the text as it is, while the layout subtly guides its participants. Liu (2017) also asserted that visual rhetoric (VR) emphasizes the identification and analysis of "visual forms" and can explore what is implicitly meant in a visual text's "rhetorical structure." He also proposed that the visual rhetoric (VR) of event texts emphasizes how the visualized "condensed symbols" and "news images" are produced in image events and their flow structure and cross-media narrative process in communicative fields. Besides that, visual rhetoric (VR) plays a valuable role in public space to propagate historical public knowledge and provide collective memory and identity (Deng, 2018).



Figure 2.10: A Visual Model of the Rhetorical Situation
(Source: https://pressbooks.pub/openenglishatslcc/chapter/the-rhetorical- situation/)

Visual rhetoric (VR) establishes a suitable communication mechanism between the object and the participants and has a role in evoking associations. The literature review show that rhetorical strategies can effectively guide the audience's emotional responses and cognitive processes in different contexts and enhance the effectiveness of visual

communication (Figure 2.10). Kopper (2014) pointed out that powerful visual rhetoric (VR) can create a sense of immediacy among viewers and thus effectively stimulate their emotions. In addition, Bisoyi (2016) analysed how well visual metaphors and rhetorical graphics convey information. They argued that when taking images or pictures, people may better perceive what information is given and can provide enough information for the client's brand identity (Bisoyi & Dandeswar, 2016). Based on Kopper's (2014) research, Han (2022) analysed the meaning of advertising images and believes that visual rhetoric (VR) can provide a deeper understanding of its conveyed value connotation and improve advertising communication. The appropriate use of visual rhetorical techniques allows the visual images to enhance their communication and inducement power, which allows a better expression of commercial themes by advertising communicators. Meanwhile, visual rhetoric (VR) can enhance its communicative and persuasive effectiveness, allowing audiences to gain a deeper understanding of the themes and meanings conveyed by visual images (Zhang, 2022).

In summary, one can clearly understand the characteristics and functions of visual rhetoric (VR). As per Foss, visual rhetoric refers to visual objects or artefacts and perspectives on studying visual data. Visual rhetoric is to make deep visuals, to make visuals express ideas and opinions. More specifically, visual rhetoric (VR) is ultimately a rhetorical act. It aims to enhance the rhetorical effect of language images to satisfy people's visual aesthetic needs. The application of visual rhetoric has an irreplaceable role in improving brand image. It is easy to find that scholars have gradually deepened their research on visual rhetoric (VR), and some research framework systems have been formed in that theory and practice for this study to draw on.

2.5.2 Expression of Visual Rhetoric

Visual rhetoric (VR) focuses on visualizing information with unique communication properties and visual art expression. Because of those powerful functions, many scholars have focused on studying how visual rhetoric (VR) is structured and rhetorical patterns.

2.5.2.1 The Structure of Visual Rhetoric

Compare to studies on other aspects related to this research, there are studies related to visual rhetorical structure. The visual rhetorical frame is not only an artistic composition concept but also implies a cognitive constraint and social power, which refers to a system of image symbols that selects certain aspects of a referred scene while ignoring others to characterize a whole cognitive and communicative process (Gan, 2020). Rhetorical structure is not something abstract but corresponds to rhetorical meaning devices such as metaphor, metonymy, catechises, irony, allegory, and symbolism (Liu, 2016). Liu (2016) stated that:

> A so-called visual rhetorical approach emphasizes that we focus on these rhetorical-level meaning devices to decode a visual text's "rhetorical structure." Visual rhetoric brings out those coded allusions or unconscious cultural symbols, meaning that the implicit meanings hidden in those "rhetorical structures" are uncovered through the identification and analysis of "visual forms." It is clear that what visual rhetoric emphasizes as implicit meaning is not only found in "rhetorical structures" such as metaphor, metonymy, transgression, irony, allegory, and symbolism but also through these special meaning devices, which transform an issue of an image into a rhetorical issue. Meanwhile, an investigation into why metaphor, metonymy, irony, allegory, and other "rhetorical structures" exist and work in image symbols directly constitutes a significant part of the research on visual rhetorical meaning mechanisms and methodological ideas. (p.35)

What Liu (2018) considers visual rhetoric concerns “meaning strategies.” He is committed to exploring visual rhetorical structures and operational mechanisms. Qian

(2018) on the other hand, analysed a causal structure and a generalized structure of visual rhetoric from the perspective of advertising visuals. He believed that causality links a product with other elements utilizing advertising visuals, making them causally related. This causality uses visual gestures to create a cause-to-effect impression on the viewer, who ultimately accepts the marketed product. Moreover, he argued that a generalization structure draws the viewer's interest by presenting a full range of elements with the same essence so that the viewer could process the information and draw conclusions (Qian, 2018).

In general, literature on the structure of visual rhetoric is limited, and each of these research approaches has distinctive characteristics. In contrast, those mentioned above have very different perspectives on the structure of visual rhetoric.

2.5.2.2 Visual Rhetoric Pattern

The study of visual rhetorical patterns focuses on how visual rhetorical devices are studied. As mentioned above, it is clear that the field of visual rhetoric (VR) research began with the study of visual images in advertising, so early scholars mainly studied what types of visual rhetoric (VR) were used in terms of advertising images' design techniques. Durand (1970) divided rhetorical operations into "structural rhetoric" and "transitive rhetoric." Many scholars believed that Durand's classification of visual rhetorical types in print advertising was the first systematic attempt ever.

Durand (1970) analysed several standard grammatical rules for producing "rhetorical images" in visual advertising, such as repetition, variation in form, homonym, continuity, variety, and consistency. These rhetorical techniques are in line with traditional rhetorical patterns of rhetoric. In his book "Rhetoric Fa Fan," Chen summarized as many

as sixty to seventy kinds of rhetorical patterns, among which the most basic and commonly used are no less than twenty to thirty, such as metaphor, simile, hyperbole, couplet, quotation, borrowing, pun, prose, and repetition (Zhang, 2022). It is easy to find that both shared many of the same techniques. However, various designs have different visual and verbal elements. Formal elements such as lines, shapes, colours, and light are widely used in visual applications that cannot be found in the linguistic sphere. Therefore, many scholars believed it needs to be revised and comprehensive to use the framework structure of traditional linguistic rhetoric to summarize visual design rhetoric.

Following Durand's study, Phillips and McQuarrie (2004) distinguished nine visual rhetorical patterns through meaning manipulation and image structure. These nine rhetorical divisions contained two dimensions: visual structure and meaning manipulation. They argued that the meaning manipulation dimension could produce three major rhetorical patterns: visual connection rhetoric, visual similarity rhetoric, and visual opposition rhetoric, all containing three types of visual structures: juxtaposition, fusion, and substitution (Phillips & McQuarrie, 2004). Liu (2017) discussed various rhetorical pattern, such as visualized media texts, spatial texts, and event texts. His perspective revealed the diversity and adaptability of visual rhetoric across different contexts, highlighting its communicative and persuasive power in various forms. Another study was done by Chen (2021) who analysed how the rhetoric of graphics commonly used in various texts contains rhetorical patterns such as imitation, metaphor, borrowing, exaggeration, representation, personification, symbolism, and quotation. As seen from graphic symbols' ideographic structure, the rhetorical structure of decorative graphics as ideographic visual symbols needs to correspond to visual rhetorical formal strategies such as exaggeration,

repetition, collage, and symbolism in order to complete their transformation from primary symbolic language to visual images (Han, 2022).

Meanwhile, many scholars have also summarized visual rhetorical techniques in different fields. In 2017, Rizki et al. described the rhetorical patterns of posters during the gubernatorial elections. Their research results showed that posters apply ten visual rhetorical strategies: form-based strategies, emotion-based strategies, attention management strategies: use of dramatic statements, repetition in the form of images and slogans, sketch model engagement, detailed benefit variation, self-efficacy achieved through images, providing further information or service strategies. In education, it is possible to expand the material for teaching text structure by exploring local advertising rhetorical techniques (Rizki et al., 2019). Beyond that, with a perspective of visual political rhetoric, Zhou (2018) focused on how Trump communicates emotionally and mobilises shared intentions with voters through the visual dynamics and communicative effects of visual imagery, using the rhetoric of contrast, the rhetoric of coincidental metaphors and the rhetoric of recurrence. There was also the study by Chen and Zhou (2022) who took a microscopic view of rhetorical patterns and explore what rhetorical devices, metonymy rhetorical devices, and imagery are used in specific situations.

Unlike previous studies, Ortiz (2010) summarized three basic ways of presenting visual metaphors: firstly, by composing a composite image of different objects; secondly, by presenting only one object, with another object somehow implied in the context; and thirdly, by presenting at least two objects at once. From the perspective of a cognitive pathway of frame formation, Gan (2020) argued that there are three common rhetorical approaches to visual pictures: scene segmentation, visual attention, and spatial topography.

In short, although there are not many systematic studies of visual rhetoric patterns, and visual rhetoric (VR) has different connotations and extensions in different historical periods, it is helpful to study visual rhetoric's structure and rhetorical techniques to summarize what makes excellent design works successful. By analysing communication, advertising, and rhetoric from multiple perspectives, a systematic theory to help guide the creation of design works and education could be established.

2.5.3 Application of Visual Rhetoric in the Field of Art and Design

Rhetoric has gradually penetrated various art disciplines and plays an increasingly prominent role, while actual research results have been achieved in visual rhetoric (VR). Research on the application of visual rhetoric in art expands a perspective on what it means to analyse visual texts. Among the studies of visual rhetorical applications in art and design are image studies of static visual texts, such as advertising images, newspapers, and web pages, and film studies of dynamic visual texts, such as public service announcements, documentaries, and films.

2.5.3.1 Application of Visual Rhetoric in Print Advertising

As an essential part of image communication, advertisements must be constantly updated to attract their participants' attention, making applying visual rhetoric a winning strategy for advertisers. This section compares what visual rhetoric has been used in the field of advertising in order to fully explain the value of visual rhetoric to advertising practice and research.

Studies on the development of visual rhetorical concepts first appeared in advertising. In 1970, Durand (1980) first introduced the concept of visual rhetoric in advertising. Numerous scholars have conducted more in-depth and detailed studies based

on Durand's research. It is important to note that rhetoric in advertising design is often combined, and images often used a combination of rhetorical expressions. In 1984, Ehses uncovered operational patterns regarding visual rhetoric in poster design.

Later, many scholars paid attention to studies on the visual rhetoric of advertising, such as McQuarrie and Mick's, Scott, and Edward. Generally speaking, they investigated the advantages of visual persuasion by integrating multiple approaches.The visual effect of advertising was studied by Farace et al. (2020) by investigating the combined effect of advertising headlines and visual patterns in advertising on consumer product evaluation. The study argued that how advertising products are visually arranged represents a critical decision for ad designers. For example, text mining and image annotation on Twitter were used to provide ecological validity to their findings (Farace et al., 2020). In order to improve a research system of visual rhetoric, Cai (2020) examined how visual rhetoric (VR) plays its role in public service announcements through a comprehensive analysis of current visual rhetoric research and the analysis of PSA examples. With reliance on Chen's (2018) classification of visual rhetoric, Cai (2020) conducted a systematic study of visual rhetoric in three aspects: linguistic, visual rhetoric, pictorial visual rhetoric, and comprehensive visual rhetoric, and a specific study of micro-rhetorical words, speech, sentences, and rhetorical patterns to conduct a more systematic study of how visual rhetoric is used in public service announcements.

Different rhetorical strategies would give different communication effects to advertisements. Han (2022) analysed several rhetorical strategies commonly used in advertising images, including visual metaphors, similes, prose, symbols, contrasts, and other techniques. Meanwhile, she also discussed a growing relationship between visual

rhetoric and advertising, which is increasingly being used by businesses and advertisers to attract their participants' attention while also generating consumption (Han, 2022). It is believed that what is advertised stimulates the participants' cultural memory through imagery and visual rhetoric and makes them share an ethical value until they accomplish their visual persuasion. All these rhetorical techniques convey to our participants such ethical values as Chinese nationhood, filial piety, and mutual harmony in a warm and beautiful narrative, making "nostalgia" an awakening of cultural memory (He & Cai, 2022).

As described above, scholars currently study various types of advertisements from visual rhetoric theory, including print advertisements, TV PSAs, and Micro-blog advertisements. As one of the first fields to conduct visual rhetorical research, advertising has been quite fruitful. Most of the literature on the visual rhetoric analysis of advertisements focuses on case studies: either interpreting the meaning of specific symbols of an advertisement, analysing a particular type of advertisement using a rhetorical strategy, or explaining the communication effect achieved by the rhetoric of the advertisement. Such multi-faceted research would be the trend of future advertising research.

2.5.3.2 Use of Visual Rhetoric in Spatial Design

Compared with the use of visual rhetoric in advertising design, the application of visual rhetoric in spatial design has been rarely studied. This section analyses how visual rhetoric is used in space and compares current research findings. From the current studies, it is found that visual rhetoric is applied in spatial design, mainly in architectural design, interior design, and landscape design.

Firstly, visual rhetoric (VR) has been widely used in architectural design, incorporating visual rhetorical concepts and various unique expressions. Bogdanović (2014)

examined the rhetorical power of architecture and proposed “architectural rhetoric” is more about its ability to serve as a “memory tool” and about the “skill of combination”). Aygören (2024) believed that the relationship between architectural design and visual rhetoric reflects how visual elements and design strategies convey the functionality, meaning, and emotions of a building, impacting the users’ perception and experience (Aygören, 2024). Architecture is a ubiquitous form of VR whose impact on human perceptions and subconsciousness could be analysed in terms of soft and hard power (Cimała, 2021). Kotliarov (2021) reviewed the architectural features of Ukrainian Seventh-day Adventist prayer rooms from the late 19th century to current times from a visual rhetorical perspective. He explained the phenomenon of Gothic elements in the construction of churches in the late 20th and early 21st centuries .

In China, Chen and Zhang (2017) cited the theory of linguistic “rhetoric” to summarize how traditional Chinese architectural spaces are created. They examined the types and functions of “rhetoric” in language and applied these concepts to architecture, further investigating the rhetoric present within the architectural entity and its effects. Leng (2022) used visual rhetoric to analyse the symbolic construction of architectural ornamental graphics in the Ming and Qing dynasties in a residential area of Xiang-Gan immigrants. He argued that most of these rhetorical techniques in graphic symbols decorate symbolic activities, which used small things to imply and represent a significant thing far beyond its meaning, to achieve the use of concrete objects that could be perceived by human senses to imply some abstract human emotions or ideas that could not be perceived (Leng, 2022).

In short, visual rhetoric as a method of analysis can identify and analyse architecture and related decorative graphic forms and also helps to explore a deep "rhetorical structure" of implicit meanings in architecture. From the dimension of visual rhetorical understanding, combining architectural elements into the category of images for visual rhetorical research is conducive to exploring its rhetorical structure and promoting a contemporary communication of its cultural genes.

On the other hand, research at the intersection of visual rhetoric and interior space design breaks a boundary between interior design and linguistics, which provides fresh vitality for interior design development. Nowadays, the essential characteristics of interior spatial language are also embodied and recognized in practice with the development of semiotics and semantics. Shi et al. (2022) proposed that metaphor, as a rhetorical device in literary language, functions as a cognitive strategy for interpreting and understanding complex concepts and phenomena. By drawing connections between seemingly disparate ideas, metaphors help individuals frame and make sense of their experiences. In the realm of interior design, this cognitive approach can be leveraged to inspire innovative design solutions.

Aiello and Dickinson (2014), on the other hand, examined Starbucks, global store design strategy launched following the economic crisis, increased brand dilution, and intensified competition in 2009 with specific cases of visual rhetoric. They critically analysed Starbucks' rhetoric of locality regarding a broader notion of authenticity and argued that while authenticity was rooted in textual and symbolic arrangements, locality operated in claims regarding the inauguration and embodied difference (Aiello & Dickinson, 2014). Meanwhile, Zhi (2014) believed that as a particular form of visual

language, the expression of interior design language increasingly emphasizes the rhetoric of space visualization, whether from the overall layout of space or each interface shape, colour, quality, and other language modifications. Like Aiello and Dickinson, (2014), Zhi (2014) believed that the visual language of interior space could subtly and effectively communicate its designer's intent and connotation.

In general, a study of interior design language is relatively recent and usually draws on the study of architectural spatial language. In contrast, few interior design language rhetoric theories have emerged, and only sporadic remarks have been made. Nevertheless, in the development process, interior space design has accumulated many rhetorical expressions similar to language and literature with cultural characteristics while constantly searching for language patterns to enhance its expression in terms of spatial structure, form, and context.

Last but not least, it is not only to create visual beauty in a visual form that visual rhetoric is applied in landscape garden design but also to leave a rich imagination for its participants. Bian pointed out that visual texts in landscape garden spaces have visual rhetorical properties, inevitably carried complex persuasive desires, narrative guidance, and rhetorical purposes, and became a communication medium for messages through specific "rhetorical" means. She believed that it would help to recognize and identify how visual rhetoric was used in landscape gardening space to gain a deeper understanding of its meaningful level and why it was created at the level of public space discourse and public psychology, and thus formed a more comprehensive knowledge and understanding of landscape gardening space creation (Bian, 2018). Li and Lu (2019) analysed the ideological stratigraphy of memorial landscapes by applying a conceptual framework of

"symbolic superposition," which took the bell tower landscape of Nanjing Peace Park as a case study. They argued that it was possible to gain deeper insight into how different political forces have adopted particular visual rhetorical strategies to use established memorial landscapes to convey their political discourse.

Gries et al. (2020) also demonstrated how visual rhetoric could highlight concepts of democratic living values and carve out spaces for community engagement, social entrepreneurship, and student partnerships on college campuses through their landscape design of Innovation Alley. Li (2020) analysed the visual rhetoric of contemporary urban sculpture in Sichuan and Chongqing, arguing that "visual rhetoric" provided a research path to "memory construction." He also analysed how contemporary urban sculptures were characterized by visual mnemonics, the spatio-temporal coding and syntactic structure of memory presentation, the "memory construction" strategy of visual discourse, and the narrative scope of memory images (Li, 2020).

Studies of visual rhetoric in this period have moved away from pictorial symbols and begun to focus on how effective and rhetorical visual rhetoric is in landscape and garden design. Therefore, visual rhetoric has emerged in landscape architecture as a practical rhetorical study.

2.5.3.3 The Use of Visual Rhetoric in Product Design

As a three-dimensional image, product modelling is essential in information transmission, emotional expression, and functional bearing, which is also faced with different representational strategies and persuasion skills. In this regard, studies on visual rhetoric in products have attracted much attention from scholars, and further exploration

has been gradually launched. This section reviews a study on visual rhetoric in product design through a literature review approach.

Visual rhetoric is a powerful way to enhance the expression of the product's visual language, making a more relevant message and giving consumers a deep impression. Durgee (2003) proposed an application of visual rhetoric to the field of industrial design and new product work, exploring the principles of visual rhetoric in industrial design and showing how it can be applied to product design .

In addition, the core concepts of visual rhetoric involve the symbolic meaning and representational function of images. According to Zhao and Yao (2019), visual rhetoric (VR) was not merely a description of image forms but a thorough exploration of how images generate meaning within specific contexts. In modern merchandise design, this implies that designers must understand and employ visual symbols effectively to convey brand values and product attributes. For instance, the use of iconic patterns and colours can enhance brand recognition and increase user identification with the product. The principles of VR are practically applied in product design through the creation of attractive and functional design solutions. Zhang (2022) noted that visual rhetoric (VR) theory can assist designers in developing products that have both visual impact and emotional resonance. For example, by employing rhetorical techniques such as contrast, parallelism, and metaphor, designers can create products that meet functional requirements while also possessing visual appeal, thereby enhancing the user's product experience (Zhang, 2022).

Furthermore, from the use of image symbols to the optimization of user experience, the principles of visual rhetoric helped designers create more attractive and functional products. Liu and Zeng (2018) discussed concepts such as emotional design, rhetorical

techniques, and product language, and examined the connections between them. They discussed the specific application of rhetorical techniques in product language and supplemented this with examples to investigate the application of rhetorical techniques in emotional design of merchandise. Meanwhile, many scholars have emphasized the importance of visual rhetoric in promoting theories related to academic endeavours in the clothing and textile disciplines. Theories related to visual rhetoric (VR) could be applied to studies of fashion and apparel scholarship. Although visual rhetoric is not a traditional theory for testing fashion and apparel, it is a good perspective for analysing symbolic communication processes (Reeves-De Armond, 2013). His analysis and research resulted in the relationship between visual rhetoric and clothing design provided a good entry point for later research to consider. However, some problems also existed, for instance, his research was only limited to emphasizing the importance of visual rhetoric (VR) in the field of clothing. It has yet to involve an in-depth study of visual rhetorical techniques.

To use visual rhetoric to gain the best communication effect, product design must follow both the rhetoric principle and the product design principle and choose rhetorical means consciously and purposefully. For example, Zhao and Yao (2019) argued that product shape is a visual text and the application of visual rhetoric in merchandise design from three aspects: form, colour, and material. Their research results showed that applying visual rhetoric methods to product form, colour, and material design will better convey what the designer intends to do, facilitate the expression of merchandise functions and operation methods, improve their product image, and enhance their aesthetic value and emotional attributes. Meanwhile, as a visual language expression, visual rhetoric has been widely used in designing cultural and creative products. It enhances the artistic effect of cultural and creative product design and strengthens people's visual perception of cultural

and creative products, raising their attractiveness. Taking Xiangxi folk art as a case, Liu (2019) explored how its rich visual rhetorical semantics could be effectively applied in creative brand design. By analysing the distinctive symbols, patterns, and colours in Xiangxi folk art, the research revealed how these traditional art forms conveyed regional culture and emotional meaning, and how they were transformed and innovated through modern design language.

Although there are relatively few theoretical studies on the rhetoric of product design language, it is easy to note that an expression of visual language rhetoric has gradually shifted from formal aesthetics to cultural awareness, from pure modelling in the past to the pursuit of the style, aesthetic value and cultural characteristics of these products and build their context. Moreover, the visual rhetorical approach gives an interactive character to those messages expressed by the product. Designers can develop their cognitive activities based on a visual rhetorical pattern of generality and apply visual rhetoric flexibly in the field of product design on such a basis.

2.5.3.4 The Application of Visual Rhetoric in Film Art

Academic research on film from the perspective of visual rhetoric (VR) started late and has only gradually received more attention from academics in recent years. The arrival of visual culture and the development of visual rhetoric research have also contributed to further research on visual rhetoric in film. A combination of individual pictorial symbols in film art is all media symbols for visual communication, and the rhetoric of visual symbols allows for more accurate communication of the author's intentions.

Rhetorical techniques in visual rhetoric (VR) play a crucial role in film narration. Liu (2020) emphasized the application of rhetorical devices such as contrast, parallelism,

and metaphor in films. Through these techniques, films not only enhanced visual effects but also deepened themes and emotions. For instance, in the film '*Little Wei*,' the director employed visual rhetorical methods to break away from the deep influence of Italian Neorealism, which often focused on realistic themes and documentary styles, thereby achieving greater creative freedom and incorporating a substantial amount of poetic writing into everyday narrative material (Gan, 2021). These visual rhetorical techniques not only helped viewers better understand the film's narrative structure but also allowed them to experience a deeper emotional resonance.

Based on findings of visual rhetoric (VR) theory, Yang discussed three aspects of visual rhetorical elements, visual rhetorical patterns, and visual rhetorical devices of the film "A Journey to Dreamland" to explore what deeper meanings are presented in the film's visual characteristics and images (Yang, 2018). It enabled a deeper understanding of the film and provides new directions for future research. Thompson explored 1970s science fiction ecological cinema as an example of its visual rhetoric (VR). They argued that film is an excellent medium for exploring ecological contradictions (Thompson, 2020). The above studies have broken the traditional research pattern of rhetorical patterns and produced a new research situation. Meanwhile, based on Charles A. Hill and Marguerite Helmers' theory of "how images act rhetorically on the viewer," Rong further explored visual rhetoric's role in cultural production and communication. She explored the textual meaning of visual images based on the theoretical framework of images and further argues for their role in cultural communication (Rong, 2020).

A review of the above literature reveals that theoretical studies on the visual rhetoric of film are scattered in a few papers, while few monographs are available. In short,

it is also based on Barthes' rhetorical theory of images and Durand's exploration of visual rhetoric. Scholars have strived to expand the boundaries of visual rhetoric in film language.

2.6 Effects of Visual Rhetoric on the Creative Merchandise of Luoshan Shadow (Hypothesis)

Visual rhetoric (VR), as a method of conveying information and emotions through visual elements, has been extensively applied in the field of merchandise design. The literature review indicates that the role of Visual rhetoric (VR) in merchandise design is primarily reflected in enhancing brand recognition, improving user experience, and conveying cultural values. According to the research by Ballassssrd and Koskela (2013), the strategic use of images, colours, and symbols in Visual rhetoric (VR) could effectively shape brand identity and evoke emotional responses from the target users. These studies emphasize the impact of visual element selection on consumer psychology and suggest that designers should leverage visual rhetoric techniques to enhance the market competitiveness of their merchandise.

Although visual rhetoric theory has been widely used in the field of advertising and communication, its application in the creative merchandise design of Luoshan shadow puppet has not been fully explored. How to apply visual rhetoric theory to the artistic expression and commodity design of shadow can be a new research direction. In addition, how to transform the elements of Luoshan shadow into attractive creative merchandise and use visual rhetoric (VR) to enhance its cultural communication effect needs to be studied in depth. Then again, the combination of user experience and cultural communication, as well as how to balance commercial interests and cultural respect in the design process are also gaps in current research. Exploring these gaps will help promote the innovation and inheritance of Luoshan shadow puppet elements in modern creative commodity design.

Through a comprehensive review and analysis of existing literature, this study identifies key trends, application examples, successful experiences, and the impact of visual rhetoric in merchandise design within the field. By summarizing previous research findings, the study aims to elucidate how visual rhetoric enhances the expressiveness and appeal of design, and to explore its specific manifestations in creative merchandise design. This approach helps to identify research gaps or deficiencies within the field. Based on this synthesized information and in conjunction with the research questions and objectives, the researcher formulates specific research hypotheses.

Hypothesis 1: The structure of visual rhetoric influences the design thinking of Luoshan shadow puppet creative merchandise.

Hypothesis 2: The context of visual rhetoric influences the design issues of Luoshan shadow puppet creative merchandise.

Hypothesis 3: The application of visual rhetoric strategies (such as metaphor, symbolism, and exaggeration) can enhance the creativity of Luoshan shadow puppet creative merchandise designs, making them more innovative and appealing.

2.7 Summary

This chapter contains the literature review related to this study and is divided into five main parts: the introduction, part I on Luoshan shadow, part II on Luoshan shadow cultural and creative merchandise, part III on visual rhetoric, part IV effects of visual rhetoric on the creative merchandise of Luoshan shadow, and finally is the conclusion.

The introduction explains the purpose of this chapter while Part I focuses on the Luoshan shadow, which is divided into four parts: its history, stylistic features, heritage,

and value. Part II of this chapter is divided into two subsections to discuss the design strategies and its development path for the Luoshan shadow cultural and creative merchandise. Part III discusses issues related to this study regarding the characteristics, expressions, and applications of visual rhetoric in art and design.

Visual rhetoric (VR) is often inter-sectionally synthesized with multiple disciplines, and cases of its application are found in various fields. However, current research on visual rhetoric is limited to advertising, film, television, and animation and rarely involves cultural and creative merchandise design specifications. Therefore, it is a subject for further research and in-depth study of how to construct, understand, and the cognitive process of visual language rhetorical text in the design of Luoshan shadow creative goods.

CHAPTER 3

METHODOLOGY

3.1 Introduction

Development and technological changes have improved the quality of creative merchandise and is becoming a trend. However, there still needs to be some form of advancement in terms of the thinking mode and means of expression especially in Luoshan shadow creative merchandise (LSPCM) with traditional design and image elements. This can be seen in a vast number of current designs. To understand what insights visual rhetoric (VR) can provide in the creative merchandise of Luoshan shadow puppet, this study adopted a design strategy centred on visual symbols. By analysing various design cases through visual rhetorical situations, rhetorical structures and strategies, a pathway of visual rhetoric on the design of Luoshan shadow creative merchandise was deduced and analysed for those creative merchandise's visual rhetorical design techniques. This chapter describes how visual rhetoric influences the innovative design of Luoshan shadow puppet creative merchandise and what methods are used in the design strategy of Luoshan shadow creative merchandise based on visual rhetoric. The major components of this chapter include (i) research design, (ii) theoretical support, (iii) data collection, (iv) data analysis methods, and (v) research procedures (Figure 3.1).

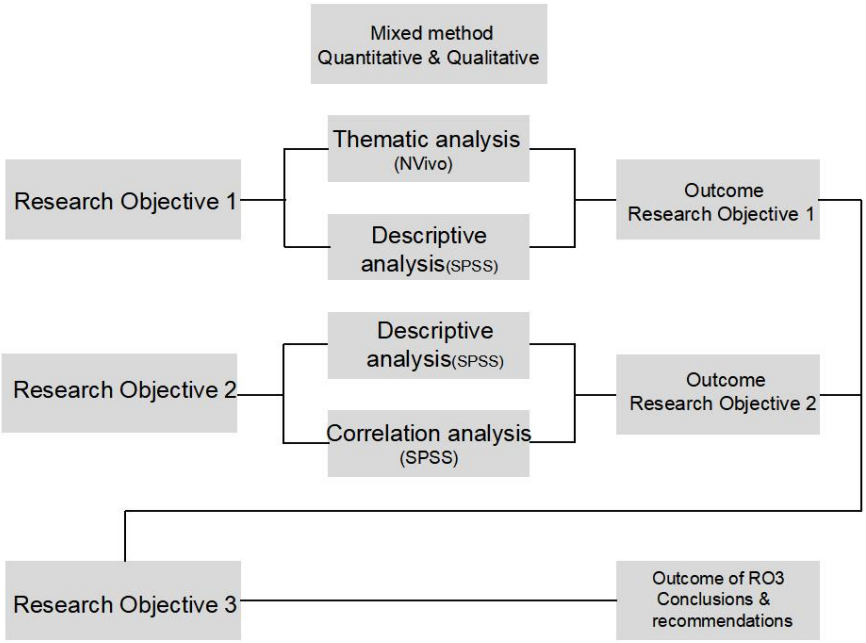


Figure 3.1: Research Design Framework

3.2 Research Design

This study aims to explore methods for designing creative merchandise based on visual rhetoric (VR) in the context of Luoshan shadow puppet. The objective is to evaluate the innovation in creative merchandise design, analysing how visual rhetoric theory could enhance the design effectiveness of Luoshan shadow creative merchandise, and investigating the use of rhetorical devices such as exaggeration, metaphor, and parallelism in design. Additionally, this study sought to assess the effectiveness of design innovations to determine the potential competitive edge of this type of merchandise. Feedback from participants on the researcher's designed creative merchandise is a key component of this study, used to validate the market acceptance and cultural value of the designs, and to further refine design strategies. Participants completed detailed surveys about the creative

merchandise, evaluating aspects such as design aesthetics, functionality, and cultural representation, and provided personal opinions and suggestions on the design.

Since the study aimed to capture a description of a phenomenon—visual rhetoric (VR) design methods—the chosen approach needed to integrate both the breadth of quantitative data and the depth of qualitative data. Quantitative research provided broad data on design effectiveness, while qualitative research offered deeper insights. Given the nature of this research, which sought to determine how visual rhetoric (VR) was applied in Luoshan shadow creative merchandise, a mixed-methods approach served as an appropriate cross-checking mechanism. It was well-suited because it integrated both quantitative and qualitative data to provide a comprehensive understanding of the application of visual rhetoric. The mixed-methods approach allowed the researcher to explore the application of visual rhetoric (VR) from multiple angles, including the specific context, structure, and format of this type of design. This enabled a thorough examination of the actual effects and impacts of visual rhetoric (VR) in creative merchandise.

The study employed a mixed-methods approach, combining both quantitative and qualitative research to comprehensively assess the innovation and effectiveness of Luoshan shadow puppet creative merchandise design based on visual rhetoric. Initially, a qualitative thematic analysis was conducted to explore potential research aspects related to design issues, creativity, and methods from the perspectives of visual rhetoric context, structure, and pattern. During this phase, 26 participants were recruited, and all possible information was collected from two semi-structured interviews to identify key themes for this study. In the subsequent phase, based on the results of the thematic analysis, a practical design work was undertaken for the creative merchandise. This involved applying and validating visual

rhetoric theory through specific design cases to observe its actual effects in the creative merchandise. The design practice involved two rounds of surveys, both utilizing a Likert 5-point scale. In the early stages of the creative merchandise design, feedback was gathered from participants on design concepts and preliminary plans to evaluate innovation and market acceptance (see Appendix E). After the completion of this creative merchandise, participants' feedback was collected on the final merchandise, including assessments of design effectiveness, functionality, and cultural value (see Appendix H).

Although the researcher preferred to use design practice to establish the results and demonstrate the actual effects and innovation of Luoshan shadow creative merchandise design based on visual rhetoric, this study acknowledged that participants' feedback might vary due to individual differences. Users' cultural backgrounds, personal preferences, and experiences could affect their evaluations of the creative products. Therefore, a combination of feedback from different users needed to be taken into account in the study to obtain more accurate conclusions from the study.

3.3 Theoretical Support for Research

To justify the use of visual rhetoric (VR) in the design of Luoshan shadow creative merchandise, it was necessary for the researcher to first briefly analyse either the advantages or disadvantages of combining qualitative and quantitative research. This was integrated with visual rhetorical theory into the questionnaire design and an elaboration of design practice.

3.3.1 Empirical Study on Creative Merchandise of Luoshan Shadow Puppets

This research fell under the category of mixed empirical studies, as the questions of this study were validated by collecting data from a diverse group of respondents.

Qualitative research explores what people think, perceive, and do, while quantitative research counts how many people think, perceive, and act in this pattern. Qualitative research is based on the opinions and ideas of a small base sample, while quantitative research is usually based on survey data from a large, representative sample. Hypotheses extracted from qualitative research can be confirmed by quantitative research. Meanwhile, data from qualitative surveys are used to explain better the conclusions drawn from those quantitative studies. With these in mind, this study attempted to construct a framework for the role of visual rhetoric in the creative merchandise design of Luoshan shadow based on visual rhetoric theory and a strategic model.

Visual rhetoric is a product created by individuals using visual symbols to communicate, and scholars have adopted the perspective of visual rhetoric to study the symbolic process of communication through images (Foss, 2005). This empirical study belonged to one of the merchandise design studies, a design methodology question derived from visual rhetorical theory. In this study, an attempt was made to document what was offered by the design and analysis of Luoshan shadow creative merchandise based on visual rhetorical theory. To assess how designers and users reacted to such merchandise, the researcher distributed a survey questionnaire to investigate their experiences of designing or using these merchandises in the Luoshan shadow creative design.

These questionnaires and interviews combined the rhetorical research paradigm with the five-part theory of act, performer (person), method (medium), scene, and purpose (Burke, 1969). The interviews and questionnaires were targeted at a smaller and more open-ended group of experts belonging to a specific environment which were designers of the creative merchandise of Luoshan shadow puppets in Xinyang and surrounding cities.

This study was conducted on 26 designers, university teachers, product operators, and Luoshan shadow creative merchandise salespeople, so it was not a very extensive survey. Beyond that, there were questionnaires for users of creative merchandise, targeting a relatively large group of people. Unlike general mixed studies, there was a difference in this study involving the use of multiple design phases of data collection and refinement of information. Moreover, this study differed from previous experiences in creative design by exploring strategies for designing Luoshan shadow creative merchandise from the perspective of rhetorical contexts, structures, and grammar.

In the survey questionnaires and interviews, the elements included are (1) the act element includes what happens during the action. (2) the 'performer' element refers to the individual or group performing an act, (3) the 'method' element refers to the tool or method used to perform an act, such as metaphor, exaggeration, or borrowing from the visual artist, (4) the 'scene' element includes the context, place, or scene in which the act occurs, and (5) the purpose element refers to what the performer tries to accomplish with a particular act (Burke, 1996). Specifically, Luoshan shadow creative merchandise design content was summarized as designer, design content, design method, design context, and design purpose. Among these, design contents were the behavioural elements, which corresponded to include, for instance, the information architecture and functional structure design of these creative merchandise. The designer belonged to the performer dimension and represented a specific creative merchandise design activity object. The design situation belonged to the background dimension, including how the product was developed and its problems. Product innovation and a good efficacy experience were the aim factors. These elements constituted the framework for Luoshan shadow merchandise design and offered

various possibilities for innovation. Specific relationships are shown in the following Figure 3.2:

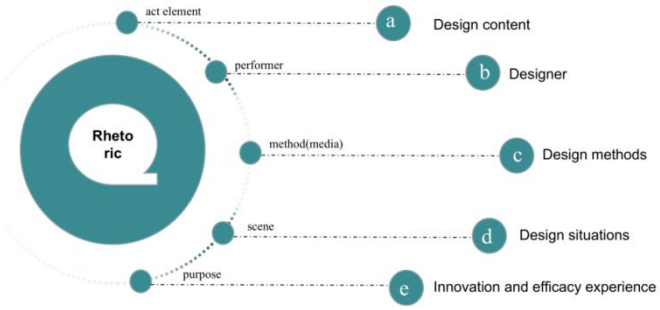


Figure 3.2: Five-part Theory and Design

This survey questionnaire for this study was designed based on Burke's (1996) five-pronged visual rhetoric theory, combined with Liu's (2019) and Wei's (2022) scales on tourism products and Zhang's (2020) scale for evaluating consumer behaviour, combining them with the theme of this study to create a 43-item questionnaire. The researcher observed strict reliability throughout all the questionnaire design processes, and the question items were made as representative as possible.

Visual rhetoric theory also provided a specific design strategy for specific product designs. How language was organized, created, and designed was, to some extent, all about rhetoric (Dai, 2022). Furthermore, Ehses (1984) had created a set of operational models on visual rhetoric in poster design. Two main stages, 'idea formation' and 'graphitization,' were used to stimulate and invoke various visual and rhetorical expressions to create a design. These theoretical and practical studies provided the theoretical and methodological guidance for the design practice of creative merchandise in this study. It was easy to find that a rhetorical approach to the Luoshan shadow creative merchandise could be understood as a specific mode of organizing, matching, and adjusting the visual elements

of such merchandise, including shape, colour, and material pattern, through some specific methods and means, in order to enhance their visual expression.

In conclusion, rhetoric has been introduced into design because of an intrinsic link between visual language and artefacts, both of which were not only mediators or means by which people expressed their ideas and created the world, but both of which were ideas expressed and worlds created by humans. According to Burke's (1996) visual rhetoric theory, visual rhetoric is a bridge to improve human relationships, and its use in design, containing rhetorical 'motifs,' can make a design work full of personality and enhance a work's impact.

3.3.2 Theoretical Support Wrap-up

This study was not purely theoretical but combined in-depth interviews with experts and questionnaires and verified the questions from those interviewed by experts through the questionnaire results. It was appropriate for the subject of this study to combine qualitative and quantitative research, as both can be complementary and allow for a better exploration and generalization of what the experts have mentioned about specific issues. To verify whether the visual rhetoric strategy proposed in this study was feasible, this section analysed relevant visual rhetoric theory to support the design practice, questionnaire, and interview design of Luoshan shadow creative merchandise.

Previous visual rhetoric theory and practice could provide a necessary basis for designing Luoshan shadow creative merchandise practices. They could also serve as inspiration for innovation in these products. It was essential to avoid a lack of detail and methodological limitations that would have narrowed this scope and left out key elements that ultimately affected the results. Each of these theories facilitated the researcher to

explore what the participants wanted regarding the functions and design forms of Luoshan shadow creative merchandise based on visual rhetoric. These visual rhetorical theories were critical in the design work of Luoshan shadow creative merchandise, presenting the most basic functions and logical support behind them.

3.4 Data Collection

3.4.1 Background Information

3.4.1.1 Background Information for the Interviews

The data for this study was first collected via interviews. Interviews were conducted with university professors, designers, Intangible Cultural Heritage specialist, business operators, and scenic area managers. The interviewees were selected based on strict criteria and must have some knowledge of Luoshan shadow puppets as well as a certain level of design expertise. Many distinctions were made between the subjects of this study, which became necessary with in-depth research. For example, differentiating between large, medium, and small business operators would help researchers see how different types of businesses perceived the value of Luoshan shadow creative merchandise. Moreover, interviews with managers of enterprises of a particular scale could also better help to refine which directions to take in developing these creative merchandises. Interviews with those who ran the attractions accompanied a broadened observation of how well these creative merchandises were sold. Although tourist area managers were not directly involved in the design and production of creative merchandise, some critical 'hidden' roles that influenced the design of these merchandise were identified and would be beneficial for this study.

A panel of 26 experts are representative of Luoshan shadow creative merchandise design and sales were selected to form a correspondence expert panel to ensure their opinions were authoritative. The specialist selection criteria included: (1) 5 years or more experience in the field of creative merchandise design and design teaching, (2) must have a middle-level title and above, (3) has more in-depth research and practical results on the creative merchandise of Luoshan shadow, (4) experts who have more practical experience in the design and marketing of Luoshan shadow creative merchandise were preferred, and (5) must be willing to join the group and could actively cooperate a well as participate in multiple rounds of consultation during the time of this study.

A semi-structured interview with anonymous correspondence for expert feedback via email or video was used. It was because when this method was used, the informants could not meet directly but could only communicated through on-line correspondence, which would eliminate such influence of authority on the results of this study. This method required two to three rounds of feedback, making the final results more objective. They reflected what the experts knew about visual rhetoric influencing the design information of Luoshan shadow creative merchandise. After collecting the opinions of senior designers and university teachers, they were collated, summarized, counted, and then anonymously fed back to each expert, and opinions were sought again, then focused, and fed back again until a unanimous opinion was obtained.

To achieve the research objectives, 26 professionals with representative characteristics of the Luoshan shadow cultural and creative products were recruited to be interviewed via email invitations. All interviewees were design teachers, business managers, and creative product designers. Their average age was 38 years old, of whom 19

had postgraduate degrees or above (70%) and had worked for more than three years on average; 7 were creative product designers, 17 were product design teachers, and 2 informants were creative product salespeople; 11 were males, and 15 females.

Before carrying out an interview, the objectives were first developed to have a clear direction for the interview. An outline of this interview was developed based on the objectives of the study, and at any given time, these questions were adjusted according to the progress of this study. They were asked discretely, without deviating from the theme of this study, and finally summarized and analysed according to the respondents' answers. Furthermore, the researcher needed to follow up on the interviewees' responses with questions during the interview to obtain more in-depth and detailed data.

Two semi-structured interviews were conducted based on the research themes. The first interview was conducted on the current status of Luoshan shadow creative merchandise design, with a selection of respondents from China who were interested in the research topic and willing to participate in multiple rounds of interviews. A second in-depth interview was conducted with those interviewed after the first interview regarding previously encountered issues to assess the role and effectiveness of visual rhetoric (VR) in the design of Luoshan shadow creative merchandise. The same interviews were conducted on VR used in these creative merchandise and their influence on consumers.

To persuade the informants to participate in the interview, the researcher first introduced it with information about what this study entails and a description of the interview requirements. Before starting these interviews, the participants were thanked and then informed that their participation in the interview was voluntary and that they could stop it at any time. To reduce interviewee fatigue, a certain amount of time was set aside

for the informants to rest after each interview. Informants would likely feel annoyed if the interview was overwhelming and may give inaccurate or non-objective answers later.

Further screening was conducted before asking relevant professional questions to ensure qualified informants. This would ensure that the informants matched the criteria. It was important for the informants to keep an eye on the market during this screening process and to stay curious and research the industry's cultural innovations that would avoid any possibility of inaccurate results. Only those with some expertise in Luoshan shadow creative merchandise design were included in the interview. Following the preliminary findings, the informants were asked if they had purchased creative merchandise in the past to explore their experience of using them. The informants were also asked to describe how they felt if they have purchased cultural merchandise and were asked to stop answering questions if they have yet to use or design a creative product. The informants would be informed in the interview that there were no correct or incorrect answers, and the objective was to explore their views on visual rhetoric applied in the design of Luoshan shadow creative merchandise. The interview was also completely anonymous and did not reveal any identity of the informants. Ideally, the research should be carried out on professional creative designers and users without a professional design base. However, because of the need for more professionals in designing Luoshan shadow creative merchandise, an extensive questionnaire survey on many users of creative merchandise was conducted instead.

3.4.1.2 Background Information of the Questionnaire

A questionnaire survey was conducted with designers and potential consumers to further explore the roles and effects of visual rhetoric in the design process of Luoshan shadow creative merchandise. It was expected that the findings of these surveys would be

summarized and used to explore what was involved in the design of Luoshan shadow creative merchandise, as well as to analyse why they arise in the light of specific issues and to validate the points raised in the previous expert interviews.

Designing the questionnaire for this study involved background information presentation, informed consent, and filter questions. This survey contained information on the age, gender, and education level of the respondents. Furthermore, in designing each of these questionnaires, the researcher needed to take all possible care to word each question in such a way that it stayed within each respondent's literacy and cognitive limitations. It would also avoid private or sensitive topics. Moreover, several design experts and professors were consulted on how the questions were specifically designed, and several revisions were made to them. A more detailed discussion of the survey design and a description of the types of information contained in these questionnaires is provided in the following sections.

As more elements were involved in the Luoshan shadow creative merchandise design, the questionnaires were designed and distributed for their prices, styles, and elements to discover the creative aspects of these merchandise designs. Furthermore, to ensure an authentic and objective result, all questionnaires were anonymous and distributed to several provinces in China through an on-line questionnaire system. A shallow recall rate would affect the authentic result of the survey. The respondents were appropriately reminded during this period to ensure the timely return of their questionnaires. In particular, it was sent again sometime after the questionnaire had been distributed (usually around 7 days) as a reminder for the respondents to fill in the questionnaire and to increase its recovery rate. A total of 266 questionnaires were returned by the closing date, covering a

wide range of provinces in China. The survey covered general workers, students, and some professionals. Significantly, as a web-based questionnaire was administered in this study, the system automatically displayed the participants' geographical location to enable a more accurate capture of relevant information by the researcher.

3.4.2 Question Categories

As mentioned earlier, this study examined several rhetorical strategies to understand how rhetorical strategies could influence the design of Luoshan shadow puppet creative merchandise (LSPCM). For this reason, the interviews and questionnaires were focused on the design and creation of Luoshan shadow creative merchandise. The primary focus was to understand how they reflected on visual rhetorical devices and how extensively they influenced these merchandise' designs. However, to demonstrate how visual rhetoric (VR) influences the innovative design of these products, both the attitude of designers and consumers towards those merchandise' creative design was still debated and concerned.

There was uniformity in the methods and procedures of the interview, as well as in the questions asked during the interview, the manner and order in which these questions were asked, and how any responses to the interviewee were recorded. Following the interviews, these materials would be coded and analysed to conclude (Flick, 2014). This method helped the researcher to understand what the respondents wished to cover when answering the questions. As a result, all questions asked during the interview survey were generally answered, and there were no missed answers, which increased the success rate of this survey. Additionally, some interview questions covered visual rhetorical techniques, creative issues in the creative design of creative products, and its design process. The

remaining questions focused on the impact of visual rhetorical design practices on creative products. In individual respondent interviews, informants were asked to present their creative works and talk about their experiences designing these products. This method helped carry out a more in-depth investigation into the influence of visual rhetoric (VR) on the design of creative merchandise.

According to the thematic analysis method of indicator building, this study designed the content of an interview and a correspondence questionnaire based on the content framework. These questions were based on visual rhetoric theory and merchandise design requirements while focusing on these users' practical needs. It helped define what direction that research should take and assisted researchers in forming methodologies and protocols applicable to different research areas, leading to better information collection, analysis, and evaluation.

Furthermore, two questionnaires were used for this study. The first questionnaire focused on issues and design elements in the current design of creative merchandise, while the second questionnaire focused on the assessment of merchandise design and how visual rhetoric affects these products. Both questionnaires investigated respondents' background information, while some questions were equally reserved on the questionnaire, especially those that needed to validate the interview results.

The first questionnaire was divided into three parts. Section A contained some background information about those respondents. These background information were necessary to understand their basic profile and professional ability, as well as to determine whether they had a particular ability to judge the design and aesthetics of these merchandise.

In the second section, questions 12-18 examined the respondents' perceptions of Luoshan shadow creative merchandise regarding their willingness to buy such products, their problems, and the relevance of the design of these merchandise. Multiple choice, scale, and short answer questions were set at each level, expecting to learn about the design of Luoshan shadow creative merchandise from multiple dimensions. The main categories included attitudes towards the creative merchandise of Luoshan shadow, the characteristics of such merchandise, and the obstacles in its design. Finally, there was a section on suggestions for the design of these merchandise, which was an open-ended question and answer session aimed at collecting respondents' opinions and suggestions on such merchandise' design and dissemination.

The second questionnaire also was divided into three sections. Section A contained some background information about the respondent. The aim is to understand each interviewee's situation. The second part, questions 5 to 8, contained feedback on product design and the specific issues of its use in the design of Luoshan shadow creative merchandise. These issues included the function, shape, and aesthetics of these merchandise. The third part, question 9, focused on the role and value of merchandise communication and visual rhetoric (VR) in Luoshan shadow creative merchandise design.

In the following sections, this study would rely on data from these survey questions to support this research theme. The theories about creative merchandising in this study are based on visual rhetoric, which the researcher integrated with this research topic. This was complicated by the fact that they were different disciplines and had the same subject matter between them. Hence, various methods were used in the researcher's data collection and for organizing the data in the study results.

3.5 Data Analysis Methods

This study aimed to explore creative merchandise design methods for Luoshan shadow puppet (LSP) based on visual rhetoric theory, employing a mixed-methods approach to ensure comprehensiveness and accuracy. First, thematic analysis was used to examine the artistic forms, traditional elements, and market demands of Luoshan shadow puppet creative merchandise (LSPCM), extracting core themes and visual elements for design. Next, descriptive statistics were applied to quantify survey data, revealing the popularity of design proposals. This process involved the statistical analysis and organization of consumer evaluations and feedback from design practices to form an objective understanding of user needs for creative merchandise. Finally, correlation analysis was employed to investigate the relationship between visual rhetoric elements and design effectiveness, aiming to optimize design strategies for creative merchandise. Through the integration of these methods, this study sought to provide scientific basis and practical guidance for Luoshan shadow puppet creative goods and facilitate the innovative transformation of traditional cultural elements.

3.5.1 Interview Analysis

A semi-structured in-depth interview was chosen for the qualitative research method, in which interviewers were asked to talk about the current status of Luoshan shadow creative merchandise design, the problems they faced, and what visual rhetoric supported these merchandises, both from a disciplinary perspective and from their perspective. The first-hand information obtained through these interviews would provide helpful insight into the needs and reactions of designers and salespeople to the Luoshan shadow creative merchandise. Recordings were made by the researcher as soon as possible after the interview, as a memory of both the conversation and the email interview were

more accurate and facilitated later coding analysis. To ensure that the data accurately reflected as much as possible about the current application of visual rhetoric (VR) to the Luoshan shadow creative merchandise, the interview data were collated, integrated, cross-checked, and then coded. After the interviews were completed, the interview data were coded thematically. While assigning themes before the interviews may have constituted a priori interpretation of the situation by the interviewer, several potential coding and analysis categories were identified before the interviews began, such as perceptions of Luoshan shadow creative merchandise, rhetorical elements, and visual symbols, creative design and efficacy experiences, and communication.

The first step in thematic analysis was data collection, a process that was both critical and multifaceted. The research team collected data through semi-structured interviews. These interviews involved in-depth discussions with 26 participants, including Luoshan shadow puppet artists, designers, and cultural scholars, who provided valuable insights into artistic forms and design elements based on their expertise and practical experience. The interviews, conducted via on-line meetings (see Appendix B.1), offered crucial understanding of the core characteristics of Luoshan shadow puppet (LSP) and explored how to effectively incorporate these elements into creative merchandise design. Their opinions and suggestions contributed significant theoretical support and practical guidance, ensuring the scientific and innovative nature of the design proposals. Additionally, the interviews directly gathered feedback from the target audience, revealing their expectations and preferences for Luoshan shadow puppet creative merchandise. This comprehensive data collection approach ensured a thorough understanding of both the artistic value of Luoshan shadow puppet (LSP) and market demands, providing a solid foundation for subsequent thematic analysis.

The second step in this thematic analysis was verifying data accuracy. Initially, researchers conducted a comprehensive review of the collected data to ensure the authenticity and reliability of data sources, including validating the qualifications of experts and the completeness of interview data. Next, data were cleaned and organized to remove duplicates, errors, or irrelevant information. This process involved standardizing data formats to ensure consistency across various data types. Researcher also used NVivo software to conduct a detailed examination, identifying and correcting potential errors and biases. Any anomalies or inconsistencies discovered were recorded and re-examined to ensure the overall accuracy and reliability of the dataset. This phase ensured that the data used was accurate, providing a solid foundation for subsequent thematic analysis.

In the third phase, the researcher conducted coding and classification of the collected data to extract key themes. During this stage, NVivo software was used for systematic processing of data, organizing and summarizing relevant information according to themes. Preliminary coding results included various important themes (see open coding table 3.1). This process helped identify visual rhetoric elements that should be emphasized in design and their application in creative products. The process began with an initial reading and understanding of data to identify potential themes and patterns. The researcher employed a coding framework to mark and categorize significant information and concepts within the data. This coding was divided into open coding and axial coding phases. In the open coding phase, researchers meticulously broke down data, identifying key keywords and phrases such as design methods, design issues, rhetorical strategies, design contexts, and design objectives, and marked them as preliminary categories or themes. In the axial coding phase, these preliminary categories were integrated and synthesized to establish connections and hierarchies among themes. To ensure coding accuracy and consistency,

the researcher employed double coding methods, comparing and discussing coding results to ensure high consistency in theme identification and classification. Ultimately, the extracted key themes and patterns provided a clear direction for subsequent analysis and design, assisting researchers in understanding how the artistic elements of Luoshan shadow puppet (LSP) could be incorporated into creative merchandise design.

Finally, the researcher conducted a comprehensive analysis of the identified themes. The 38 key themes extracted were integrated to assess their practical value in creative merchandise design. This process involved a detailed examination of relationships among themes, exploring how various visual rhetoric elements interacted and their impact on creative merchandise design. By combining the results of this comprehensive analysis with actual design needs and user feedback, the researcher formulated specific recommendations to optimize design strategies, ensuring that creative merchandise effectively conveyed traditional artistic features of Luoshan shadow puppet (LSP) while meeting modern consumer demands. This comprehensive analysis provided practical guidance for decision-making in Luoshan shadow puppet creative merchandise and facilitated the innovative transformation of these traditional cultural elements.

3.5.2 Questionnaire Analysis

Two questionnaires were centred around the research theme and design practice, aiming to gain a deeper understanding of the key factors in the design of Luoshan shadow puppet creative merchandise (LSPCM). The researcher systematically collected participants' opinions and feedback, which provided valuable insights into artistic expression, design elements, and cultural connotations. The obtained data helped reveal the challenges and opportunities in current design practices and provided theoretical support

and empirical evidence for future creative merchandise designs. The survey design focused on participants' intuitive responses and professional insights, also involving an in-depth exploration of design methods and artistic expression, thereby ensuring the comprehensiveness and practical applicability of the research outcomes.

The first questionnaire included three sections: background information about the respondent, product personality, and product intention. This questionnaire focused on understanding the users' needs, preferences, habits, and expectations of creative Luoshan shadow goods, which would help design merchandise that better matches users' needs. It was possible to investigate how users experience emotions in the environment in which they use creative goods through a questionnaire. For this reason, these questionnaires could help gather insight into what users feel, experience, and comment on the products so that they could optimize their designs for these creative goods. The second questionnaire investigated satisfaction with the merchandise and its visual rhetorical design approach. It included a survey on four dimensions: design dimensions, design thinking, design strategy, and symbolic communication.

In the analysis of questionnaire 1, the researcher primarily employed descriptive statistics, cross-tabulation analysis, and correlation analysis methods. The researcher organized the survey data, ensuring that all 266 questionnaires were complete and valid, with no data loss. Next, in the descriptive statistics phase, the researcher calculated fundamental statistical indicators such as mean, standard deviation, and frequency distributions to understand respondents' overall views on various design elements. The data was input into the statistical software SPSS, where frequency counts and percentages for each option were computed, including variables such as respondents' gender, age, and

preferences for different design elements. Frequency tables for each question were generated, displaying the number of responses and the proportion for each answer option. This process helped the researchers grasp overall trends, identify common opinions and preferences, and provided a foundation for subsequent in-depth analysis.

Moreover, cross-tabulation and correlation analysis methods were employed to explore the relationships between different variables. Cross-tabulation helped the researchers compare attitudes toward design elements among respondents with different backgrounds, while correlation analysis revealed the relationships between various design factors and the effectiveness of the creative merchandise. SPSS software was used to create cross-tabulation tables, analysing the relationships between two or more categorical variables, such as respondents' age and their preferences for specific design elements. Percentages were calculated from these tables to uncover distribution trends across different variable combinations. Cross-tabulation enabled the identification of potential patterns and associations, further understanding respondents' preferences and attitudes, and provided data support and direction for improving creative merchandise design. Correlation analysis was conducted using SPSS software to calculate correlation coefficients (such as Pearson's correlation coefficient or Spearman's rank correlation coefficient) to assess the linear relationships or rank consistency between variables. Additionally, the significance levels of the correlation coefficients were analysed to determine whether the relationships between variables were statistically significant. These analyses helped the researchers identify potential associations between variables, providing insights into respondents' attitudes and preferences, and thus guiding the optimization of creative merchandise design strategies.

Following the analysis of Survey 1, the research shifted to the design practice of Luoshan shadow puppet creative merchandise based on visual rhetoric strategies. In this phase, the findings from the survey data were integrated to guide the design process using visual rhetoric theory. The design practice involved a thorough analysis of visual elements in Luoshan shadow puppet (LSP), such as the imagery, colour, patterns, and symbolic meanings, employing these elements to develop merchandise aligned with visual rhetoric strategies. By translating the preferences and attitudes of survey respondents into specific design solutions, this research aimed to create shadow puppet merchandise with cultural depth and market appeal, while enhancing the expression and impact of traditional art forms in the modern consumer market.

The next phase involved questionnaire 2, which was conducted to assess the actual effectiveness and market acceptance of the Luoshan shadow puppet creative merchandise design developed based on visual rhetoric strategies. Survey 2 focused on evaluating the creative merchandise developed during the design practice phase, gathering respondents' feedback on aspects such as the aesthetics, functionality, cultural adaptability, and overall satisfaction with the products. By analysing the data from Survey 2, the research aimed to evaluate whether this creative merchandise met users' expectations and its potential performance in the market. The results from this phase provided empirical evidence for further optimizing the design and guiding final adjustments and promotional strategies for the creative merchandise.

In the testing of questionnaire 2, the researcher primarily used descriptive statistical analysis method. The researcher processed the data from 12 respondents in survey 2, calculating statistical indicators such as frequency counts, percentages, means, and

standard deviations to reveal overall evaluations and feedback on the creative merchandise. Specifically, the researcher created frequency distribution tables and charts to display the distribution of scores for various aspects of the design, and analysed the acceptance and satisfaction with different design elements. These statistical analyses helped the researcher understand the performance of this merchandise in actual testing and provided data support for further design optimization and market promotion strategies.

These analytical methods provided deeper insights, enabling the researcher to identify key factors influencing the design practice and propose targeted improvements based on data-driven results. The researcher synthesized all the analysis results by integrating data from questionnaire 1 and questionnaire 2, forming a comprehensive evaluation of the Luoshan shadow puppet creative merchandise design based on visual rhetoric strategies. This integrated analysis included descriptive statistics, correlation analysis, and respondents' feedback on the creative merchandise, helping to identify issues and strengths in the design. By combining findings from each stage, the researcher was able to gain a thorough understanding of audience needs and preferences and provide optimization suggestions accordingly. This comprehensive analysis revealed the potential market performance of the creative merchandise, providing a scientific basis for future design improvements and promotional strategies, ensuring the final effectiveness of merchandise in meeting cultural values and market demands.

3.5.3 Coding and Analysis

After collecting the data, an initial quality check and performed data entry and calibration to correct errors and incomplete data were conducted. This was to design coding rules and schemes to classify and code data into numbers or symbols for statistical

and analytical purposes, depending on the content of this study. Attention was given to the reprehensibility and consistency of what was coded as a rule, avoiding errors due to subjectivity and uncertainty. Besides that, research ethics and academic norms were strictly adhered to when coding and analysing to ensure both confidentiality and privacy of these datasets.

Following the interviews, an open coding of all data was carried out using NVivo software. 38 non-repetitive variables emerged during the open coding process that could be used as primary codes (Table 3.1). Within these codes, 10 non-repetitive core categories were distilled to serve as primary open codes. For example, design style, aesthetic impression, efficacy experience, design goal, and design effect were all different aspects that express the creative goods, which were highly logically related to each other, so these five primary codes were put together in the central axis code of Luoshan shadow creative good design. In addition, the researcher did a selective distillation of variables that were more fragmented or not easily categorized, and then the 10 core categories were coded.

Table 3.1: Open Coding

No.	Basic category	Basic concept	Original statement	Source
1	Schematic Diagram	Demand, Brand, Product differences	.....The starting point is to use it and meet the needs user	A12
			.....differentiate them from competitors' product and avoid same	A14
2	Product issues	Lack of character and quality	..... Content is rarely up to date and lacks character	A05
			..... without particularly many typical elements of low quality	A06
3	Elemental	Colours, shapes, patterns, images	..... its patterns, colours, forms and sounds	A13
			..... focuses on use of visual elements such as colour, shape	A11
4	Rhetorical strategy	Symbolism, Metaphor, Exaggeration	.....Rhetorical devices include metaphor, symbolism and Metaphor	A14
			..... With the help of VR , metaphor, hyperbole and symbolism, ...	A26
5	Design thinking	Individualised, innovative approaches	..... is an innovative approach to problem solving	A16
			..... Tailor the appearance of goods to meet individual preferences	A23
6	Aesthetic effect	Emotional, Artistic, Attractive	..... creates goods are more in tune with the emotions of consumer	A21
			..... Unique, sophisticated and artistic visual effects ..... Increase the attractiveness of goods	A06

Table 3.1 continued

7	Cultures	Sharing, Ideas, Concepts	..... Compare and contrast traditional shadow and shadow cultural and creative products to increase the understanding of cultural connotation of shadow	A25
8	Readability of information	Recognition, Information comprehension	..... Product recognition and readability of information to enhance users' understanding and interpretation of information	A17
9	Hereditary	Traditionally, Cultural lineage	..... products get new breakthroughs to inherit the culture	A05
10	Competitiveness	Brand image, Selection preferences	..... attracts attention and determines choice preferences	A13
			..... use of visual rhetoric can improve a marketability of products	A01
11	Inspiration	Emotions, Publicity	..... give consumers a more enjoyable, interesting and profound cultural experience	A08
12	Visual connection	Cognition, Association, Connection	..... enables consumers to quickly recognise and associate Luoshan shadow culture visually	A22
			..... Designing visual merchandise to create a connection with the Luoshan shadow	A25
13	Design rules	Contrast, Combination, Exaggeration	..... colour contrast, shape contrast, size contrast, material combination	A01
			..... shows the process and design rules of exaggeration and contrast that the designer adheres to in full	A19
14	Aesthetic value	Aesthetic needs, Emotional resonance	The aesthetic enhancement of ..... products will also bring me fresh feelings	A09
			.....resonate emotionally with users when combined with merchandise	A17
15	Public perception	Purchasing power awareness, Attention	..... will increase my desire to buy or pay attention	A03
			..... relatively low level of attention to the creative merchandise	A21
16	Design context	Objectives, Issues	..... Demand for cultural and artistic products is increasing, but there are many problems	A04
			..... Determine objectives of this type of commodity problem situation	A02
17	Elemental transformations	Element selection, Mining, Refining	..... According to different themes and functional needs of products, refine the cultural elements from historical traditions,, etc.	A14
18	Art style	Consumer awareness, Recognition	..... design styles can enhance brand recognition and awareness	A16
			..... It can shape the brand image and enhance consumer awareness	A23
19	Homogeneity	Similarity, Resemblance, Duplication	..... Some of designs are too similar and lack uniqueness	A06
			..... Merchandise is similar in shape to the rest of the region	A17
20	Commodity culture	History, values, Innovativeness	..... constructing the culture, history and value of the product	A20
			..... Creating an innovative culture of such commodities	A26
21	Classicism	Traditions, Crafts	..... use of shadow elements reflects respect for traditional crafts	A01
22	Visual output	Presentation of results, Software design	..... Design output presented should be unique	A05
			..... through design software to complete the merchandise design s	A18
23	Market	Opportunities, Potential, Economic support	..... This creative merchandise has the potential and opportunity for infringement in the marketplace	A07
			..... can expand its market potential and also provide economic support for the inheritance and development of craft of Luoshan shadow	A20

Table 3.1 continued

24	Propagate	Sales, Promotion,Presentation	..... Co-organize exhibitions, events or themed displays of creative Luoshan shadow merchandise	A03
			..... boosts exposure and sales of merchandise	A09
			..... and spread the word to others through word of mouth	A21
25	Elementality	Carrier, Inspiration	..... will focus more on the graphic element because of its decorative function	A08
26	Storytelling	Product stories, Energy of stories	..... explains the stories behind these cultural creations to audience	A15
			..... can convey the emotional content and storytelling of product	A24
27	Comfortableness	Pleasant, Receptive, Effective transformation	Matching convenience and comfort in ..... use scenarios	A14
			Product reviews from ..... visual, tactile and sensory experiences	A08
28	Usability	Easy to use and less burdensome	..... Enough to make cultural and creative products fit the habits and needs of users	A01
29	Product image	Impression, Quality	..... product handling, quality, impression, after-sales service	A05
			.....merchandise depends on creativity, materials, craftsmanship, etc. ..... to make merchandise visually present a high quality feeling.	A16
30	Safety	Healthy, Environmentally friendly	..... does not harm the user or damage the environment	A02
31	Originality	Level of creativity, Original	.....Divergent, reverse & Thinking to Enhance creativity.....	A04
			..... product clearly doesn't look original	A11
32	Design Concept	Safe and practical	The dominant ideas established during the conceptualisation process of ....., including safety, practicality, etc.	A15
33	Persuasive effect	Persuasion, Effectiveness	..... It can make the goods persuasive and attract consumers' eyes	A01
			..... Designing creative Luoshan shadow merchandise can bring good communication effect for the brand	A09
34	Inspirations	Creative thinking, New ideas	..... Designers can draw inspiration and ideas from the stories and images of the Luoshan shadow	A15
			..... Design inspiration can stimulate creative thinking and generate new ideas	A25
35	Coherence	Harmony, integrity, Unity	..... can highlight the characteristics of product and also create consistency and coherence in the style of product	A16
			Harmony between the design elements of	A24
36	Pass on feelings	Acceptance, Emotion	..... helps products to be better accepted by users and enhances performance	A02
			..... Using images to capture attention and provoke emotion	A09
37	Communicating theme	Ideas, Structure	..... shapes the structural image of product's operation and the external decorative image that appeals to the eye	A04
			..... conveys feelings, shows attitudes, expresses opinions and ideas	A19
38	Product image	Quality image, Visual image	..... guarantees the quality image and mass production capability of the product	A08
			..... has designed a new visual identity	A11

The principal open codes obtained in this study belonged to a relatively independent conceptual level. Because there were many of these codes, it was not easy to abstract or simply describe how the variables were intrinsically related to each other. Therefore, further refinement of these 10 codes was needed to summarize them into highly generalized main categories. While maintaining the original intent of each code, the researcher eventually categorized it into six broad categories of codes: rhetorical context, rhetorical structure, rhetorical pattern, design dimensions, design ideas, and design strategies.

In addition to using surveys for design practice and validation, researcher employed descriptive statistics and correlation analysis methods to test the initially established research hypotheses. The survey provided empirical data on the research questions, assisting in evaluating the accuracy and applicability of the hypotheses proposed in Chapter 2. Statistical analysis revealed the degree of support for the hypotheses, examined relationships between variables, and offered validation evidence for the research hypotheses. This approach ensured the reliability and validity of the research findings, allowing the hypotheses to be tested and adjusted in practice.

3.6 Research Procedure

All experimental sessions were conducted by the researcher, including data cleaning, analysis of the themes and creative merchandising design practice.

3.6.1 Data Collation and Cleaning

Data cleaning was a crucial step in the post-questionnaire data analysis to ensure the accuracy and integrity of what was available and to convert the data into an analysable form. Firstly, it was important to check the completeness of these data - to see if each

question and each respondent's answer was recorded and to fill in any omissions. Next, the data was checked for accuracy, including whether the responses were in the correct format, whether the answers met the requirements, and whether the options were correct. Respondents' unanswered questions were filled, removed, or interpolated, and different methods were chosen to deal with missing values, depending on the data. Moreover, the questionnaire data were checked for abnormal values, for example, by dealing with extreme values outside any normal range. After that, with the key elements of visual rhetoric and Luoshan shadow artwork in demand, filter the variables and observations the researcher needs were determined. All these steps helped the researcher clean the data, reduced errors during subsequent data analysis and better supported the findings of this research.

3.6.2 Path of Visual Rhetoric Influencing the Creative Merchandise Design of Luoshan Shadow Puppets

This study used thematic analysis to construct a pathway for how visual rhetoric worked in designing Luoshan shadow creative goods and questionnaire to quantitatively identify what specific factors influenced these goods' creative design. Based on Professor Liu Tao's and Kenneth Burke's theoretical perspectives on visual rhetoric (VR), the researcher combined the core elements of visual rhetoric, such as visual rhetorical context, rhetorical structure, and rhetorical pattern, to map the design content of Luoshan shadow creative goods and construct a pathway for the role of VR in influencing these goods' design.

By combining visual rhetoric methods with the design of Luoshan shadow puppet creative merchandise (LSPCM), what could be deduced was a comprehensive model that clarified how visual rhetoric could guide the innovation of these goods in the study of

innovative design and analysed the intrinsic links between visual rhetoric and these merchandise innovations. This model specified the stages in which visual rhetoric influences what forms an innovative product in the Luoshan shadow creative goods and allowed designers to develop design strategies based on the influencing factors at each stage, which also provided a basis for exploring questions at the beginning of this study.

After sorting out the key elements, those designed with the same visual and rhetorical content paths were correlated and then analysed in the specific indicators of creative design. These derived key indicators summarized the standard features of the design of Luoshan shadow creative goods. According to the results of such analysis, it was found that the context of visual rhetoric (VR) was closely related to the design dimension of these products, which involved factors such as the positioning and objectives of these goods. This could also directly impact the form of expression of Luoshan shadow merchandise, as the users choose their own aesthetics for the type and shape of products. In general, researchers have outlined it as design objectives such as product differentiation, brand building, satisfying needs, and sustainable design. A design opportunity points to explore a different user needs and build a product design approach scenario would provide a reference direction for the subsequent creative design practice of Luoshan shadow creative merchandise. What's more, there was a close correlation between the structure of visual rhetoric and the design thinking of creative merchandise. It involved indicators such as storytelling, interactivity, and ease of use. They reflected the genes of traditional and modern Luoshan shadow culture, which focused on a sense of experiential achievement in merchandise design and the intrinsic value gained after-ward. It was worth noting that visual-rhetorical structures were only formal frameworks for analysing and solving

problems rather than specific ways of solving them. The specific paths of action are illustrated below in Figure 3.3:

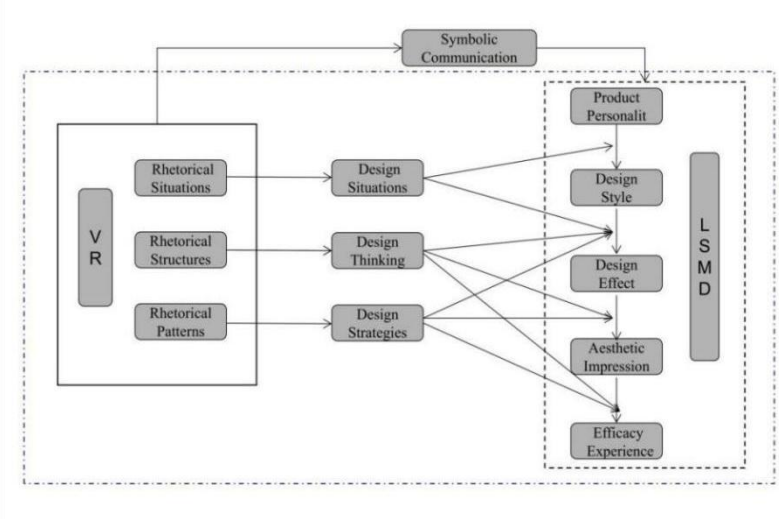


Figure 3.3: Path of Visual Rhetoric Influencing Creative Merchandise Design

3.6.3 Design Methods of Luoshan Shadow Creative Merchandise Based on Visual Rhetoric

It was possible to summarize a framework of creative design strategy based on visual rhetoric for Luoshan shadow creative merchandise from each stage, based on the path of visual rhetoric acting on these merchandise designs proposed by a survey of interviews and questionnaires. Moreover, its visual rhetorical strategy focuses on applying Luoshan shadow creative merchandise elements based on the design objectives and achieving meaningful 'identity' in the merchandise message through specific rhetorical methods. The elements of Luoshan shadow puppet (LSP) primarily included puppet shapes, colours, sounds, patterns, and structures (Figure 3.4). Based on these elements, creative design employing visual rhetoric (VR) formats involved integrating puppet shapes, colours, sounds, patterns, and structures to enhance the expressive impact and aesthetic appeal of the Luoshan shadow puppet (LSP).

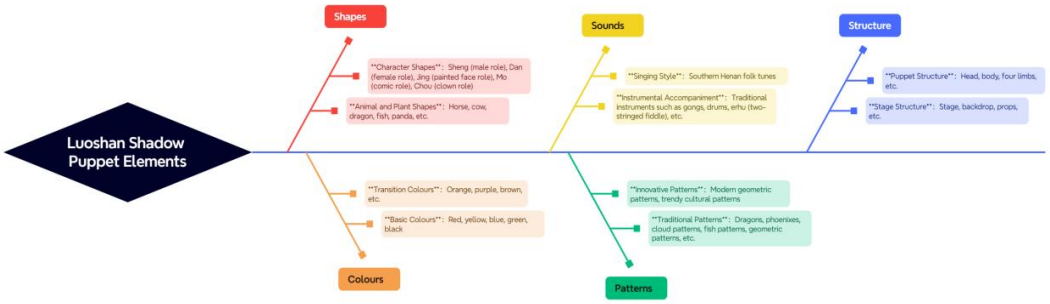


Figure 3.4: Elements of Luoshan Shadow

In the specific creative design of merchandises, the rhetorical context frames the good's value field, the rhetorical structure clarifies which direction the product was designed, and the rhetorical pattern was refined to specific elements, showing the formal language and constitutive law of creative merchandise design. There were four primary areas of design strategy that the researcher has categorized as shown in Figure 3.5.

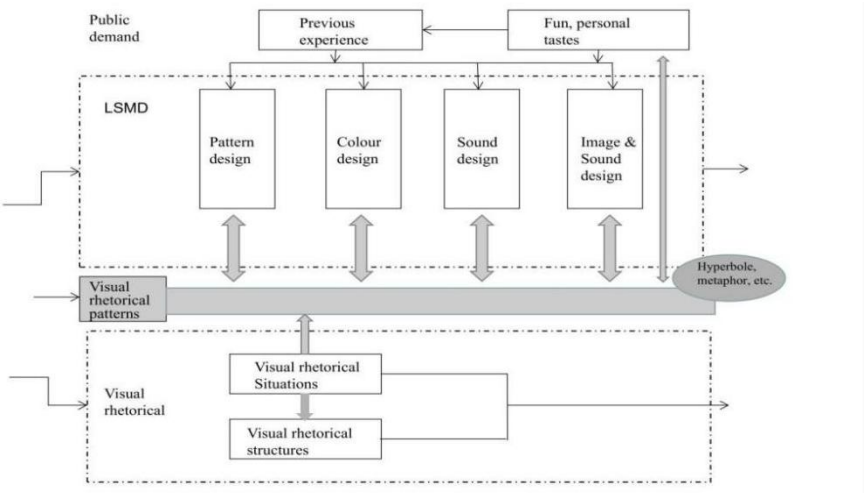


Figure 3.5: Design Methods

3.6.3.1 Methods for Shape

As a core element of Luoshan shadow goods, shape was also a motivating factor for users to purchase the merchandise. At that the shape stage, the designer uses rhetorical techniques to design a shape for the creative merchandise of Luoshan shadow according to its visual objectives and positioning. For example, they use anthropomorphism, metaphor

and symbolism, contrast and repetition, composition, and layout, as well as colours to make a shape more expressive and attractive.

3.6.3.2 Methods for Colour Design

It was clear from the results of these questionnaires that participants place a high value on the colour design of creative goods. Three main modes of colour as a vehicle for imagery - iconic, semantic, and narrative elements - were used to determine and organize the colour of products according to various design themes for these merchandise, using a combination of metaphor, simile, hyperbole, and borrowing from different rhetorical patterns.

3.6.3.3 Sound and Image Design Methods

Sounds and image designs have long been developed and valued in films and television, digital products, and games. They could convey information and emotions, enhance efficiency, and brand mindfulness. Typical visual rhetorical patterns such as prose, repetition, and refrain enhanced the sensory, perceptual, attentional, memory, representational, thinking, and emotional effects of sound and cognitive processes from a phonetic perspective. A variety of speech rhetoric were cleverly used to give the speech of some Luoshan shadow creative merchandise, especially digital products with a unique aesthetic character, making them a product with vivid and beautiful speech images.

3.6.3.4 Strategies for Material Design

Material provided many possibilities for merchandise design, with its texture and colour. Many designers used rhetorical techniques such as metaphor and contrast to shape the texture of their products in creative merchandise design. At the level of effect expression, some materials whose textures could be unified with a better visual language,

such as the colour and shape of creative merchandise, have a better visual symbol, which would enable consumers to enhance their recognition or loyalty to these creative merchandise in the process of exposure to them.

This creative children's plate was made from safe and environmentally friendly plastic, specifically designed for children, making it both lightweight and durable. The material was non-toxic and harmless, meeting food-grade safety standards to ensure children's health and safety during meals. Additionally, the plastic material was easy to clean, offering greater convenience for parents in everyday use. The design of the plate fully considered children's needs, featuring vibrant colours and lively shapes that attracted children's interest and enhanced their dining experience.

3.6.4 Design Practice of Merchandise

This section explains the design practice and validates visual rhetorical design methods using the design of creative merchandise for children's tableware as a case study.

The design steps for creative merchandise involve several key stages (Figure 3.6). 1) Based on the results of Survey 1, the researcher conduct an in-depth analysis of Luoshan shadow puppet's artistic forms, including shapes, colours, and textures, to extract representative visual elements; 2) The designer incorporate these elements into the creative merchandise design, developing an initial design proposal; 3) Surveys and interviews are conducted to gather feedback from target users on the design proposal, analysing data to validate the effectiveness of the design and the extent to which user needs are met; 4) Based on feedback, designer iterate and refine the merchandise, adjusting design details to enhance functionality and aesthetic appeal. This process is iterative, ensuring that the design successfully integrates LSP art into creative merchandise.

3.6.4.1 Product requirement analysis

The demand analysis for creative merchandise design based on Luoshan shadow puppet (LSP) included a comprehensive evaluation of market demand, consumer preferences, and cultural heritage. The researcher assessed current consumer interest in traditional cultural products and purchasing tendencies, particularly focusing on the needs of the children's market. Consumer preference analysis identified audience preferences for Luoshan shadow puppetry's artistic style, patterns, and colours, especially in integrating modern elements to enhance appeal.

3.6.4.2 Structure (function) design

Among the critical aspects was the selection of Luoshan shadow puppet (LSP) elements. This involved a thorough examination of various traditional elements, such as iconic shadow puppet characters, symbolic motifs, and distinctive colour schemes that define the art form. Researcher had to determine which elements would best capture the essence of Luoshan shadow puppet (LSP) while appealing to contemporary consumers, particularly children. The selection process required balancing the preservation of authentic cultural symbols with the incorporation of modern design principles to ensure that this creative merchandise not only honour the tradition but also resonate with current market trends and consumer preferences.

In the design of the Luoshan shadow puppet-inspired children's creative dinner plate, incorporating fish and horse patterns, the initial focus was on ensuring safety and convenience for children. The plate's shape was designed in round or oval forms to avoid sharp edges, with segmented areas to accommodate various types of food. The fish and horse motifs were skilfully integrated into the centre and edge of the plate, using vibrant printing or embossing techniques to highlight the traditional artistic style of Luoshan

shadow puppet. The fish pattern symbolized auspiciousness and prosperity, while the horse motif represented strength and success. These visual rhetorical elements enriched the cultural significance of the plate, enhancing users' dining experience. The plate was made from food-grade safe plastic, ensuring it was non-toxic and easy to clean, meeting daily usage needs.

3.6.4.3 Prototype design

The product prototype is an expression of the design solution. The designer quickly produced it using CAD and SU software to represent the initial design concept and ideas. When designing the tableware prototype, the designer clarified which elements were on the product to show a three-dimensional final effect

3.6.4.4 Visual design

The design process constantly adjusted the proportions and relationships between elements to achieve a better visual expression. A key consideration in this process was maintaining consistency in form. By employing a unified style and visual language, designers effectively reduced the cognitive load on users, minimizing the effort required to adapt to different visual changes. Additionally, consistent form reduced the memory burden on users, making it easier for them to recall and comprehend the design's content, thereby enhancing the overall user experience.

Vibrant colours and distinctive shadow puppet figures commonly found in Luoshan shadow puppet were utilized to capture children's attention and interest in the design of this children's dinner plate. The shape and pattern of this plate were inspired by traditional stories and characters from this traditional art. The figure was simplified and cartoonized to better align with children's visual cognition and aesthetic preferences. The

overall design emphasized visual effects, with vivid patterns and colour combinations enhancing the plate's appeal, making mealtime an enjoyable experience.

3.6.4.5 Technical realization

.The production of the children's plastic dinner plate uses an injection moulding process, which requires the creation of precise moulds to ensure that each plate's shape and pattern meet the design specifications. Once the moulds are completed, the production process proceeds to the injection moulding stage. Suitable plastic materials are selected, heated to a molten state, and injected into the moulds. After cooling and solidifying, the plastic plates are removed from the moulds, followed by de-moulding and trimming. This stage requires careful attention to the plastic's safety and durability to ensure that the merchandise meets safety standards for children's use. To enhance the plate's appeal and protect the plastic surface, Luoshan shadow puppet patterns and colours were chosen for decoration and coating. The patterns and colours were printed onto the plate using heat transfer technology, which beautified the plate and improved the durability and wear resistance of the designs.

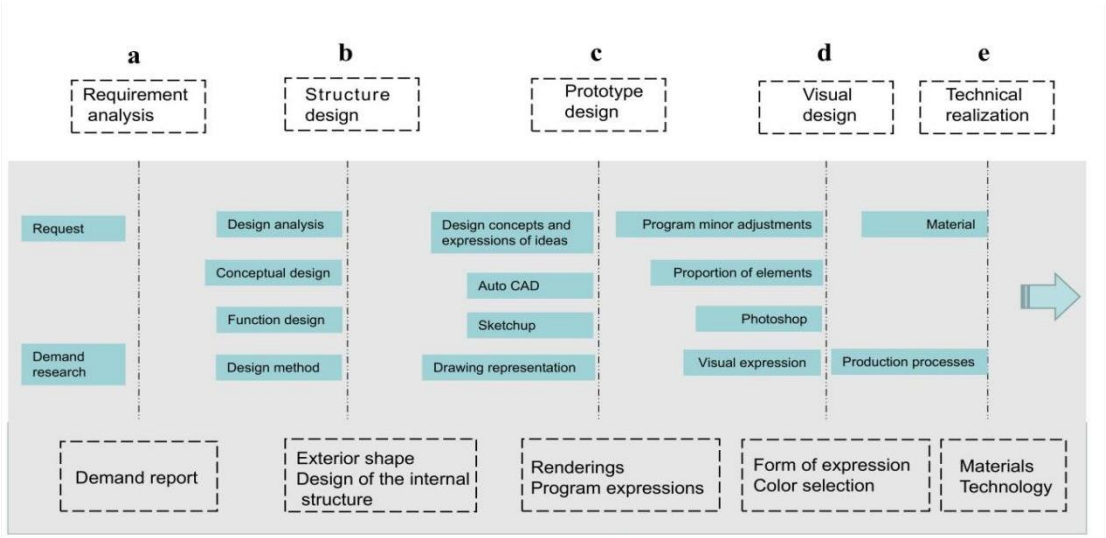


Figure 3.6: Step in Design Practice

3.6.5 Testing of the Merchandise

To assess the effects of visual rhetoric (VR) acting on the path model of Luoshan shadow puppet creative merchandise (LSPCM) and its specific design methods, respondents related to the research topic, such as professionals and industry practitioners, were selected for the collection of receipts. After a design was completed, some participants were invited to evaluate what was designed as creative merchandise for the Luoshan shadow puppet (LSP). These respondents should have sufficient knowledge and experience to provide helpful information about this good. Interview surveys and questionnaires were conducted to understand more of the informants' ideas, perceptions, and experiences.

The researcher assessed the design of the Luoshan shadow puppet-themed creative children's plates using a customer acceptance level scale. First, evaluation criteria were determined, including visual appeal, functionality, safety, and integration of cultural symbols. Next, a questionnaire was designed, incorporating specific questions related to these criteria, with a rating system from 1.0 to 5.0. Subsequently, a specific group of parents was selected for the survey, and feedback on the children's plate was collected. Finally, data analysis was conducted to evaluate the mean scores and standard deviations for each criterion, determining the design's acceptance level and areas for improvement to ensure that the merchandise met customer needs in terms of visual appeal, functionality, and cultural relevance.

3.7 Ethical Considerations

In this study, the ethical principles of autonomy, non-maleficence, and fairness in data collection and usage are crucial, as they protected participants' rights and upheld the

integrity and scientific validity of the research (Pietilä et al., 2020). The researcher ensured that informed consent was obtained from participants during interviews and surveys, clearly informing them of the purpose, process, and potential impact of data usage. Participants remained anonymous in the study, with respect given to their privacy rights and personal data protection, ensuring that their participation was voluntary and that they could withdraw from the study at any time. Furthermore, this study ensured that personal information and data were kept strictly confidential during processing and storage, preventing any risk of leakage or misuse. All data were stored in encrypted form and were accessible only to authorized research personnel to prevent unauthorized access or misuse. Additionally, regular security audits were conducted throughout the research process to ensure data security and integrity. These measures protected participants' privacy and mitigated the risk of data leakage or misuse.

The interview records and survey data were used solely for academic purposes and were not shared with any companies or organizations. All data were handled confidentially and used exclusively for research analysis and academic publication. Specifically, interview data were not employed for commercial purposes or external dissemination, ensuring the protection of participants' privacy and data security. The researcher committed to not using the interview records for any purposes unrelated to the research objectives, thereby maintaining the ethical integrity of the study and participants' trust. The researcher also considered the authenticity and accuracy of the data to avoid misleading interpretations that could negatively impact the research subjects. These ethical considerations were crucial in ensuring the legality of this research and respecting cultural values.

3.8 Summary

In this chapter, seven sections detailed the methodology used throughout this study. The eight sections are introduction, research design, theoretical support, data collection, data analysis methods, research steps, ethical considerations, and summary.

The first section is an introduction to the main content of this chapter, followed by the second section which discussed the research design and methods used in this study. The third section describes the theoretical framework underpinning this study. In the fourth section, the method of data collection chosen for this study is explained while the fifth section described the data analysis for the data collected. The sixth section is an explanation of the step-by-step approach to this study, which specified the data cleaning, the role framework pathway, and the specific design strategy model. Part VII is ethical considerations. Lastly, in the final section is a conclusion of the chapter.

CHAPTER 4

RESULTS AND FINDINGS

4.1 Introduction

This chapter contains the results and findings from all research questions related to the data analysed in response to what was raised as research questions in Chapter I. This chapter shows the results of the theme analysis, questionnaire design, and design practice. The significance of Luoshan shadow elements in the development of creative merchandise, the reasons for designing with visual rhetoric (VR), and the suggested design methods are described in response to the research questions and objectives.

Next, necessary procedure is the practice of creative merchandising. For this, the researcher validated an approach to visual rhetorical design through design practices and examples of children's tableware. A second questionnaire survey and expert interviews were conducted to obtain experts' views and experiences on how this item was designed. This merchandising practice validates what visual rhetorical approaches can offer in those merchandise designs, which provide valuable information and examples for creative merchandising.

4.2 Results of the Thematic Analysis

The primary purpose of conducting a thematic analysis was to select participants with design experience to find out existing problems, design methods, and related suggestions in designing creative goods for Luoshan shadow puppet (LSP).

4.2.1 Procedure of Thematic Analysis

Primary research was conducted in November 2021 using semi-structured interviews. The respondents in these semi-structured interviews had a certain level of expertise, ensuring a more meaningful preliminary study. The sample size was 26 experts, scholars, and designers of China's cultural heritage. The researcher provided short descriptions of this study and interviewed the respondent via video conference and email to participants.

After the interviews, the researcher transcribed the verbal language into text. Following a data conversion, the researcher read some further iterations and generated some initial coding ideas. This study has two main problems with creative merchandising based on visual rhetoric (VR). Firstly, considering the study's objectives, the respondents selected should be equally familiar with the design of Luoshan shadow creative merchandise. Specifically, the respondents had research experience, design experience, or sales experience. Secondly, considering visual rhetoric's influence on creative merchandising design, this study follows Ballard and Koskela (2013) research recommendations to select appropriate rhetorical strategies to enhance our understanding of design theory and practice. Considering the above criteria, this study was open coded based on existing studies. Open coding was divided into two categories: creative merchandise for Luoshan shadow and visual rhetoric (VR).

Following the end of coding was a search and check for themes (Braun & Clarke, 2014). The researcher collated and summarized all existing codes, grouping them under various potential themes. At this stage the analysis of the codes began, and the codes were then combined to form an overarching theme. By drawing diagrams, the researcher showed

a logical relationship between the codes, sub-themes, and themes at this stage. For example, visual rhetoric consists of visual rhetorical structures, visual rhetorical situations, and visual rhetorical strategies.

There was a need to determine which aspects of all data were included in each theme by defining and refining these themes. After referring to relevant studies, there were eight themes assessed by the researcher: design strategy, design thinking, design situation, visual scenarios, visual rhetorical structures, visual rhetorical patterns, and visual communication. Apart from identifying what each theme encompassed, the researcher examined the themes to ensure there was no overlap between them and that they were closely related to this research theme. As part of the refinement, it was determined if the theme contained any sub-themes. A thematic map was also established in this phase to present a relationship between the Luoshan shadow and the visual rhetorical themes.

In short, the task of thematic analytical writing is to tell the complex data story in a way that convinced a reader of its analysis and validity (Terry et al., 2017). Research theme analysis provides a succinct, coherent, logical, and non-repetitive story of all data within a theme. In the research on Luoshan shadow puppet creative merchandise design based on visual rhetoric (VR), a systematic analysis and integration of various data sources have been conducted to present a coherent and logical narrative. This study focuses on Luoshan shadow puppet (LSP) and employs visual rhetoric design methods to innovate its product designs, aiming to enhance the quality of these creative merchandise. To achieve this objective, the research deeply explored the historical background and artistic expressions of Luoshan shadow puppet (LSP), supplemented by expert interviews,

gradually forming a comprehensive understanding of visual rhetoric methods, which are then applied to practical design contexts.

4.2.2 Presenting the Findings of Data

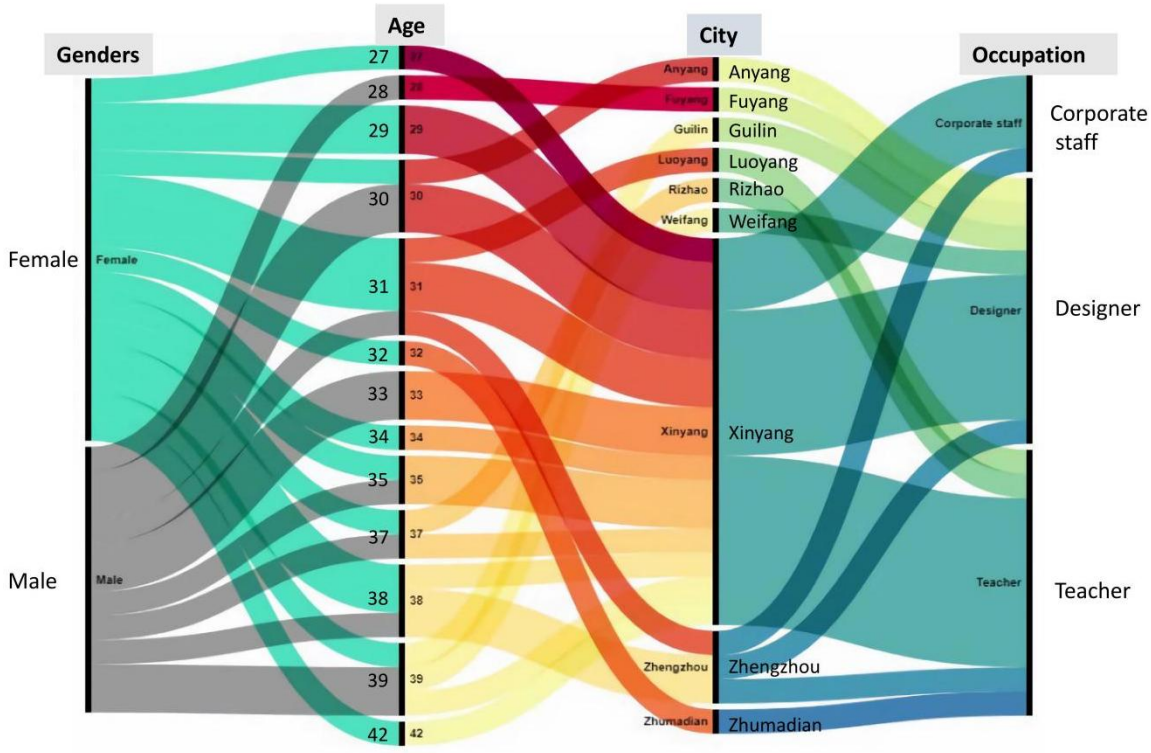


Figure 4.1: Demographic Statistics

A total of 26 respondents were interviewed during this study (Refer Appendix B). Figure 4.1 illustrates the details of those who participated in the interviews. The demographic statistics consist of four components, which contain gender, age, city, and occupation. This is vital to understand the connection between different groups and communication among different places. There were relatively more female respondents in the sample, 15 in total, and 11 male respondents. In terms of city distribution, 61.54% (16 person) of the respondents were from Xinyang city. 42.31% are designers as well as 42.31 % are teacher. In terms of age, 11. 4% of the participants are 31 years old, which is

the most significant percentage. In terms of educational qualifications, there were only 3 PhDs, while the majority (73.08%) were those with a master's degree.



Figure 4.2: Word Cloud Diagram

Figure 4.2 shows that words such as "shadow," "creative," "rhetoric," and commodities appear most frequently, followed by words such as "product," "culture," "expression," "vision," and "design," of which "product" belongs to the attributes of objects, and "culture" is a word that is condensed in and outside of matter. This word cloud is generated from the interviews with participants. "Design" is a vocabulary of the creative process. From the word cloud visualization, there are also relatively unimportant words such as "therefore," "many," "something," and more. This could be caused by the fact that there are so many interviews. The distribution of word frequencies reflects that the core focus of the research is primarily centred on the relationship between the creative expression of Luoshan shadow puppetry, its rhetorical strategies, and the process of commercialization. However, it generally only affected the final presentation of some of the significant themes.

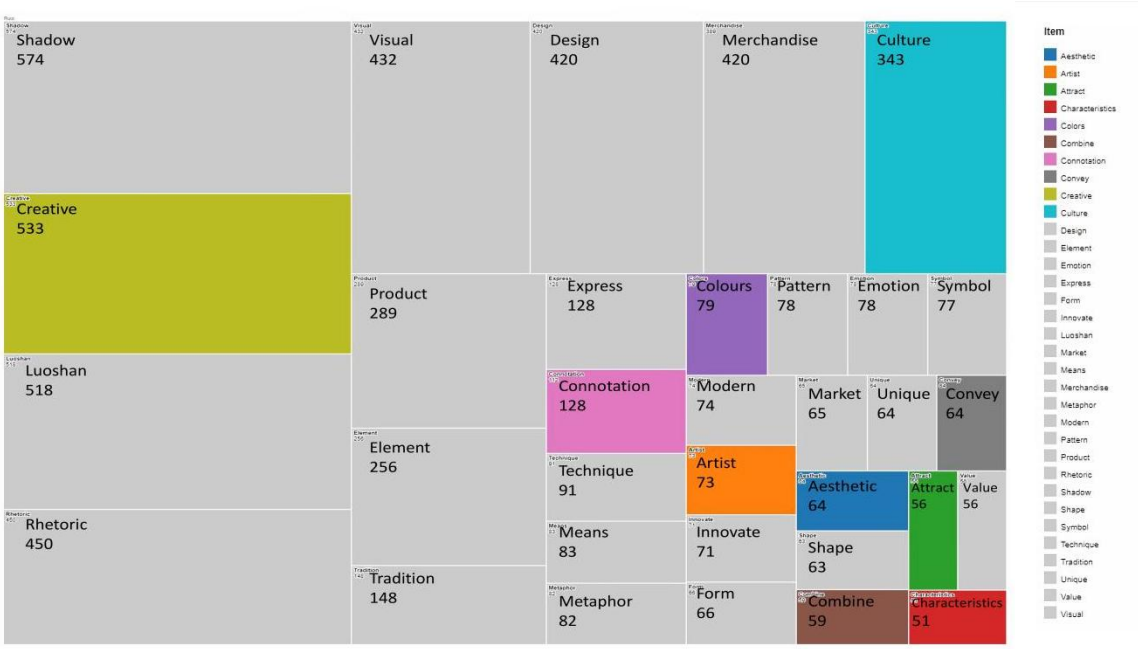


Figure 4.3: Main Vocabulary Words

Figure 4.3 is generated with NVivo software. A data visualization of the main vocabulary in Figure 4.3 leads to a graph, as shown in Figure 4.3 Among the top 30 words with high frequency of occurrence, apart from "shadow," "design," "merchandise," and "product," the elemental vocabulary of design appeared more frequently, such as colour (79 times), pattern (78 times), form (66 times), shape (63 times), and symbol (77 times). Also, the method of visual rhetoric appeared with as many words as necessary, such as "connotation" (112 times) and "metaphor" (82 times). Designers commonly use these two design methods and are common in design work. Symbolic and gradient techniques, which follow the metaphor but do not appear in Figure 4.3, are necessary for the researcher to focus on because they are also essential design methods.

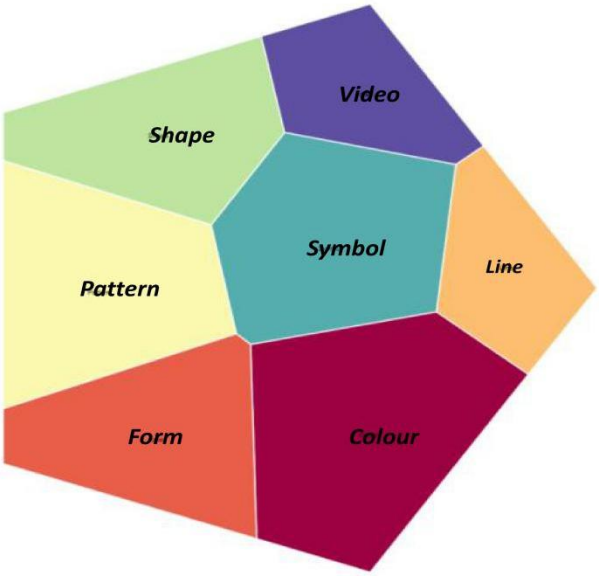


Figure 4.4: Statistics on the Design Elements of Luoshan Shadow Creative Commodities in the Interviews

Figure 4.4 shows that “colour” and “pattern” are the two design elements with the highest frequency of words that appeared during the interviews, 79 and 78 times respectively, followed by “symbol,” “shape,” and “form,” 77, 66, and 63 times respectively. The 6th ranked word is “line,” one of the most essential elements of design, which appeared 42 times. After “line” falls “image,” the fundamental element that carried or transmitted visual information appeared 41 times. This statistical result indicates that in the creative design of Luoshan shadow puppet merchandise, colour and pattern are the core elements most frequently emphasized by designers and artists. These elements play a crucial role in conveying cultural meaning and visual aesthetics. The frequent occurrence of these elements reflects the diversity and complexity of visual expression in the creative merchandise design of Luoshan shadow puppet.

Table 4.1: Problems in the Design of Luoshan Shadow Creative Goods

No.	Category	Source
1	Design homogenization	Homogenization of appearance and poor quality of goods
2	High prices	Mixed with tourist souvenirs, they are sold at a price that is not cheap.
3	Less design material	Less variety of product design materials.
4	No distinctive features	In the design of creative merchandise for Luoshan shadow, there may be some challenges that make them lacking in unique characteristics.
5	Dull use of elements	At present, there is a certain rigidity in the use of creative merchandise elements of Luoshan shadow.

As shown in Table 4.1, homogenization was the top concern of those interviewed. As cultural and creative products cover all kinds of scenic spots in China and the problem of homogenization has also raised concerns. Many of interviewed experts believed that Luoshan shadow creative commodities have homogenization problems. Homogenizing these commodities would reduce the core competitiveness of the scenic spots. Moreover, some respondents felt that creative goods are generally overpriced at retail. Many of these products are grossly overpriced for similar items in the market. No characteristics and the lack of exploration of new materials are equally essential problems with the creative merchandise of Luoshan shadow, which meant that no attention was paid to these merchandise's individuality and characteristics. Lastly, there is the dullness of using elements in related the product not reflect Luoshan shadow puppet element at all.

Respondents believed that overly heavy elements such as shadow patterns, colours, and lines would make the merchandise look stiff and dull.

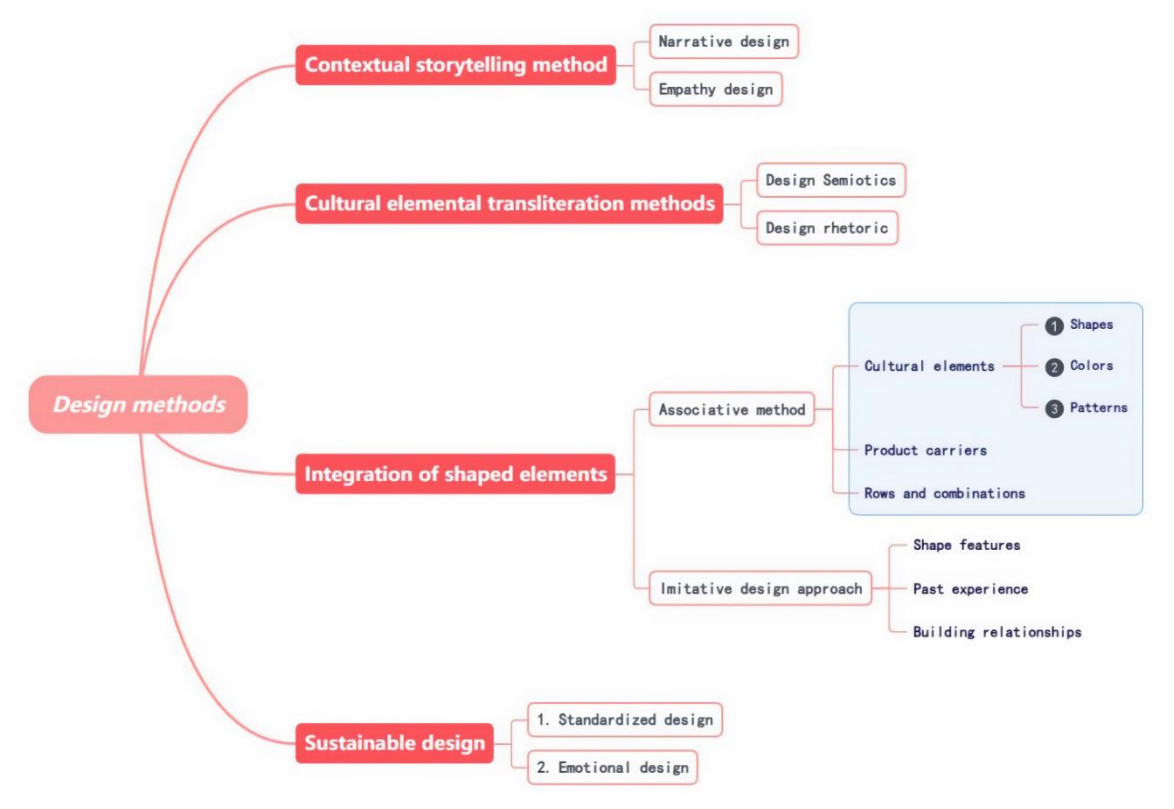


Figure 4.5: Design Methods

As shown in Figure 4.5, how to design creative merchandise for Luoshan shadow based on their experience could be summarized as follows:

i. The storytelling method includes storytelling design and empathy design, which means that the product's concept, culture, and values are communicated through storytelling.

ii. They are transforming cultural elements methods, including symbolic and rhetorical design.

iii. An integrated design approach to elements, including association and imitation. Association Design's approach is to arrange and combine cultural elements to create new concepts and ideas and to show the culture of shadow through a product vehicle. Imitation of design is also a design method frequently mentioned by respondents.

iv. There is sustainable design, which means it is essential to consider how the product will be environmentally impacted, socially responsible, and economically beneficial to merchandise a sustainable development realistically.

It included both standardized and emotional design. Some respondents believed that a uniform standard and specification used in standardized design ensures product quality and reliability and saves on materials. Unlike standardized design, this approach creates emotional resonance by designing various goods in terms of their appearance, colour, and material to enhance the proximity and cultural attractiveness of such goods. The above design methods mentioned by those interviewed aimed to create unique, creative, and engaging goods as well as enhanced their cultural attractiveness and market competitiveness.

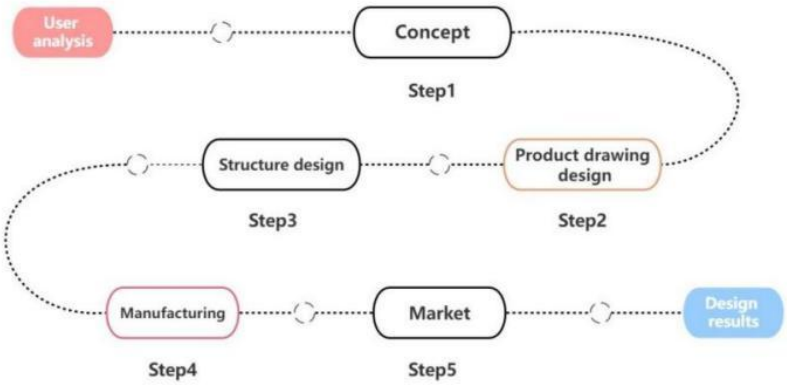


Figure 4.6: Design Process of Luoshan Shadow Creative Merchandise

As shown in Figure 4.6, some interviewees described the design process of Luoshan shadow creative merchandise. Firstly, a new concept for the design. Creative concepts are developed based on understanding the target market, consumer needs, and competitors and collecting relevant information and data, including brainstorming and sketching. Respondents believed that following a creative concept, a design solution with the most feasible and marketable potential is filtered out. This involved discussion and feedback with team members, customers, or relevant stakeholders. Phase 2 was a product-specific design detailing the selected design, including dimensions, colours, materials, and craft. This process could be designed using computer-aided design (CAD) software. The next phase was a product structure design. The designer designed and tested the sample or prototype of what has been designed to assess whether it meets a function, reliability, and quality requirement. Also, necessary improvements and optimizations are made based on a test result. The fourth step was producing a merchandise, which includes procurement of materials, preparation of production equipment, and planning a production process and finally, marketing and sales. Following the completion of merchandise production, marketing and sales activities were carried out, including brand publicity, channel construction, and promotional strategies, which allowed for broader recognition and acceptance of Luoshan shadow creative merchandise. Some respondents also suggested that the above is a general process for this type of creative merchandise design, and more specific steps may vary depending on what type of merchandise was being offered.

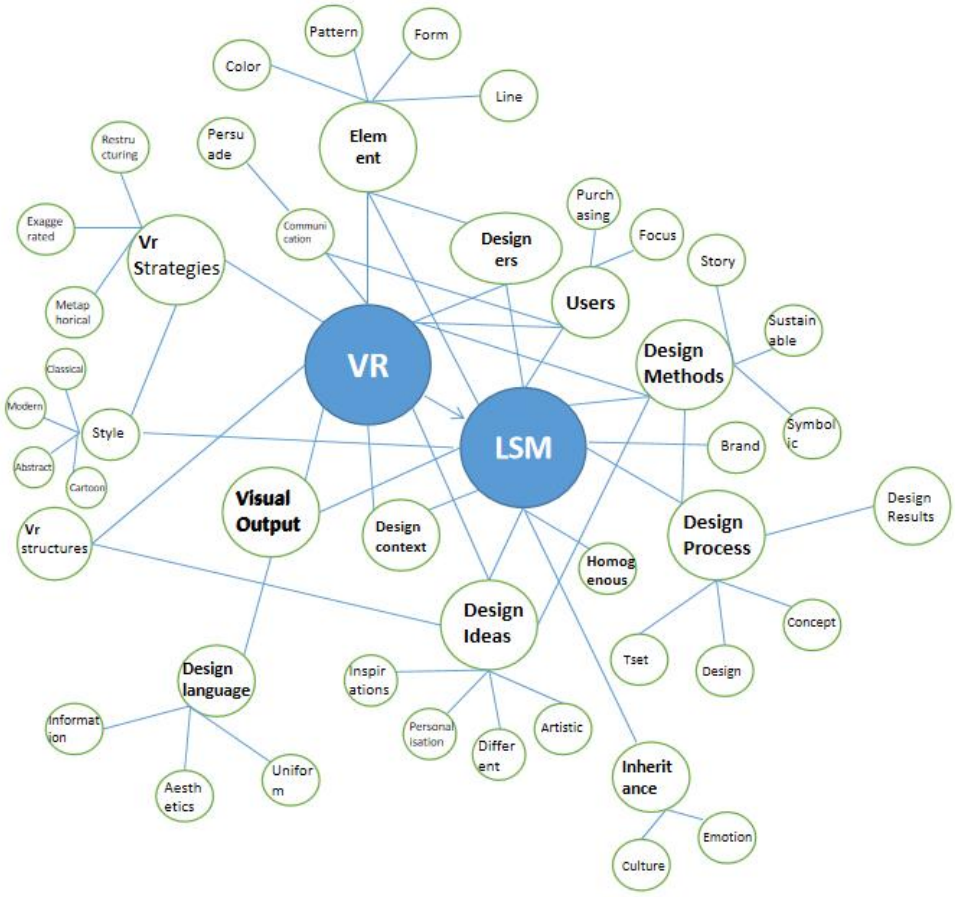


Figure 4.7: The Relationship between Visual Rhetoric and Luoshan Shadow Creative Merchandise

Figure 4.7 illustrates visual rhetoric's role in the creative merchandise of Luoshan shadow. This relationship diagram is created based on open coding. Please refer to sub-topic 3.5.3 for the further information. It is possible to discover how visual rhetoric influences creative merchandise design innovation through a series of critical design points surrounding the creative merchandise of Luoshan shadow. Specific points included design conception, design process, design methods, visual output, design situations, visual rhetorical strategies, and visual rhetorical structures. The strategy and structure of visual rhetoric are closely related to those design methods and design conception of Luoshan shadow creative goods. Visual rhetorical strategies are techniques and methods for conveying information, emotion, and meaning through visual elements. Creative

merchandising methodology refers to a series of steps and methods used in designing a product. Respondents argued that visual rhetorical strategies could help designers express specific emotions and meanings in Luoshan shadow creative merchandise design. As a result of choosing appropriate visual elements and combining them, designers could make products that take on different emotions and meanings.

4.2.3 Implications of the Results

4.2.3.1 The Significance of Luoshan Shadow Elements for the Development of Creative Merchandise

Results from the 26 participant interviews indicate that what is significant about the Luoshan shadow elements for the development of creative goods is their unique cultural heritage and innovation potential. Participants agreed that integrating the traditional artistic elements of shadow into creative merchandise design can effectively pass on this precious traditional culture, enabling it to be given a new lease of life through modern design techniques. The incorporation with modern design enables the continuation and development of this traditional art form, creates new value and attraction in the modern market, and allows the artistic glamour of Luoshan shadow to be presented to the majority of users in a completely new way.

In addition, the visual elements and aesthetic characteristics of Luoshan shadow puppet (LSP) provide rich design inspiration for creative commodities. Its bright colours, unique shadow puppet shapes and texture can significantly enhance the visual appeal and aesthetic value of the commodities, providing consumers with a unique artistic experience. Participants pointed out that the exquisite and expressive shapes of Luoshan shadow puppets, as well as their bright colours and unique local characteristics, have become

indispensable elements in the design of creative commodities. The unique shapes of shadow puppets and traditional craftsmanship provide designers with a variety of design possibilities, incorporating these elements into the appearance, packaging, and decoration of merchandise to create visually compelling goods with cultural depth. Additionally, the dynamic performance and rich emotional expression of shadow puppets provide inspiration for the interactive design and experiential innovation of these commodities, making them not only attractive in appearance, but also bringing a more vivid and immersive cultural experience in the process of using them. Such a design integration demonstrates the unique aesthetics of shadow art and enhances its market competitiveness and cultural added value of creative commodities.

According to the results of the interviews, creative commodities incorporating Luoshan shadow elements have significant advantages in market expansion and brand building. Some participants also pointed out that the unique cultural background and artistic value of the Luoshan shadow puppet (LSP) gave a strong local flavour to the creative commodities, making them more recognisable and attractive in the market. This incorporation of cultural elements can attract consumers interested in traditional arts and market segments seeking unique and culturally relevant goods. As a result of incorporating Luoshan shadow elements into merchandise design, companies are able to effectively establish an emotional connection with consumers and enhance the cultural value and market identity of their brands. It also helps the brand to stand out in the competitive market by forming a distinctive brand image. Moreover, this unique design style further enhances the brand's popularity and influence by telling shadow stories and passing on traditional culture. This deep integration of cultural elements with the market offers strong support for brand building and market expansion.

4.2.3.2 Combining Visual Rhetorical Characteristics of Luoshan Shadow Creative Merchandise Design

The data obtained provide an opportunity for researcher to conduct thematic analyses. Thematic analyses involve an active process of examining the pattern of meaning. The goal of the data analysis is to explore the richness and complexity of the data and provide a nuanced understanding of the phenomenon under investigation.

Rhetoric and design are both forms of expression that convey emotions, meanings, and information through language, words, and images. Four main themes emerged from the thematic analysis of respondents' concerns, comments, and suggestions. They are also vital aspects of visual rhetoric (VR) influencing the design of Luoshan shadow creative merchandise.

Theme 1: Visual rhetoric situation and Luoshan shadow creative commodity design situation.

Situation is the basis of visual rhetoric (VR), which refers to an environment and a scene expressed in visual rhetoric. The visual rhetorical situation means that in visual communication, it is possible to convey a more profound message or express a specific mood or atmosphere through the meaning and effectiveness of certain design elements. The purpose of rhetorical situations is to control a visual communication's linguistic skills better and to improve its information communication and perception. Absence, audience, rhetor, scene, and opportunity are the essential elements of a rhetorical situation. Luoshan shadow creative merchandise design situation is also what designers face while developing new products in their environment and conditions. These environments and conditions include target markets, technological constraints, consumer demand, and a current state of

commodity design. This means that the design of these goods must consider their surroundings to ensure that consumers would receive them well.

There is a close relationship between the visual rhetorical situation and the merchandise design situation of Luoshan shadow puppet (LSP). In the design of Luoshan shadow merchandise, the environments and conditions they face correspond to elements of the visual rhetorical situation. Current design problems of these commodities correspond to a lack of visual rhetorical situations. For example, the current low variety, lack of distinctiveness, and high prices of creative merchandise for Luoshan shadow are mentioned by those interviewed as background to what is being designed. Users of Luoshan shadow creative commodities correspond to "audiences," which in this case refers to a wide range of communication recipients, including but not limited to consumers, customers, users, viewers, and readers. It is a specific group of people who are users of Luoshan shadow creative merchandise (LSPCM), which is the core target audience of this product design. Merchandise design must consider user needs, preferences, habits, and other factors to ensure a good user experience and ease of use. What is included in the former is a wider variety of objects, and people who use Luoshan shadow creative merchandise are only those who use such a merchandise. Nevertheless, visual rhetoric (VR) audiences and Luoshan shadow creative merchandise users are specific groups of people with their own needs and preferences. Besides that, visual rhetoric (VR) audiences and users of these creative goods need understanding and message receivers. A close relationship exists between the 'rhetors' and designers. Rhetoricians and designers share the goal of communicating messages that resonate and increase user understanding and acceptance through visual and verbal means. This means that they all need to improve how attractive and impaction a text, image, or video can be to convey a message through

various means better. Rhetoricians and designers also share similarities in thinking about and solving problems. Both must improve their work's quality and value through creative thinking and innovative design.

Visual rhetorical scenarios refer to specific environments and contexts in which visual rhetoric is applied, including but not limited to advertising, packaging, brand identity, exhibitions, films, web design, and more. It corresponds to a form, content, and method of creative merchandise of Luoshan shadow. Visual rhetorical situations need to reflect on a target audience's characteristics to design visual elements better to engage and influence those target audiences. Finally, there is a need for visual rhetorical timing to be chosen for different situations and purposes in order to achieve the best rhetorical effect and user experience. It also has the exact timing and purpose as Luoshan shadow creative merchandise design, which are all for achieving the best rhetorical effect. However, Associate professor Dong Ying, who was one of the respondents, suggested that the timing of visual rhetoric (VR) should be based on different situations and purposes and that an appropriate time and occasion should be chosen for rhetoric to achieve the best effect.

In short, a visual rhetorical situation corresponds to the environment of Luoshan shadow puppet creative merchandise design (LSPCMD). Rhetorical situations can help designers analyse contexts such as the purpose, audience, characteristics, and other factors of these goods' designs to identify the best design situations for them to ensure optimal design effects and achievement of those designs' goals.

Theme 2: Visual rhetorical structures and design thinking

In linguistics, various corpora have their rhetorical structure, which become their most dominant external feature. Rhetorical structure theory was developed in the 1980s by

Mann and Thompson (1988) at the Institute for Information Science, University of Southern California. They tried to interpret the wholeness and coherence of discourse from a functional perspective. A central concept of rhetorical structure theory is the rhetorical relationship. Rhetorical structure theory relations are called by different names, such as coherence, discourse, linkage, metaphorical, or even rhetorical relations. In other words, rhetorical structure emphasizes the overall structure and constituent points of rhetorical expression and interactions and associations between different rhetorical methods.

Visual rhetorical structures could play an essential role in merchandise design, particularly in influencing how designers generate ideas and concepts during their design process, including ideas about design themes and elements. Design thinking is the soul of a design. It determines the direction and style a design should take and is integral to any design's expression. Rhetorical structure, on the other hand, refers to several aspects of what is included in a design's components, mainly including the rhetorical object, situation, and goal.

Based on the interview, it was found that rhetorical structure could be understood as design elements, design concepts, and design thinking. In Luoshan shadow creative merchandise design, designers can achieve the best effect of merchandise design by skilfully using these elements and relationships.

Theme 3: Visual rhetorical strategies and design methods

Rhetorical strategy refers to a particular linguistic structure in rhetorical expression, including borrowing, repetition, permutation, and rhetorical questions. It conveys particular meaning and information by combining and utilizing visual elements in LSPCM. Many respondents believed that visual rhetorical strategies (VRSG) could play a

significant role in creative merchandise design, helping designers convey a product's characteristics and brand image, and enhancing its competitiveness.

Rhetorical strategy is integral to visual rhetoric (VR) and includes similes, symbols, metaphors, comparisons, repetitions, and parallelism. Rhetorical strategies and design methods are closely related and can influence each other, bringing more possibilities and creativity to product design. Moreover, product design methods and visual rhetorical strategies (VRSG) share many commonalities and can draw on and influence each other. Based on the interviews conducted, there are three main aspects of their relationship between visual rhetoric (VR) and Luoshan shadow creative merchandise design:

（ i ）Rhetorical strategies could be used for brand image shaping and product feature communication in Luoshan shadow creative design. Using rhetorical strategies, designers could convey a product's features, functionality, quality, and brand image, providing a competitive edge for these products. For example, designers could tie merchandise and brand images to consumers' lives and values through metaphors, similes, comparisons, exaggerations, and other rhetoric, enhancing consumer identification and brand loyalty.

（ ii ） Merchandise design methods could also use rhetorical strategies to bring more creativity and possibilities to a merchandise. Designers could connect a merchandise design with consumers' emotions and cognition through a thinking way and method of rhetorical strategy, which could create a creative merchandise of Luoshan shadow (LSP) that is more in line with the market demand and consumer psychology. This merchandise design approaches, and visual rhetoric strategies require attention to awareness and understanding of these targeted users, all of which require attention to the product's

aesthetic and shape design. Furthermore, they all pay attention to re-innovation and differentiated design. Designers need to highlight their product's features and brand image through innovation and differentiated design, which could provide the products' competitive strength and market share.

（iii）Combining rhetorical strategies and merchandise design methods could provide more comprehensive and in-depth thinking and practice in product design. With the combined use of rhetorical and product design methods, designers could continue to explore and innovate to create more valuable and influential Luoshan shadow creative commodities and brands.

In conclusion, visual rhetorical strategies and Luoshan shadow creative merchandise design methods are mutually influential, and their combination can bring more possibilities and creativity to the creative design of these merchandise.

Theme 4: Visual rhetoric and merchandise of communication

Based on the relationship between visual rhetoric (VR) and Luoshan shadow creative merchandise design, merchandise communication in relation to visual rhetoric (VR) is also an area that researchers must pay attention to. Visual rhetoric (VR) could help Luoshan shadow creative goods to convey images and characteristics, thus attracting consumers' attention and interest.

Associate professor Wujun Tang argued that visual rhetoric could help merchandise communicate messages and stories. A clever use of these visual elements of a merchandise could communicate its message and story, enhancing consumers' sense of identity and brand loyalty. For example, one of the respondents, Xiaofan Jiang argued that a product's

features and brand story could be communicated through the visual rhetoric of its styling, which could attract consumers' attention and desire to purchase it. It is clear that Luoshan shadow, as a type of handicraft with Chinese traditional cultural characteristics, creative merchandise design derived from it could help them increase users' attention and purchase desire through visual rhetoric. For example, designers use the collocation and application of different elements to convey a product's features and brand image, attracting users' attention and interest. Moreover, visual rhetoric could help Luoshan shadow creative goods become distinctive in the market. In a competitive market environment, more creativity and possibilities could be brought to these merchandise designs through the flexible use of visual rhetorical strategies (VRSG), enhancing these products' competitiveness and market share.

Conclusively, visual rhetoric plays a vital role in the communication of creative merchandise of Luoshan shadow, which can help these merchandise to communicate brand image and characteristics, disseminate information and stories, as well as help these merchandise to be sold in the market. Therefore, it is important to use visual rhetoric (VR) in merchandise design.

4.3 Results of the Validation

To gather information and opinions on target themes or issues, researcher designed and administered two surveys centred around design practice, conducting them in two separate rounds. This approach allows for the collection of quantitative data, which can be analysed statistically to validate the accuracy of interview findings and provide a solid foundation for subsequent design practice and testing. The initial survey aims to gather baseline data and conduct a quantitative assessment of preliminary understanding of the

research topic. The second survey focuses on evaluating the researcher-designed products, with an emphasis on collecting feedback and opinions to gauge target users acceptance and satisfaction with creative merchandise. This method helps to validate findings from interviews, revealing potential patterns and differences in the data, leading to guiding the researcher's decision-making in the LSPCMD.

4.3.1 Procedure for Validation of Design Method

The first questionnaire was designed and collected to address the current status of creative merchandise design for Luoshan shadow, design methods, and users' expectations of these merchandise. The focus is on collecting and summarizing data on regarding the essential design elements, methods, and materials in design practice. The data collected could help designers understand users' needs and expectations to fulfil them better. Besides that, from the data obtained, designers would be able to understand how users use, prefer, and whether they are dissatisfied with Luoshan shadow creative commodities, which would then guide the subsequent design practice of creative merchandise.

After completing the first questionnaire, the researcher designed a children's tableware shape and pattern based on a theme of Luoshan shadow, which is in response to what the users have raised as their expectation points. The design practice of creative dinner plate serves as a significant case for validating the research theme. The designer integrate visual elements from Luoshan shadow puppet into this plate design to explore how traditional art forms can be transformed into practical and aesthetically valuable merchandise. By focusing on aspects such as plate shape, patterns, colours, and decorations, the researcher can assess the effectiveness of these design elements in practical application. This design practice aids in validating the effectiveness of visual rhetoric theory in creative merchandise design.

Furthermore, the design practice of children's creative dinner plate provides the researcher with opportunities for practical testing and feedback. As a result of collecting user evaluations of the dinner plate, the researcher can assess whether the design successfully convey the artistic style of Luoshan shadow and meet user needs. This process helps optimize existing designs and reveal potential areas for improvement, ensuring success in both functionality and artistic expression. This approach enables researchers to gain deeper insights into how visual rhetoric (VR) theory operates in practical merchandise.

A collection of researcher-users was essential to help the designer understand user feedback and needs for the product to improve further and optimize it. This study used questionnaires and interviews to collect users' opinions and validate visual rhetoric's role and significance in Luoshan shadow creative merchandise. The researcher collected feedback and opinions from users through an on-line questionnaire that included several aspects such as merchandise appearance, function, and experience of using this product. This approach allows for a more in-depth understanding of users' needs and feedback as well as the timely resolution of user issues and confusion.

During the design method validation process, the researcher conducted a comprehensive assessment of the proposed method's effectiveness and feasibility through systematic design evaluation and testing. The entire validation process involved theoretical analysis, prototype design, as well as user feedback and iterations to ensure that the developed design method possesses a high degree of practicality and innovation in real-world applications. By quantitatively evaluating key design metrics and conducting in-depth case studies, the researcher ultimately confirmed that the design method effectively enhances the expected design outcomes and demonstrates strong adaptability and stability

across various application scenarios. This has laid a solid foundation for its subsequent promotion and implementation.

4.3.2 Questionnaire Data of Luoshan Shadow Creative Merchandise Design Based on Visual Rhetoric

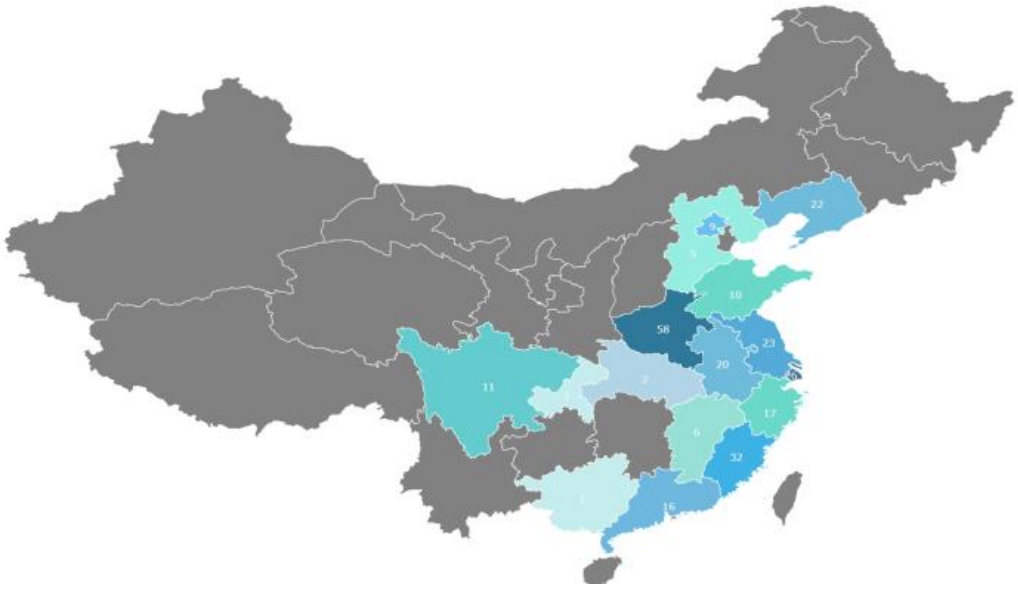


Figure 4.8: Distribution of Questionnaire Collection

A total of 266 participants participated in the first on-line questionnaire during this study period (Refer to Appendix E), the distribution of which can be seen in Figure 4.8. The population of this questionnaire is mainly concentrated in the Henan, Fujian, Jiangsu, Zhejiang, and Sichuan Provinces, and the recovery situation is shown in Figure 4.8. Henan has the most significant number of participants, totalling 58, followed by Fujian with 32, and Jiangsu with 23. Based on the collected data, Henan Province had the highest number of participants, totalling 58, which indicates a strong interest in the survey topic or a more concentrated target population in this region. Additionally, there are significant differences in participation across different regions, which may be attributed to factors such as local cultural background, population density, or the extent of promotional efforts.

Table 4.2: Results of Frequency Analysis

Category	Items	No.	%	Total (%)
Gender	Female	159	59.77	59.77
	Male	107	40.23	100.00
Age	26-30	58	21.80	21.80
	31-35	60	22.56	44.36
	36-40	46	17.29	61.65
	41-45	14	5.26	66.92
	>46	6	2.26	69.17
	＜25	82	30.83	100.00
Education	Diploma	61	22.93	22.93
	High school	39	14.66	37.59
	Others	9	3.38	40.98
	Postgraduate	24	9.02	50.00
	Primary	23	8.65	58.65
	University degree	110	41.35	100.00
Number of years working	1-5years	82	30.83	30.83
	11-15years	61	22.93	53.76
	16-20years	39	14.66	68.42
	6-10years	74	27.82	96.24
	>21years	10	3.76	100.00
Occupation	Corporate employees	81	30.45	30.45
	Individual households	45	16.92	47.37
	Institutional and career staff	34	12.78	60.15
	Not in regular employment	23	8.65	68.80
	Students	83	31.20	100.00
Total		266	100.0	100.0

Table 4.2 shows the demographic profile of the participants who answered the questionnaire. In terms of the age distribution, 30.83% of these participants are aged below 25 years old, which is the largest percentage. 41.35% or 110 participants have university degrees and 30% of the participants have one to five years of working experience, while 31.20% were students. 30.45% were corporate employees.

Table 4.3 : Cronbach's Reliability Analysis

Category	No.	Cronbach α ratio
Design Principles	6	0.918
Visual Rhetorical Design Strategies	6	0.891
Design Elements	7	0.898
Factors Affecting Design	6	0.876
Design Objectives	4	0.809
Design Requirements	5	0.876

Table 4.3 shows the reliability of questionnaires. Reliability analysis is used to test whether the data of a study is accurate and reliable. If the value of Cronbach's alpha coefficient is greater than 0.7, the questionnaire is considered to have high reliability. 266 samples were selected from Q11 to Q19 of "Luoshan Shadow Creative Merchandise Design" and imported into SPSS software for reliability analysis according to different variables. The results indicate that the reliability coefficients for the dimensions of design principles, design objectives, and design methods are 0.918, 0.809, and 0.891, respectively, all of which exceed 0.7. This suggests that the reliability of the research data is of high quality. Considering these reliability coefficients collectively, it can be concluded that the research data exhibits a high level of reliability, providing a solid foundation for

subsequent analyses and conclusions, and effectively supporting the credibility and accuracy of the research. (Refer to Appendix G).

Table 4.4: Validity Analysis of Questionnaires

VR patterns KMO & Bartlett Testing		
KMO Value		0.908
Bartlett Test	Approx. Chi-Square	798.165
	df	15
	p -value	0.000

Design elements KMO & Bartlett Testing		
KMOValue		0.913
Bartlett Test	Approx. Chi-Square	936.843
	df	21
	p -value	0.000

Design aims KMO & Bartlett Testing		
KMO Value		0.799
Bartlett Test	Approx. Chi-Square	330.506
	df	6
	p-value	0.000

Table 4.4 shows the validity of the questionnaire. Validity examination is divided into content validity analysis and structural validity analysis. Exploratory factor analysis structural validity analysis was used and KMO values were selected. Bartlett's spherical test as the criteria for analysis, which allows a judgement to be made on suitability for exploratory factor analysis. The combined use of these two tests can be effective in determining the applicability of factor analysis to the data, thus providing a reliable basis for subsequent analyses. KMO values are usually judged to be greater than 0.6, with larger values being better. A p-value of less than 0.05 judges Bartlett's spherical test. Table 4.4 shows that the KMO values are 0.908, 0.913, and 0.799 respectively and these values are significantly higher than 0.6 indicating high structural validity of the data. All data passed Bartlett's test of sphericity, which further demonstrated significant correlation between the variables. Therefore, these results collectively indicate that the structural validity of the data is good and suitable for in-depth factor analyses, laying a reliable foundation for the subsequent analysis steps.

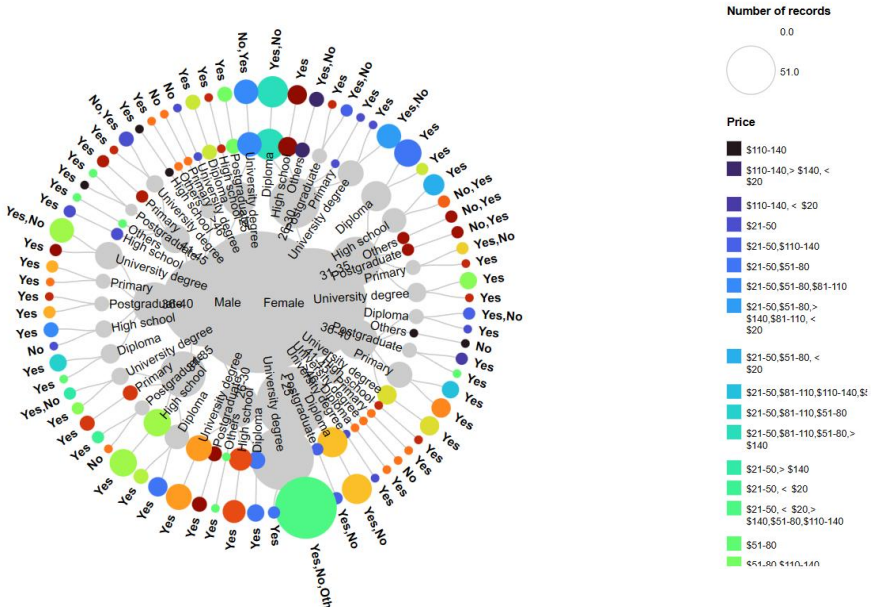


Figure 4.9: Relationship Between Results of Questions in Section I of Questionnaire 1

Figure 4.9 shows a relationship between participants' willingness to buy, price, and style choice of creative merchandise for Luoshan shadow. As seen from the figure, 89.1% of those participants were willing to buy such goods, 10.53% chose not to be interested in such goods, and 0.38% choose others. Most of the participants wanted these items to cost between $21 and $50, especially those with 1 and 5 years of work experience. Besides that, most of the participants preferred the modern style of Luoshan shadow creative merchandise, followed by the classical style, and the least chosen was the handicraft style. This indicates that modern-style creative merchandise inspired by Luoshan shadow puppet hold broader appeal among the majority of participants, likely because their designs align more closely with contemporary consumers' aesthetic preferences and lifestyles.

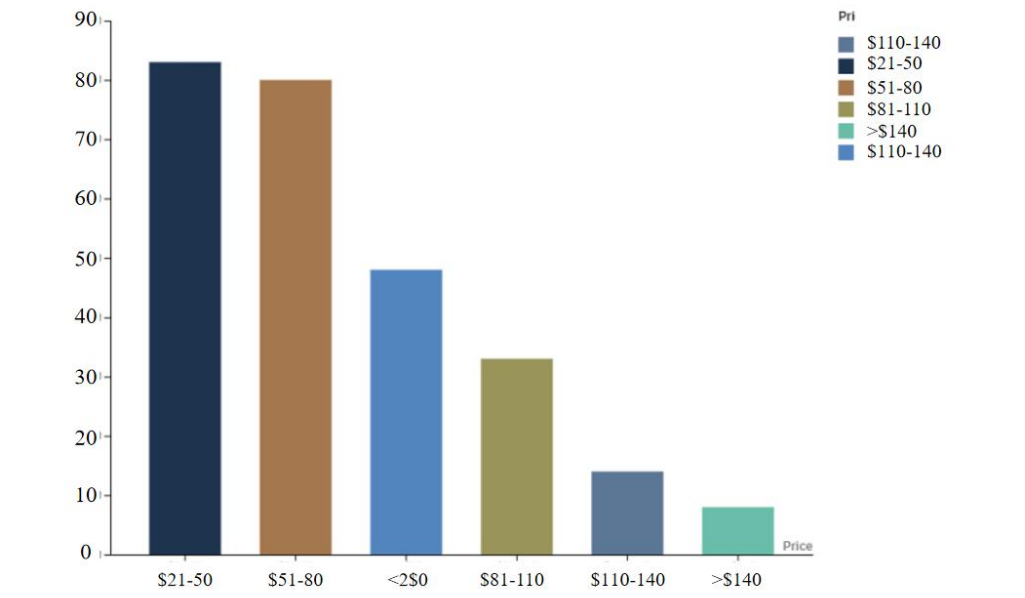
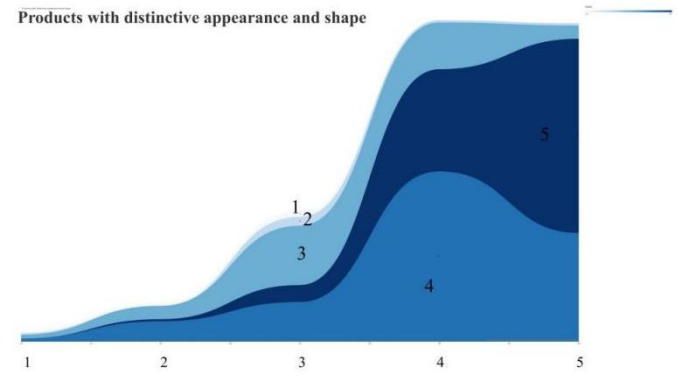
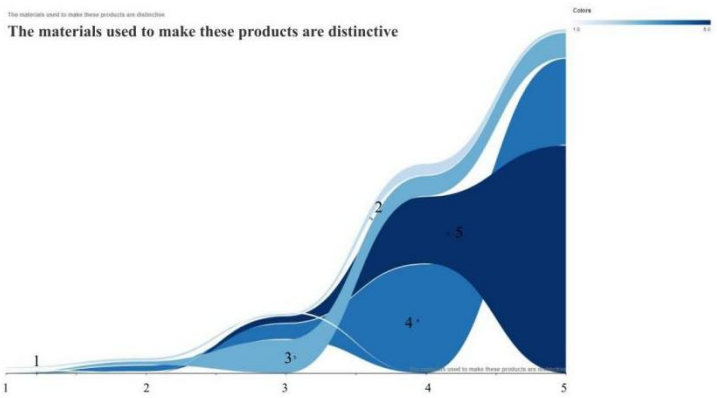


Figure 4.10: Participants' Price Expectations for Luoshan Shadow Puppet Creative Goods

As shown in Figure 4.10, most of the participants chose Luoshan shadow creativity merchandise priced from $21 to $50. 31.2% or 83 participants believed that the price should be between $21 and $50, while 80 participants, or 30.08%, believed that the goods should be priced between $51 and $80. This is followed by 48 participants, or 18.05%, choosing less than $20. Lastly, only eight participants or 3.01%, chose a price of $140 or more. This reflects their sensitivity to pricing and their financial capacity. For individuals with 1 to 5 years of work experience, who are in the early stages of their career development and may have relatively limited income, they are more likely to prefer projects priced within this range. Furthermore, this suggests that when determining the pricing of such projects, consideration should be given to the economic conditions of these target groups to ensure the projects attract and meet the needs of this segment of the users.





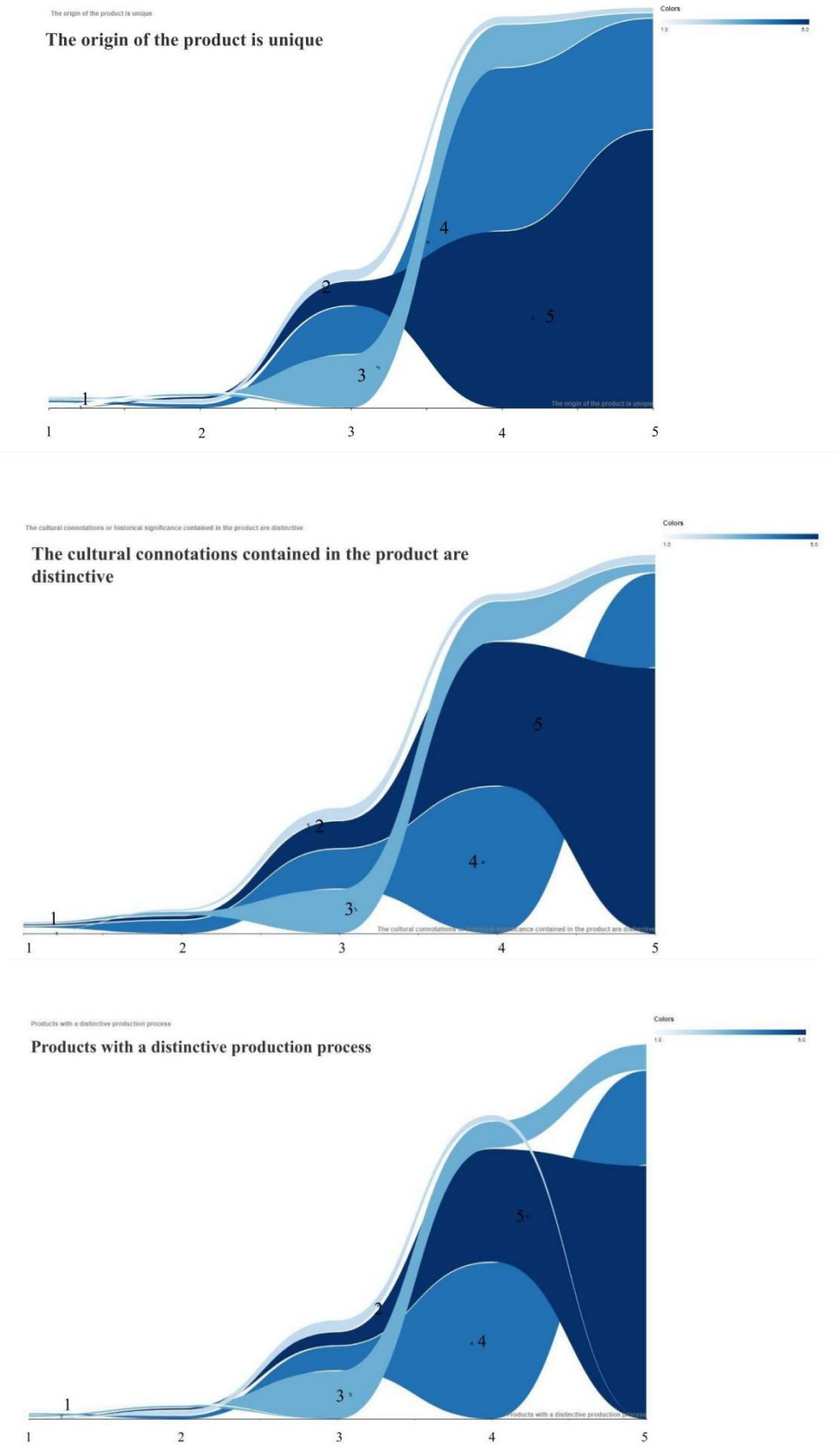


Figure 4.11: Participants' Expectations of the Characteristics of Luoshan Shadow Creative Merchandise

Figure 4.11 illustrates the participants, expectations of the characteristics of Luoshan shadow creative merchandise. Having unique materials was the majority view of those surveyed, with 46.24% agreeing and 3.76% disagreeing. Many respondents were interested in the styling of Luoshan shadow creative merchandise, with 43.61% of participants agreeing entirely and only 3.76% not agreeing. Among the unique crafts, 38.72% of the participants ultimately agreed with them, while 2.63% held the opposite view. 34.59% of the participants agreed that such commodities must be integrated with culture, while 4.89% disagree. Moreover, 33.83% of participants agreed entirely that this type of merchandise requires unique creativity, while only 3.01% disagreed.

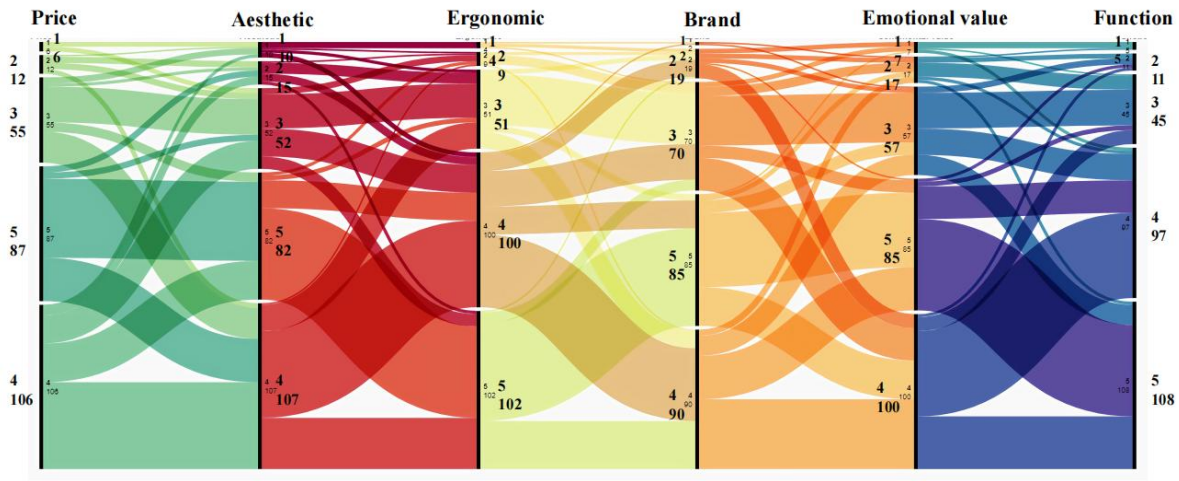


Figure 4.12 : Factors Influencing Users to Purchase Luoshan Shadow Creative Goods

Figure 4.12 shows the factors influencing users to purchase creative merchandise of Luoshan shadow. Most participating authors choose functionality, with 108 (40.6%) agreeing. This is followed by ergonomics, with 102 or 38.35 % in complete agreement. Following this is price, with 87 people, or 32.71 %, holding an ultimately agreement view. The brand has the lowest percentage of options agreeable to all factors, with 175, or 65.78 %, 30 fewer than the number of functionaries. Most of them focus on the function of

Luoshan shadow creative merchandise. The high recognition of functional factors reflects the current consumer preference for practical merchandise, indicating that they seek items that serve a tangible purpose in their daily lives. Therefore, when designing and promoting creative merchandise inspired by Luoshan shadow puppet, emphasizing their functional attributes may more effectively capture consumer interest and drive purchasing decisions.

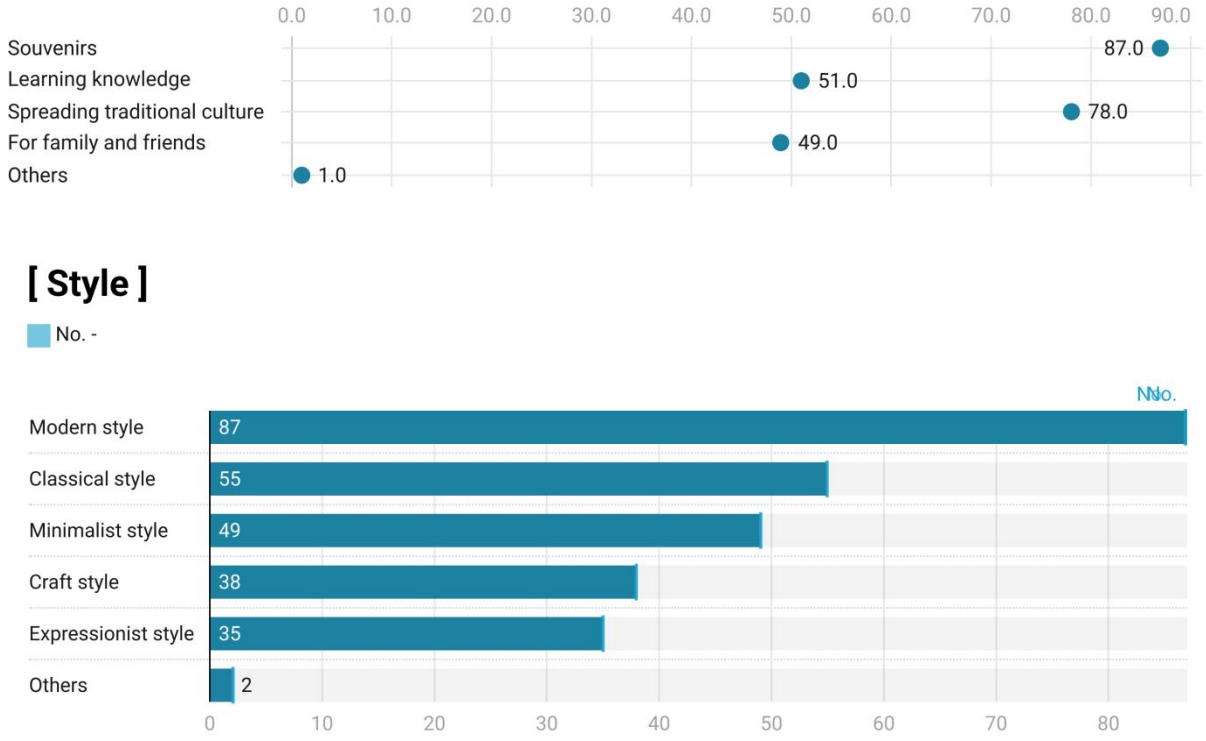
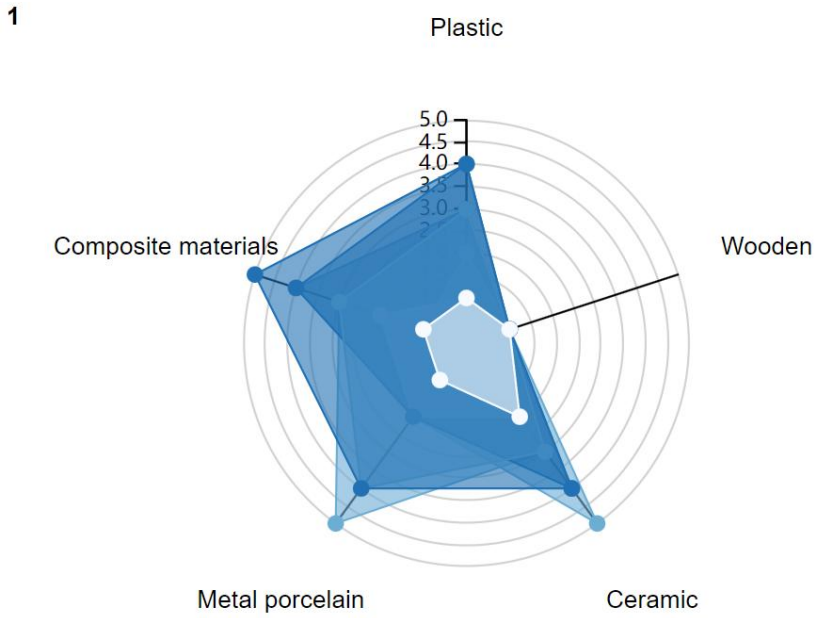
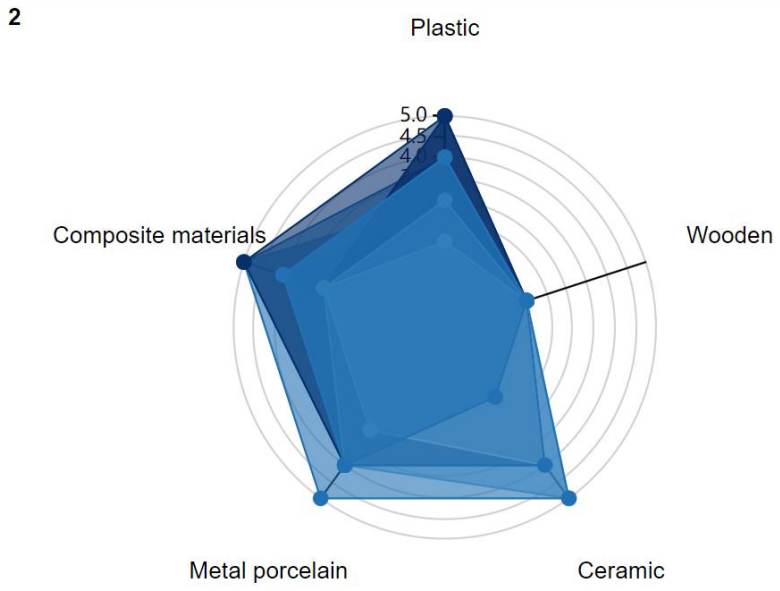


Figure 4.13 : Participants' Purchase Purpose and Style Choice Preferences

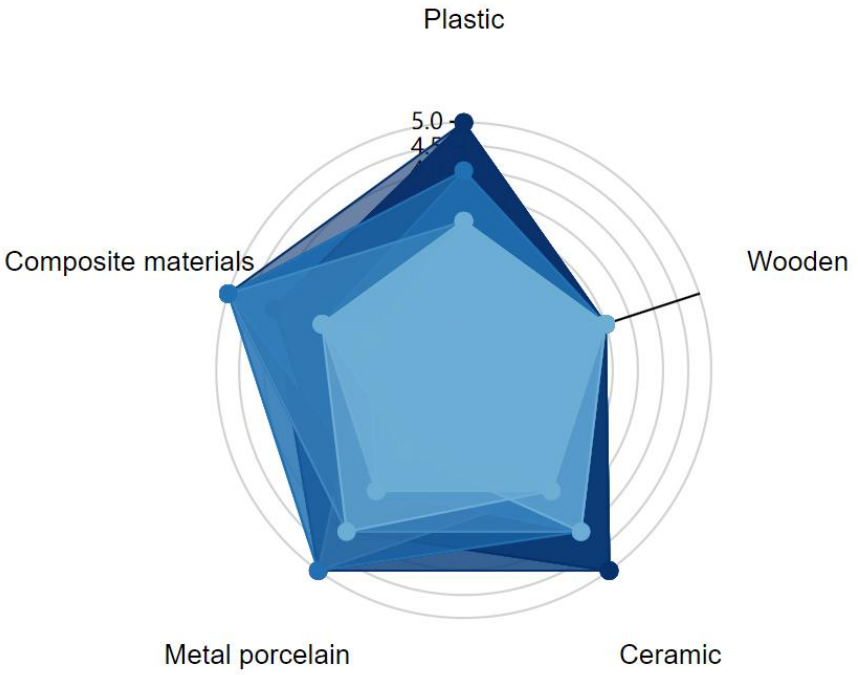
The researcher analysed what these users buy for and their style preferences (Figure 4.13). Participants chose to buy Luoshan shadow creative commodities for tourism goods, learning knowledge, and dissemination of culture for friends and relatives. However, the participants were interested in travelling souvenirs (87 participants), culture communication (81 participants), learning knowledge (51 participants), and friends to buy (46 participants). Variability in the number of people choosing a style preference for goods

shows that users are more interested in modern, classic, and minimalist styles and less interested in craft and expressionist styles. These provide some reference for later design practice.

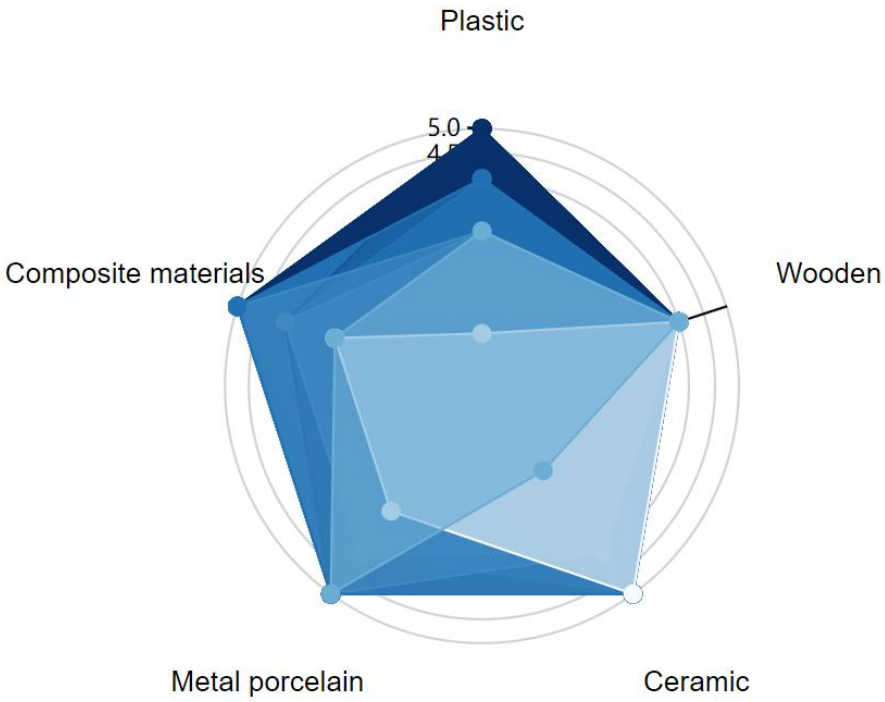




3


Plastic
5.0
Wooden
Composite materials
Ceramic
Metal porcelain

4


Plastic
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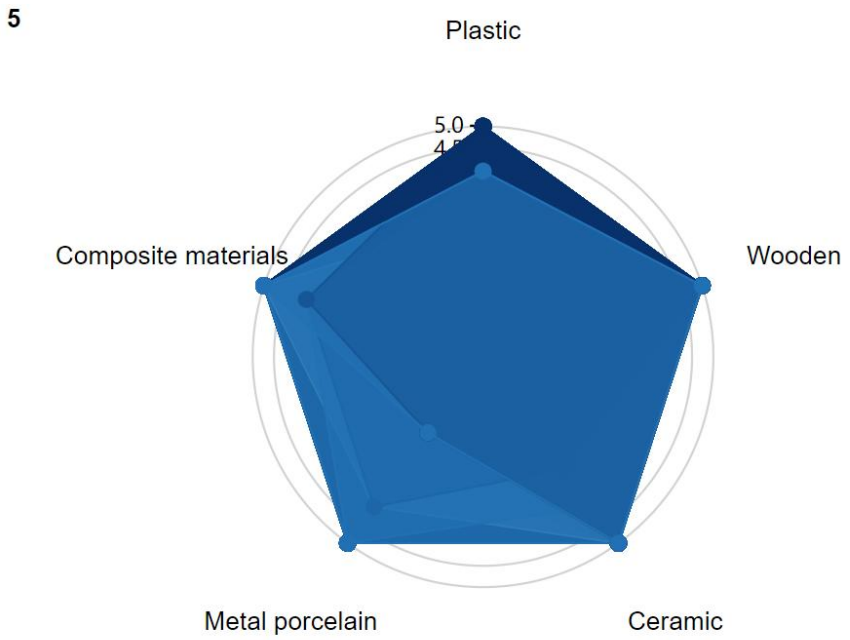


Figure 4.14 : Participants' Choice of Materials

Figure 4.14 shows what materials are used in the Luoshan shadow creative merchandise. The result of the survey illustrates that 71.05% preferred ceramic materials, the highest percentage among all materials. This is followed by materials that are composite with 66.54%. The remaining rankings are metal (61.66%), wood (60.52%), and plastic (57.90%). Participants' preference choices provide some reference for using materials in later design practice. This data indicates that ceramic materials have significant appeal in the design of such creative merchandise, likely due to their unique texture, visual aesthetics, and strong connection with traditional Chinese culture. The high level of recognition for ceramics reflects consumers' preference for materials that possess both aesthetic value and practicality.

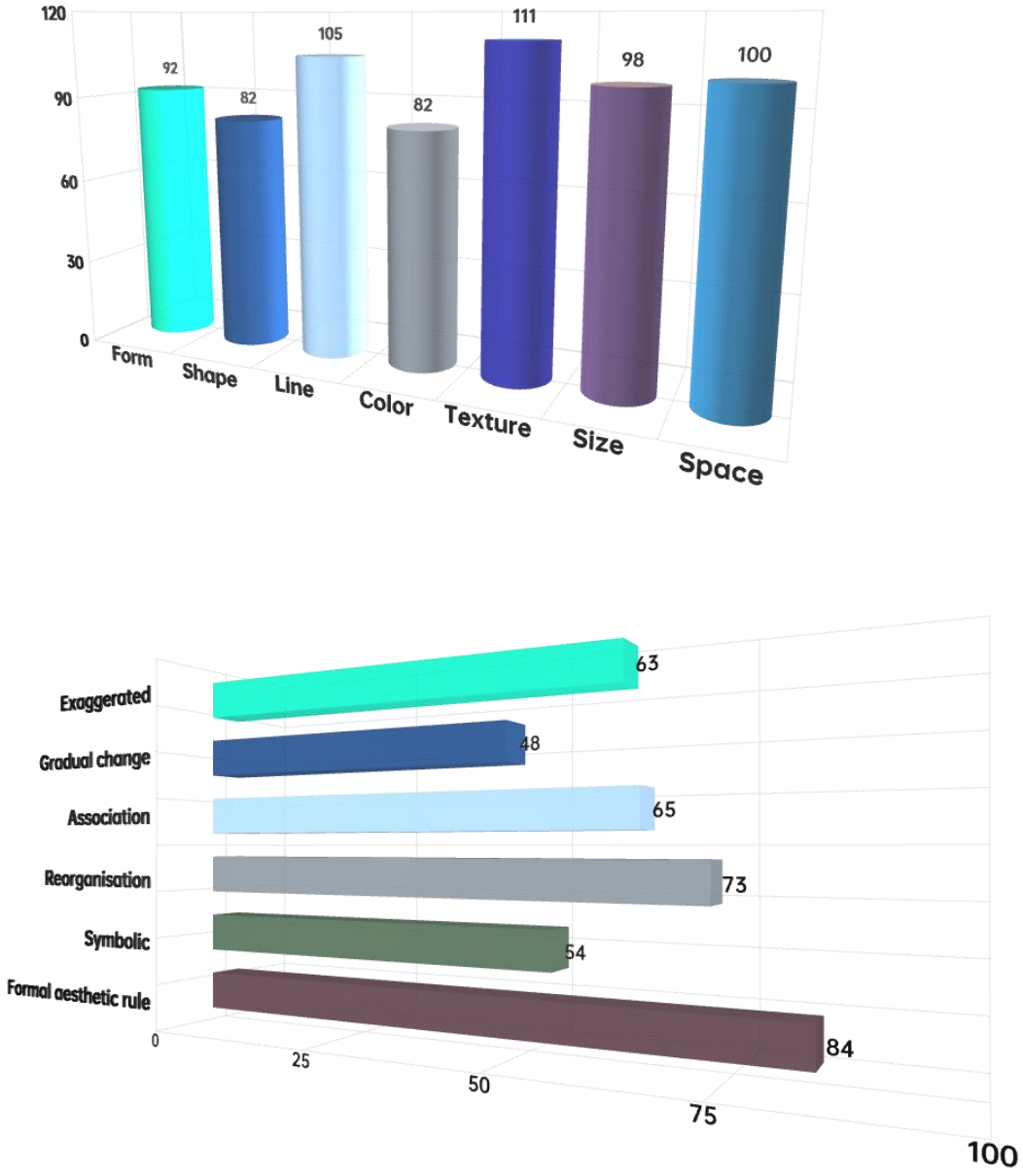


Figure 4.15: Participants' Selection Preferences for Design Elements and Visual Rhetorical Strategies

Figure 4.15 shows the participants' selection preferences for design elements and visual rhetorical strategies. Among those design elements of Luoshan shadow creative merchandise, participants mainly pay attention to texture (111 participants), line (105

participants), and space (100 participants) . Variability in the number of people choosing a visual rhetorical strategy preference shows that participants were more interested in formal beauty rules, reorganization, and connection, with 84, 73, and 65 participants, respectively. There is the slightest interest in a rhetorical strategy of gradual change, with only 48 participants considering this approach is the most important in this type of product design.

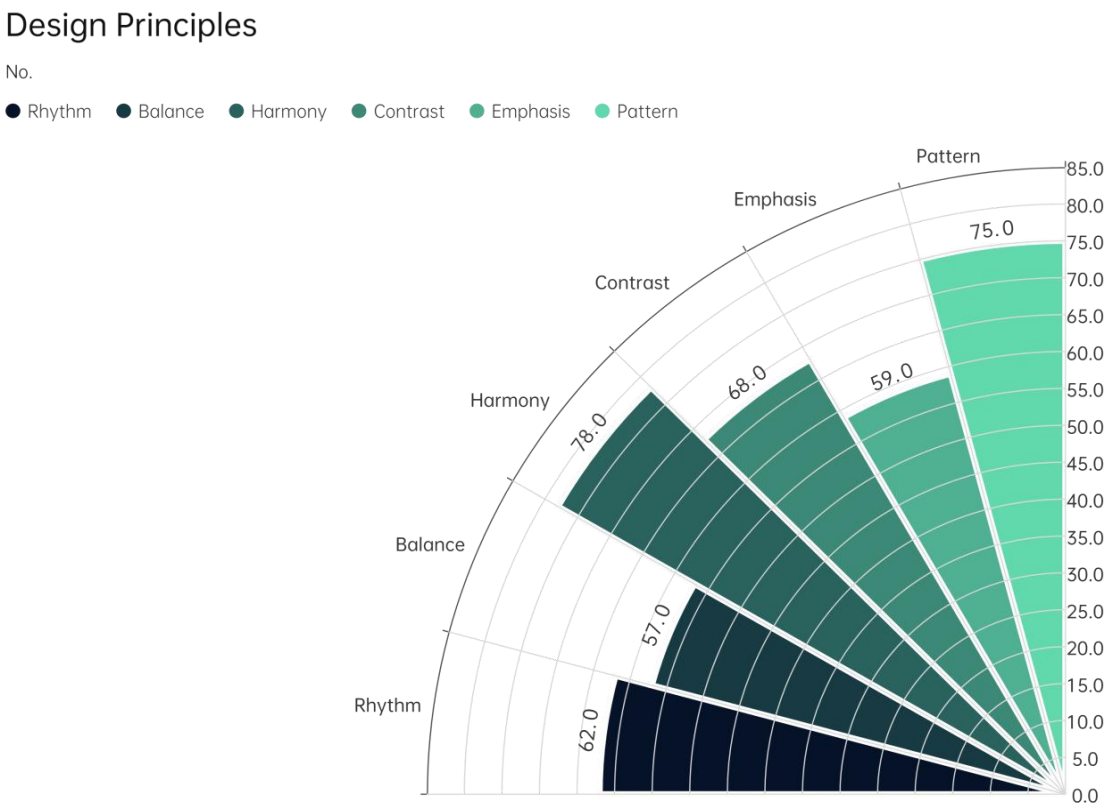


Figure 4.16: Participants' Preference for Design Principles

Figure 4.16 shows the analysis of the participants' preference for design principles of creative merchandise of Luoshan shadow. Among design principles in carrying out creative merchandise of LSP, those participants mainly focused on harmony, pattern, and contrast, with 78, 75, and 68 choosing the important points, respectively. Also, there is the

slightest interest in the design law of balance, with only 57 participants believing this approach is the most important in this type of product design. These preferences reveal the aesthetic demands of consumers in creative merchandise design and provide valuable insights for future design directions.

4.3.3 Product Design Presentation and Evaluation

Using the framework, method,and process proposed in this study, the researcher completed a design practice of Luoshan shadow creative merchandise (LSPCM).

4.3.3.1 Product Design

Research findings on visual rhetorical influences on merchandise design illustrated how rhetorical strategies could be used in ways to present traditional. Luoshan shadow has a rich story and tradition from which to draw inspiration. This research focused on selecting the classic storyline from Luoshan shadow, transforming it into a design element of creative merchandise, creating unique and creative merchandise with cultural connotations, and bringing consumers novel visual experiences and emotional resonance.

It is crucial to choose a theme that is representative and can arouse children's interest. The designer chose the classic horse and fish patterns from the Luoshan shadow puppet as creative inspiration, and these elements have cultural symbolism. In Luoshan shadow puppet (LSP), the horse often symbolises courage and strength, while the fish often represents good fortune and prosperity. Incorporating these shapes into the design of children's dinner plates can stimulate children's curiosity and creativity through vivid colours and exaggerated images.

Followed by choosing the right rhetorical rhetorical device for creative ideation. Selecting suitable rhetorical techniques is crucial during the creative conception of the

Luoshan shadow children's dinner plate. Using the animal elements of fish (Figure 4.17) and horse (Figure 4.18) in Luoshan shadow puppet (LSP), the designer transformed them into merchandise design elements and then drafted a merchandise design for children's tableware. The designer used the fish pattern as an essential element of product modelling, based on its goal and function to match the Luoshan shadow story according to the children's favourite pattern and its symbolism. The researcher chose a horse's pattern as a decorative element.

The designer used exaggeration to make the horse and the fish more vivid and interesting, for instance, the head and body of the fish were designed to be particularly large, and the fins and tail of the fish were exaggerated to be gorgeous and dynamic. This exaggerated design captures children's attention and increases the visual appeal of this dinner plate. Also, the visual impact of the plate was enhanced through a contrasting technique, using contrasting colours and shapes to highlight the features of both horse and fish, making it even more striking. A combination of these rhetorical devices made for an interesting dinner plate design.

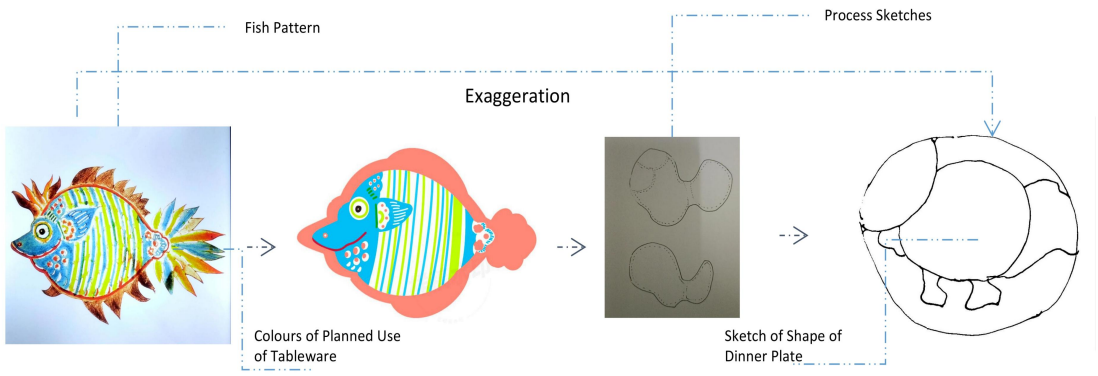


Figure 4.17: Shape Design of Tableware

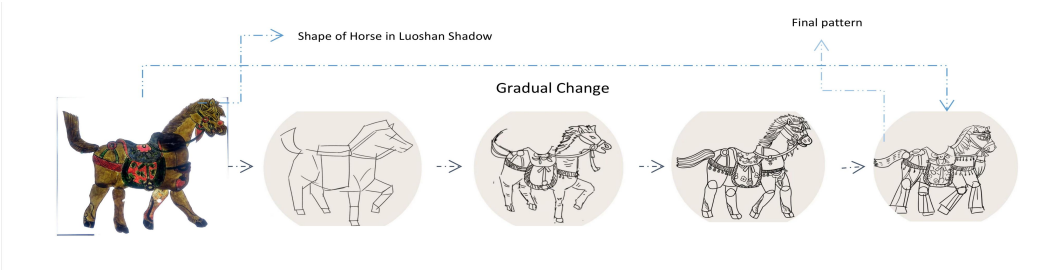


Figure 4.18: Design of the Pattern

The design idea was followed by the conceptual design. Based on the design idea, the designer starts with hand-drawn sketches and digital sketches to try out different design options and combinations of elements. These sketches helped to clarify the general direction and details of the design. Next, the sketches and prototypes were evaluated for functionality, usability, aesthetics, and user-friendliness. The designer solicited input and feedback from several designers at this stage. Finally, design details were adjusted, including colours, materials, sizes and shapes, to optimise the performance of the final design.

After determining the final design direction, detailed design drawings were produced, including structural drawings, material descriptions, dimensional specifications, etc. These drawings would be used in the subsequent production and implementation phases. The designer focused on considering how to incorporate the selected shadow elements into the different areas of the dinner plate, such as the rim, the centre and the dividing area. It also ensured that the design meets the actual usage requirements of the plate, including suitable areas for placing food, ease of cleaning and safety.

A visual presentation of a thematic story to conceptualize a product is a sketch of that experiential story to generate product design ideas. It then used 3D rendering to refine the most complete concept sketches further to realize it creatively. This children's plate

combined a silhouette pattern and colours of Luoshan shadow to create a fun and interactive dining experience for parents and children. The horse pattern of Luoshan shadow was printed in the middle of this plate, which presented delicate texture and outline through a unique paper-cutting process to increase the artistic sense of this plate (Figure 4.19). Also, the primary colours of the plate were chosen from standard colours of Luoshan shadow, such as green, red, and yellow, thus adding to a lively and joyful atmosphere of children's meals. Children could complete the jigsaw puzzle by combining dinner plates to stimulate their observational and hands-on skills. Some of these interactive elements designed on this plate echoed a storyline or character from the Luoshan shadow puppets. An animal motif related to the Luoshan shadow story was printed in the centre of this plate, allowing children to interact with it during meals, which increases fun and imagination. Additionally, the material of the dinner plate should be chosen from safe and harmless food-grade materials to ensure children's health and safety.

In short, the designer focused on the most apparent elements of its story, patterns, and colours to achieve traditional cultural communication. It tried to make users understand the core value of Luoshan shadow puppet (LSP), thus achieving an effect of traditional cultural information. It showed that using visual rhetorical techniques for the innovative design of Luoshan shadow creative merchandise enables designers to elevate their design work to a higher cultural experience rather than simply imitating other merchandise designs.

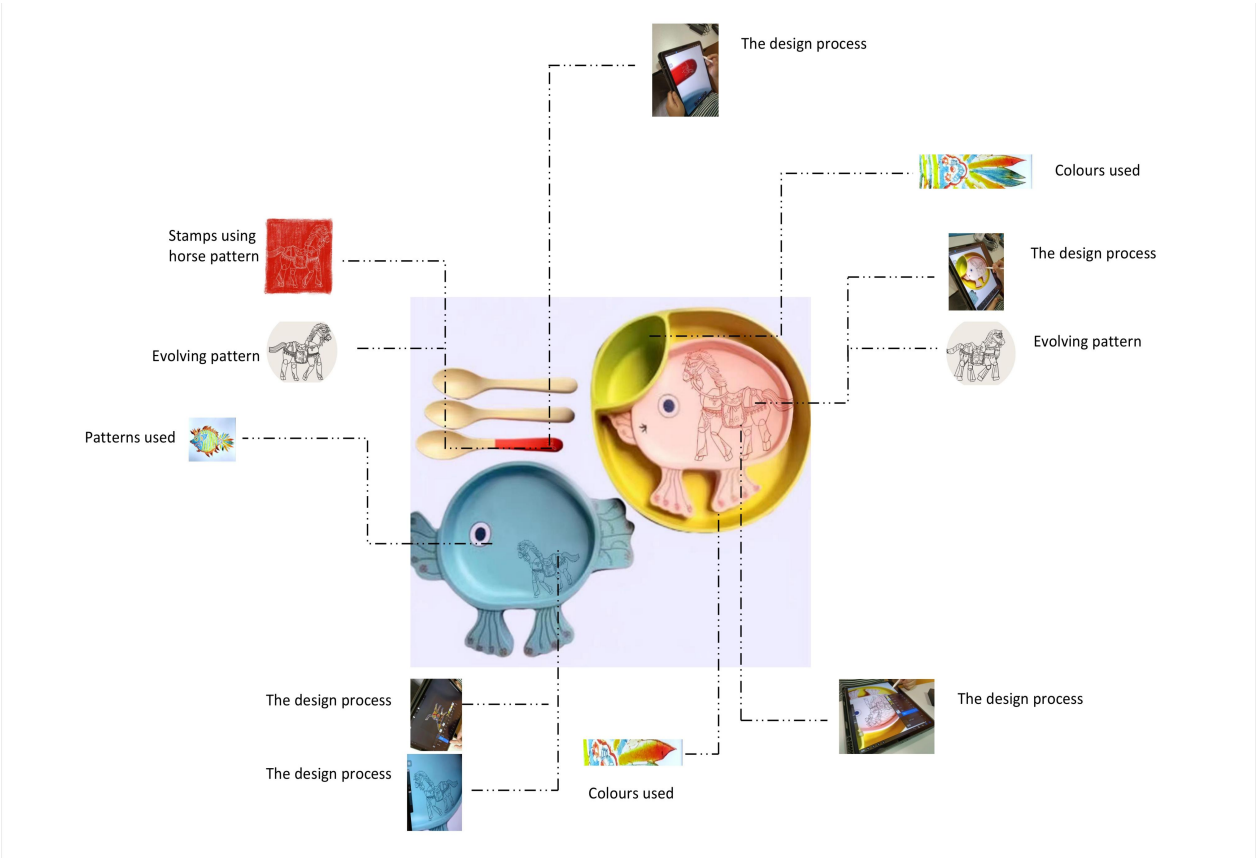


Figure 4.19: Display of Creative Merchandise Design

4.3.3.2 Design Evaluation

Following design practice, it was necessary to verify that the designed functions satisfy this design strategy from both merchandise innovation and practicality perspectives. To optimize it further,12 parents aged between 26 to 45 were randomly recruited for this design evaluation, including six teachers, two Technical/R&D staff, one manager, one professional (designer), and two others (Table 4.5). A test was conducted in person and on-line format. After an introduction to this product, the researcher conducted a satisfaction survey via questionnaire. The questionnaire used a Likert scale between 1.0 to 5.0, with 1 being dissatisfied and 5 being very satisfied.

Table 4.5: Participant Demographics

	Choice	No.	(%)	(%)
Occupation	Academia	6	50.00	50.00
	Manager	1	8.33	58.33
	Other	2	16.67	75.00
	Professional	1	8.33	83.33
	Technical/R&D staff	2	16.67	100.00
Gender	Female	8	66.67	66.67
	Male	4	33.33	100.00
Age	26-35 years old	5	41.67	41.67
	36-45 years old	7	58.33	100.00
Education	Master or above	8	66.67	66.67
	Undergraduate	4	33.33	100.00
	Total	12	100.0	100.0

Based on the design strategy and product positioning, relevant questions were set up in 13 dimensions. Table 4.6 shows the result of the survey.

Table 4.6 : The Level of Consumer Acceptance toward the Uses of Plate

No	Point	1	2	3	4	5	Mean	Level
	Likert-scale	**Strongly Disagree**	**Disagree**	**Uncertain**	**Agree**	**Strongly Agree**		
1	Beautiful shape	1	0	3	8	40	4.33	High
2	Novelty	1	2	3	4	40	4.17	High
3	Unique style	1	2	9	20	10	3.50	Medium
4	Space-saving	2	2	6	20	10	3.33	Medium
5	Original concept	0	2	3	8	40	4.42	High
6	Good use of element	0	0	6	16	30	4.33	High
7	Deep culture	1	2	3	12	30	4.00	High
8	Beauty of rhythm	1	4	3	12	25	3.81	High
9	Better quality	1	2	3	12	25	3.67	Medium
10	Good function	0	0	3	28	20	4.25	High

Table 4.6 continued

11	Reasonable price	0	2	6	12	30	4.17	High
12	Good thinking	0	2	6	12	30	4.17	High
13	Easy to use	1	2	3	12	30	4.00	High

This creative merchandising design practice has the highest level of satisfaction in terms of unique style, deep culture, and better quality, which is in line with the design strategy to a certain extent. As shown in Table 4.6, its overall score is higher than the average score of 3 regarding using design elements and design effects. It illustrates the finding of the questionnaire 2 in which the merchandise has the highest ranking on the original concept (4.42), follow by beautifully shape and good use of element (4.33), novelty (4.17), and finally space saving (3.33). However, its use of elements has yet to be particularly outstanding. To further optimize the merchandise design, additional in-depth interviews were conducted with those two users who gave lower scores and felt that traditional elements were more important to this product design.

Based on the analysis of user acceptance levels, the design of the Luoshan shadow puppet-themed creative dinner plate effectively integrates traditional cultural elements with modern functional requirements, while meeting users' aesthetic and practical needs. The designer has incorporated shadow puppet patterns and colours into the plate design, enhancing the dining experience for users. Participants have shown a high level of acceptance towards this creative dinner plate, particularly appreciating its unique shape and functionality. Overall, this creative dinner plate showcases the distinctive charm of Luoshan shadow puppet (LSP).

4.3.4 Implications of the Results of the Validation

To verify the effectiveness of the visual rhetoric-based design method for Luoshan shadow puppet creative merchandise, the researcher implement this approach through practical design practice. Designer select a series of typical Luoshan shadow puppet (LSP) elements as the basis for creative merchandise design, employing elements from visual rhetoric (VR) theory, such as exaggeration and metaphor, to translate these traditional art forms into the design language of modern merchandise. In this process, the designer meticulously document each design step and analyse the challenges and innovations encountered in the design process. In this process, the designer meticulously document each design step and analyse the challenges and innovations encountered in the design process. In practice, user feedback indicates that the design successfully integrates artistic elements with functionality, transforming the plate into culturally symbolic and visually appealing artworks. Furthermore, the results of second questionnaire survey demonstrate that this creative design significantly enhances user experience and increases purchasing interest, thereby further validating visual rhetoric (VR) as an effective design methodology.

Moreover, this design practice validates the core hypothesis of the research and further enhances the understanding of the methodology for creative product design based on visual rhetoric (VR) in the context of Luoshan shadow puppet (LSP). Through practical design activities and feedback results, the researcher have found that VR theory effectively guides the creative transformation of shadow puppet elements, thereby increasing the artistic quality and appeal of this type of merchandise design. This process demonstrates the feasibility of integrating traditional art forms with modern design theories and highlights the practical application of visual rhetoric (VR) in the commercialization of Lupshan shadow puppet (LSP).

4.3.4.1 Design Method and Process

From the practice of designing creative plate, four steps in the visual rhetoric-based creative merchandise design are identified. Firstly, after determining a design objective, the designer discovered suitable Luoshan shadow elements and chose specific shapes, lines, or patterns to inspire creative merchandise design (Lin et al., 2022). Next, elements extracted were adapted and blended by changing size, scale, and colour to be transformed and applied to these merchandise designs. In the second step, a visual rhetorical style was applied to transform the Luoshan shadow story experience and elements into a form of merchandise that could be offered. The goal of visual rhetoric adopted in Luoshan shadow creative merchandise design was to visualize merchandise using image visuals, colours, shapes, lines, and other elements to convey a specific message, emotion, or idea. Therefore, visual rhetorical strategies (VRSG) transformed the Luoshan shadow factor that triggered users' emotions into an emotional content of the merchandising experience. Furthermore, setting up a specific image or design could create interest and curiosity in its users. Finally, the merchandise was conceived by presenting elements from a visual point of view and the story or elements of Luoshan shadow were visualized within the software to generate design ideas. Creativity was then achieved by using image processing software to refine a merchandise's colours and patterns. After completing this design practice, the sample produced was tested to assess its actual usage effect and user experience, to verify whether its design function met the design strategy, and to optimize a design solution further.

Most participants provided positive feedback on the Luoshan shadow puppet creative plate designed using visual rhetoric strategies. Many respondents noted that this plate have high visual appeal, with unique shadow puppet shapes and colour designs that not only enhance the aesthetic quality of the plate but also increase the enjoyment of

mealtime. Participants indicated that this creative designs made their children feel delighted during meals and sparked their interest in traditional culture. The patterns and colours on the plate are visually pleasing and contribute to children's understanding and appreciation of LSP. Additionally, the interactive elements in the design were also well-received, with users noting that these features enhanced the functionality of the plate and increased children's engagement during mealtime. Overall, the application of visual rhetorical strategies (VRSG) brought significant improvements to the design of Luoshan shadow puppet creative plate, earning unanimous praise from users.

The results from the creative plate design practice validated the visual rhetoric-based design method. Participants provided positive feedback on the visual appeal and functionality of this plate, noting that the patterns, colours, and interactive elements significantly enhanced the dining experience. Observational records revealed that children showed high levels of interest and engagement with the creative plate, further confirming the effectiveness of visual rhetoric strategies in attracting users. Additionally, through data analysis, the researcher systematically assessed the actual impact of visual rhetorical strategies (VRSG) in design. Comparing traditional designs with the creative plate, it was found that visual rhetoric elements notably improved design quality and user satisfaction. These findings indicate that the visual rhetoric-based approach effectively achieved the goals of enhancing design performance and user experience in creative plate design.

Moreover, some participants have indicated that compared to existing creative merchandise based on Luoshan shadow puppet (LSP) in the market, this innovative plate design demonstrates significant advantages in its creative application. They believe that the plate effectively showcases the unique artistic style of Luoshan shadow puppet while

achieving an excellent balance between functionality and aesthetics. In contrast, other creative products on the market often lack such a deep cultural integration and design innovation, making this plate stand out in terms of both visual appeal and practicality (Figure 4.20). This design approach not only enhances the aesthetic value of the plate but also strengthens its role as a cultural transmission medium, reflecting both respect for and innovation in the traditional art of Luoshan shadow.



Figure 4.20: Luoshan Shadow Merchandise and Packaging in the Market

4.3.4.2 Visual Rhetoric as a Design Method for Luoshan Shadow Creative Merchandise

The results of the design practice reveal that visual rhetoric (VR), through the incorporation of artistic elements from Luoshan shadow puppet (LSP) into plate design, effectively conveys cultural intentions. Luoshan shadow puppet provides a rich visual material for plate design with its unique elements. By embedding these artistic elements into plate design, such as using representative patterns and colours, designers can create tableware that is imbued with cultural flavour. This approach not only transforms the plate into a work of art but also sparks users' interest in Luoshan shadow puppet, thereby enhancing cultural recognition and appreciation. Moreover, the application of visual rhetoric (VR) in plate design achieves an effective visual communication effect. Designer employ colours, patterns, and forms from shadow puppet to convey specific emotions and

narratives in the plate. Results from survey 2 indicate that vibrant colours and exaggerated shapes capture users' attention and stimulate their emotional responses.

Furthermore, the creative plate design validates the practical effectiveness of visual rhetoric as a design method. User feedback reveals that design approaches based on visual rhetoric strategies successfully achieve the goals of visual communication, effectively integrating art and functionality. 66.67% of the participants believe that this creative plate design has a strong design concept. As a result, designers can make adjustments and optimizations based on this feedback, thereby further validating and refining the effectiveness of visual rhetoric as a design method.

From the results of the creative plate design practice, it is evident that this approach is an effective design method. Visual rhetoric help Luoshan shadow creative goods attract users in a competitive market. By introducing appealing visual elements and rhetorical approaches, products could be more visually compelling, increasing their visibility and appeal. It is easy to realize that there is a close relationship of influence between visual rhetorical strategies and those design principles. They work in tandem to influence a design's effectiveness and expression. Visual rhetorical strategies (VRSG) include appropriately selected visual elements such as colours, shapes, lines, and images and using rhetorical methods such as metaphors, symbols, comparisons, and repetitions to convey a message, evoke emotional resonance, and enhance a sense of interest in the design. Apart from that, design principles could also produce a visual effect of alignment and harmony, improving a design's eye-catching and visibility. They all influence the adequate performance of merchandise design.

Visual rhetorical strategies (VRSG) and design principles are also used to communicate better what a design is about and intends to do. Using an appropriate visual element and rhetorical approach, conveying a specific message and emotion is possible. Both follow certain principles and rules to create a harmonious, balanced visual effect that makes the message easier to understand and accept. Furthermore, VRSG and design principles can enhance the aesthetics and visibility of a design work. VRSG create aesthetically appealing visual effects by selecting appropriate visual elements and rhetorical techniques. Design principles create group and balanced design layouts and combinations by following certain principles and rules to make the design more aesthetically attractive and visually appealing.

4.3.4.3 Specific Design Methods Incorporating Visual Rhetoric

As can be seen from the design practice of the Luoshan shadow children's creative dinner plate, three stages can be summarised for the whole creative merchandise design. Definition stage: Transform the research data and define the design theme and creative direction based on the research data. In the design phase, factors affecting the design of creative merchandise are identified, and appropriate visual rhetorical design strategies are selected for diffusion studies against user needs. Realisation stage: finalise the concrete expression of the merchandise and evaluate it with corresponding tests. The results of this design practice show that the key to the design process lies in combining the visual symbols of shadow art with modern design language to create merchandise that is creative with cultural depth and practical value.

Based on the framework of the relationship between visual rhetoric (VR) and Luoshan shadow puppet creative merchandise design (LSPCMD) derived from the thematic analysis, combined with the visual rhetoric strategy, eight design processes can be

expanded and summarised from each stage, as shown in Figure 4.21, namely, shadow culture understanding, design conceptualisation, refining visual elements, innovating with traditional elements, application of visual rhetoric (VR), functional and practical design, merchandise design realisation and merchandise testing.

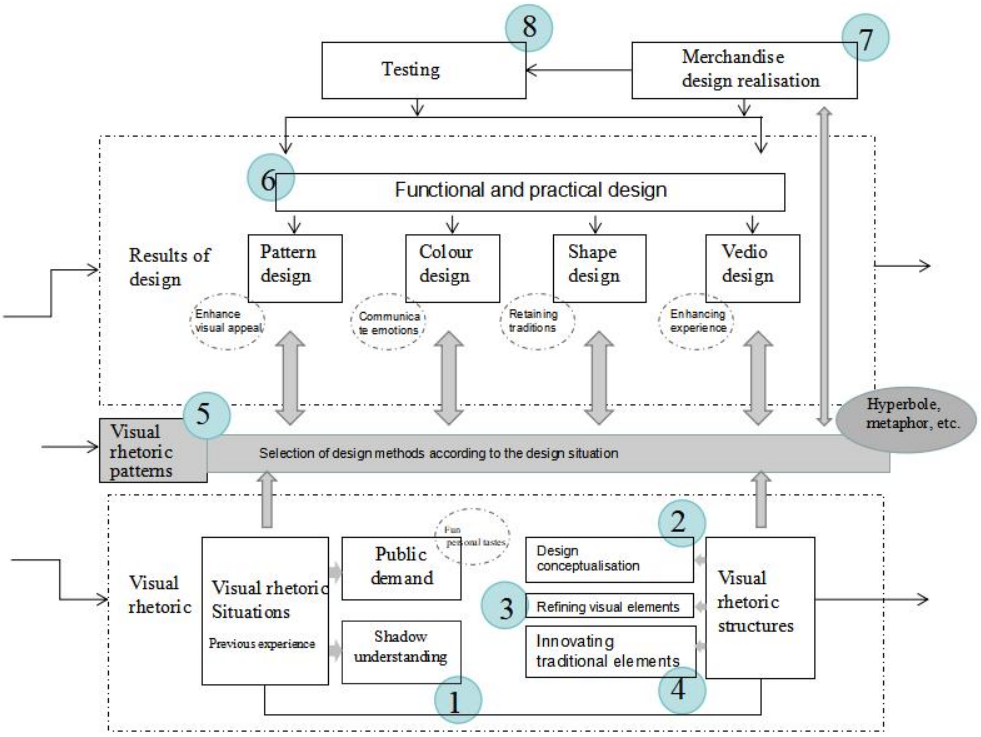


Figure 4.21: The Application Method of Visual Rhetoric in LSPCMD

It should be noted that when applying these visual rhetorical strategies (VRSG) in the design process, attention should be paid to the effect of combining traditional art elements with modern design concepts. By associating shadow images with modern design elements through the use of similes, enhancing the cultural depth of the goods through the use of symbols, and increasing the emotional resonance of the design through metaphors, creative goods can be created that are both culturally deep and in line with modern aesthetics. It is essential that designers ensure that these shadow elements retain their original artistic charm, integrate with modern design concepts, and meet contemporary

aesthetic needs and functionality when applying visual rhetorical techniques to the modern design of these traditional elements.

The design practice of the Luoshan shadow creative dinner plate shows that the design process of this type of goods is a highly iterative process. Initially, designers extract key elements from the traditional art form of Luoshan shadow puppet (LSP), such as shapes, colours, and decorative details, and incorporate these elements into the plate design. Subsequently, through preliminary concept sketches and model creation, designers explore various design options to ensure the compatibility of creativity with practical functionality. Throughout this process, designers continuously adjust based on actual feedback, optimizing details, and improving both aesthetic appeal and practical performance. For instance, if a user test reveals that a particular colour combination lacks visual prominence, the designer will promptly revise the colour scheme to enhance visual impact. The entire process involves multiple feedback loops and ongoing communication and adjustment among artists, designers, and potential users. Ultimately, through numerous iterations and refinements, designers are able to create creative plates that meet modern usage needs. This iterative process ensures that the designs carry on the essence of traditional art with real market appeal and functionality.

4.4 Reviewing Research Questions to Identify the Connection to the Data Findings

4.4.1 Report of Findings for Research Question 1

RQ1: What is the significance of Luoshan shadow puppet elements that can be developed for creative merchandise?

Luoshan shadow is a traditional Chinese folk-art form with a long history and unique artistic charm (Fang, 2009). The accompanying creative merchandise has also been

developing. However, through those interviewed, the researcher finds that there are problems in terms of lack of innovation in form, insufficient cultural expression, lack of market orientation, and lack of differentiated competition in the design of Luoshan shadow creative merchandise. Besides that, many participants in the questionnaire survey believed that the design of these merchandise may need more innovation, lack some reliance on traditional elements and design patterns, and lack novel creativity and unique performance. However, research evidence suggests that users have a high demand for Luoshan shadow creative goods. Users have a more purposeful need for these goods.

In cases where there are more innovation and differentiated competitive advantages in Luoshan shadow creative merchandise design, it may need help differentiating itself from other competitors, resulting in a less competitive market. Consumers would be more inclined to choose those merchandise with unique designs and distinctive product innovation elements. Results of these questionnaires indicate that lack of character and outdated styles are quite prominent problems with this type of merchandise. Lu (2019) argued that the creative merchandise of Luoshan shadow lack character and do not meet what consumers needs and preferences, which may not appeal to its target users. It can affect a product's overall quality and aesthetic value, thus damaging its brand image.

According to the results of the interviews, Luoshan shadow elements are of great significance in the process of developing creative commodities. As seen from the literature review, these elements represent a deep local cultural background and carry rich historical and artistic values. The results of the study found that these traditional elements in the design of creative commodities can effectively convey and retain the unique charm of the

regional culture, and enhance the cultural value and market attractiveness of these commodities.

It is also important to incorporate the elements of Luoshan shadow into the design of creative commodities, contributing to the expression of culture in innovative design. Designers can give these traditional elements new forms of expression by redesigning and innovating the shapes, colours and textures, thus creating cultural commodities with a modern feel. This combination can fulfil the modern consumer's demand for uniqueness and individuality, and promote the application and regeneration of traditional art in contemporary design.

The results of this study found that the application of Luoshan shadow elements in the development of creative merchandise also promoted cultural identity and heritage. The significance of Luoshan shadow elements in the design of creative merchandise is reflected in its cultural transmission and market value, in that promoting the deep integration of traditional art and modern design. Incorporating these traditional artistic elements into creative merchandise, designers are able to effectively transform the classic shadow puppet shapes, colours and symbolic patterns of the Luoshan shadow puppet (LSP) into merchandise that modern consumers can accept and enjoy. Interviewees said that by transforming these traditional elements into merchandise designs, they can stimulate users' interest in and recognition of traditional culture. This design preserves what has been a central feature of traditional culture, allowing it to be reproduced and perpetuated in the modern world.

4.4.2 Report of Findings for Research Question 2

RQ2: Why are the Luoshan shadow puppet elements can be developed for creative merchandise by incorporating visual rhetoric characteristics?

In Luoshan shadow creative merchandise design, visual rhetoric (VR) is crucial, affecting how a merchandise is aesthetically pleasing and how users perceive it. Associate Professor Wujun Tang said in the interview that visual rhetoric can help Luoshan shadow puppet creative merchandise (LSPCM) better convey their themes and emotions. Findings from thematic analyses and design practices show that visual rhetoric (VR) can enhance the attractiveness and aesthetics of these creative merchandise.

The findings of this study found that visual rhetoric (VR) can enhance the brand image of Luoshan shadow puppet creative merchandise (LSPCM). Vivid information evokes a strong emotional response (Seliger, 2014). Therefore, designers can associate a product with a specific brand image by choosing suitable visual elements such as colours, materials, and patterns. The designers create unique and innovative designs through visual rhetorical techniques that will distinguish Luoshan shadow creative merchandise. Moreover, this study found that visual rhetoric can also help convey the cultural connotation and value of goods and enhance their brand image and market competitiveness.

Also, visual rhetoric (VR) can enhance the functionality and ease of use of Luoshan shadow puppet creative merchandise (LSPCM). The functions and operation of a merchandise can be more clearly and intuitively presented to its users through rational layout and structural design. This study found that visual rhetoric (VR) can make these Luoshan shadow creative merchandise structures more intuitive and easier to understand. It can also reduce a cognitive burden on its users through elements such as colour, layout,

and iconography. It allows users to quickly find the necessary functions and information and improve a more efficient operation.

Furthermore, visual rhetoric (VR) significantly impacts the communication of Luoshan shadow creative goods. Using metaphors and symbols, designers can transform the stories and meanings in Luoshan shadow into visual symbols that are easier for users to understand and accept. Such a way of communication can break through the barriers of language and culture, allowing Luoshan shadow culture to spread to a broader audience across geographical and ethnic boundaries. Applying rhetorical elements can make the goods more beautiful and exciting, enhancing their attractiveness in the communication of Luoshan shadow puppets. Associate professor Xiang Jun believes visual rhetoric (VR) can improve the artistry, creativity, and visual effect of Luoshan shadow creative design works, producing better communication effects.

Visual rhetoric (VR) connects the user's attention to what is on the surface of a merchandise with aesthetic pleasure. Users obtain aesthetic pleasure from an experience of the strength of surface flow (Brummett, 2008). Designers can integrate aesthetics into technical communication by applying visual conventions derived from larger cultural forces, designing principles that promote aesthetics, and innovating novel forms (Kostelnick, 2020). This research found that visual rhetoric (VR) can inject new creativity and forms of expression into such creative commodities, making them more modern and contemporary. VR can combine traditional Luoshan shadow elements with modern aesthetics to create more visually appealing merchandise.

The results of the study show that there is a close relationship between the creative merchandise design of Luoshan shadow puppet (LSP) and visual rhetoric (VR). The

thematic analyses show that visual rhetorical situations (VRS) affect the current design problem of Luoshan shadow puppet creative merchandise (LSPCM). There is a relationship between visual rhetorical situations and product design issues, and there may be problems in that relationship. To address these issues, designers should ensure proper use of visual rhetorical situations, maintain consistency, match functionality, and respect culture and values to enhance these creative merchandising designs for quality and user experience. Moreover, visual rhetorical structures (VRST) correspond to design ideas and concepts. Design strategies correspond to visual rhetorical patterns.

The results of this study show that visual rhetoric (VR) significantly impacts designing the creative merchandise of Luoshan shadow. Visual rhetoric (VR) ultimately affects those goods' design goals, design styles, design effects, ergonomics, and aesthetics. Visual rhetoric (VR) is an artistic technique that conveys a specific meaning or emotion through visual elements. It is also a non-discursive rhetoric involving visual images' ability to convey compelling information (Durgee, 2003). The results of this study show that visual rhetoric (VR) plays an essential role in merchandise design and can influence how a merchandise looks, feels, and has an overall aesthetic effect. Effects of visual rhetoric (VR) on these merchandise designs are mainly seen in the use of design elements and rhetorical strategies. Designers can create different aesthetic effects by choosing different colour combinations. For example, bright colours can convey a sense of energy and pleasure, while pastel shades will give a feeling of warmth and serenity. Colour can indicate what people want it to mean (Hutchings, 2004). These distinctive colours express the grotesque, bizarre, and individualistic design concepts and promote a visual impression that dares to imagine, overthrow, and break the rules. Also, it is possible for the choice of graphics and shapes in visual rhetoric to influence a product's overall appearance

and visual impact. For example, circular patterns have connotations of continuity (Durgee, 2003). Therefore, the designer chooses suitable graphics and shapes to enhance these goods' aesthetic effects and connotations according to a product's characteristics and target users. Furthermore, visual rhetorical strategies (VRSG) affect the overall sense of harmony and balance of creative merchandise as much as design principles, such as the rhetorical methods of exaggeration and gradation. Proper proportions and balance can make Luoshan shadow creative merchandise look comfortable, coordinated, and aesthetically appealing. The results show that using visual rhetoric (VR) methods in designing Luoshan shadow creative commodities is conducive to expressing product function. At the same time, it can improve its aesthetic effect and emotional attributes.

Table 4.7 : Analysis of Correlation Between Design Principles and Visual Rhetorical Strategies

Pearson						
	Exaggerated	**Gradual change**	**Reorganisation**	**Association**	**Symbolic**	**Formal aesthetic rule**
Rhythm	0.144	0.319**	0.198*	0.323**	0.297**	0.288**
Balance	0.134	0.250*	0.199*	0.289**	0.286**	0.229*
Harmony	0.160	0.276**	0.174	0.332**	0.226*	0.294**
Contrast	0.151	0.287**	0.167	0.327**	0.279**	0.411**
Emphasis	0.143	0.216*	0.302**	0.229*	0.231*	0.294**
Pattern	0.204*	0.323**	0.242*	0.276**	0.324**	0.314**

* $p<0.05$ ** $p<0.01$

There is a close relationship between visual rhetorical strategies (VRSG) and design principles. Visual rhetorical strategies (VRSG) can use these design principles to

achieve their aims and effects. The data show a clear correlation between them. As shown in Table 4.7, gradual change, association, symbolic, and formal aesthetic rules correlate significantly positively with all design principles. Only 'reorganization' and 'exaggeration' show insignificant correlations with individual design principles. For example, the Pearson values of reorganization with harmony and contrast are 0.174 and 0.167, respectively. The Pearson values are close to 0, indicating their relationship is insignificant. An overall significance is shown in the correlation analysis between visual rhetorical methods and design principles.

In conclusion, visual rhetoric (VR) has an essential influence on the design of Luoshan shadow creative merchandise. Designers can create appealing, harmonious, and aesthetically attractive products with an approach that draws on visual rhetoric (VR) and ingenious use of visual elements such as colour, graphics, shape, proportion, and layout.

4.4.3 Report of findings for Research Question 3

RQ3: How are the Luoshan shadow puppet elements can be enhanced as a new design approach for creative merchandise by incorporating visual rhetoric characteristics?

Design strategy refers to a plan to gain a competitive advantage through merchandise design that maximizes the value of creativity (Hu, 2016). Based on the theory of visual rhetoric (VR) and the value of Luoshan shadow, the researcher combines a user's research needs to refine its rhetorical strategy to guide this type of merchandise design and establish its visual rhetorical model. Firstly, designers' study and analyse Luoshan shadow to understand its unique artistic style, cultural symbols, and significance. It is also necessary to understand the target market's cultural background, aesthetic preferences, market demand, and competition. Next, based on the results of research and analysis, the

objective and positioning of these merchandise designs are determined. Appropriate visual rhetorical strategies (VRSG) are selected to convey information and express emotion based on goal setting. Furthermore, there is the process of design idea generation based on selected visual rhetorical strategies (VRSG). The final step is to translate the design ideas into actual merchandise designs.

Based on the themes studied, the key elements of Luoshan shadow creative merchandise design include material design, shape design, colour design, pattern and texture design, and sound design.

Colour design must clearly define the target audience of Luoshan shadow creative merchandise and a brand image to be conveyed, including product positioning, characteristics, and values, to determine a suitable and appropriate colour scheme. Appropriate colour combinations and contrasts can highlight the features of an item. This is because colours can give intense stimulation, and designers will most likely express their design ideas through colours (Zhao & Yao, 2019). A designer's use of visual rhetorical strategies for colour requires a combination of contrast, repetition, symmetry, proportion, emphasis, and symbolism. Furthermore, we adjust the brightness and saturation of colours according to what kind of product it is and what the target users prefer. In addition to considering user preferences, colour design should also consider user experience and ease of use. For example, different colours are designed in the shape of dinner plates according to a fish pattern colour, through which different personalities are given to each area, and various colours add interest to this tableware. It also ensures that the colours chosen to do not affect the user's understanding and use of a merchandise's features and interfaces.

Finally, designers must constantly optimize and adjust the colour scheme for the best visual effect and user experience.

Moreover, materials with different textures offer many possibilities for merchandise design. Many materials have a distinct visual personality, and people have different sensibilities due to their different textures. Visual rhetorical strategies (VRSG) can usually be used to express individuality for the material design of goods. Metaphors, contrasts, and other rhetorical approaches are often used in product design to shape the textural effect of a merchandise. Contrasting different materials' texture, colour, or gloss conveys opposing or conflicting meanings. Like colour design, material design for these merchandises also requires market research and user research to understand user preferences, trends, and expectations of materials. Then, the designer selects a suitable material by considering a product's functional needs, appearance requirements, and cost factors. Following this, appropriate rhetorical strategies are used to create textural effects using surface treatments, texture design, and gloss levels. In addition, different material combinations and layered designs can add visual layers and interest to the merchandise. Results of this study show that material design by designers through visual rhetorical strategies (VRSG) can produce rich visual stimuli that contribute to user recognition.

Product graphics are designed to increase its attractiveness and uniqueness as well as give personalized product features. The "image consumption era" boom has made graphic design a key communication element for brand image communication (Qiu et al., 2023). This study shows that a better effect is achieved in the pattern design of Luoshan shadow creative commodities through strengthening graphic recognisability and integrating era-image design. Strengthening graphic recognition means choosing the most

representative patterns, images, or symbols in Luoshan shadow as a core element and emphasizing and highlighting them in product design. For example, the design of children's dinner plates amplifies and exaggerates the pattern, creating a visual focal point that reinforces its theme. This makes the graphic attractive and deepens its strong recognisability and legibility. Furthermore, integrating period pattern design is another critical design strategy. Using modern elements, innovative pattern images, diversified application methods, and the application of digital technology create a richer and more varied image effect for this kind of goods. The findings indicate that exploring different combinations and arrangements of patterns based on core elements and rhetorical goals can lead to sound, visual effects for such merchandise.

Finally, the image design of Luoshan shadow puppet creative merchandise (LSPCM) can use a series of visual rhetorical methods to enhance its expressive power and artistic sense. Image design is usually used more in film, television, or digital merchandise design. With the help of language, symbols, images, and other media, these merchandise more actively and pro-actively use visual rhetorical techniques to express a core point of view of its creator, which is intended to achieve the best visual effect and a better persuasive effect. Rhetorical strategies commonly used in image design include visual metaphor, visual anthropomorphism, visual prose, visual symbolism, and visual contrast. Different rhetorical strategies will bring different communication effects to digital goods (Han, 2022). In conclusion, a reasonable and appropriate use of visual rhetoric (VR) in image design can enhance the impact of images. However, it is worth noting that this type of commodity design is not the focus of this study.

4.5 Summary

This chapter focused on the results and findings of the data collected through the questionnaires and interviews. It is subdivided into five sections. The researcher introduced this chapter's leading content and structure in the first section, followed by a discussion of the themes from the data in section 2. Section 3 was a validation of the results of the thematic analyses through descriptive statistics presenting the questionnaire's data and design practice, which stated its implications. Finally, section 4 presented the findings through comparison and discussion of the data, responding to all four research questions posed in chapter one.

CHAPTER 5

INCORPORATING THE LUOSHAN SHADOW PUPPET WITH VISUAL RHETORIC ELEMENTS FOR THE DEVELOPMENT OF CREATIVE MERCHANDISE

5.1 Introduction

This chapter discusses the results of this dissertation's research into the design of a generalisable creative merchandise for the Luoshan shadow puppet (LSP) by integrating existing theories of visual rhetorical context, visual rhetorical structures (VRST), and visual rhetorical pattern. The discussion of this study responds to the research hypotheses presented in Chapter 2. These findings provide theoretical support and practical guidance for combining traditional cultural elements with modern design concepts, thus promoting the development and promotion of creative commodities with cultural depth and market appeal.

This chapter is divided into five sections. The first part is an introduction. Section 2 discusses how the visual rhetorical situations affect the Luoshan shadow creative merchandise, including its influence on personalization, design elements, and design style. Section 3 discusses how visual rhetorical structures affect the visual hierarchy, themes, and cultural communication of Luoshan shadow creative merchandise. Section 4 explains how visual rhetorical strategies (VRSG) affect ergonomics, user experience, aesthetic effect, and merchandise communication. Finally, Section 5 summarizes this chapter.

5.2 Effect of Visual Rhetorical Situations on Design Questions in Luoshan Shadow (Hypothesis 1)

A rhetorical situation refers to any situation in which some form of communication is used to change at least one person's point of view. It is possible to define a rhetorical

situation as a complex of people, events, objects, and relationships that present an actual or potential situation (Bitzer, 1992). One can learn how specific scenarios or social backgrounds influence behaviour by analysing the 'behaviour-to-scenario ratio' (Palmer, 2020). Whenever anyone tries to make an argument, it is done so in a particular context that affects and shapes what is presented. While there has been a great deal of attention and interest in how the communication function of design works, more research needs to be conducted to examine how internal organizational communication affects a product's design (Lin, 2007).

The research results validate the hypothesis that contextual factors in visual rhetoric (VR) influence the design issues of Luoshan shadow. This hypothesis indicates that the visual rhetoric strategies employed in the design process can significantly impact the form and artistic effect of Luoshan shadow creative merchandise. Through the application and analysis of visual rhetoric theory, this study reveals that various contextual factors, such as cultural background, audience needs, and market trends, profoundly affect design decisions, altering the stylistic presentation and design direction of such merchandise. This finding provides a new perspective for the innovative design of Luoshan shadow puppet (LSP) and offers strong theoretical support for research in related fields. visual rhetorical situations (VRS) can provide a theoretical foundation for creative merchandise design and also serve as a theoretical reference for the study of "context" in design disciplines.

5.2.1 Effect on Merchandise Personalisation

Research findings support the notion that visual rhetorical situations (VRS) influence designers and manufacturers to create unique and personalized visuals in Luoshan shadow creative merchandise. From the results of these interviews, it was clear

that there were many problems with the current Luoshan shadow creative merchandise, such as lack of innovation and failure to meet market demand (Figure 5.1). As stated by Professor Dong Ying, many merchandise need to be simplified or be more complex in design, not in line with consumers' aesthetic trends and purchasing habits, leading to sales difficulties. Personalized design is one of the most important ways to solve these problems. This is because merchandise personalization provides a competitive advantage depending on how it is carried out in a new product and what target group it is aimed at (Mugge et al., 2009a). However, less attention has been paid to personalized design methods for Luoshan shadow creative merchandise.



Figure 5.1: Luoshan Shadow Pillow Design

Potential reasons for explaining why visual rhetorical situations (VRS) influence the personalization of creative merchandise are as follows. The literature review showed that several studies have explored the impact of customer needs on merchandise personalization (Pradel et al., 2021). Reasons behind a desire for personalization include an expression of uniqueness, individualism, and a personalized choice (Grant et al., 2013).

Moreover, effective design methods require meaningful communication between users and designers (Salvo, 2001). Thus, user analysis of such goods may be critical to understand rhetorical situations. This is because different users use goods for different purposes. Designers need to consider their different purposes and how best to help them achieve them. Considering the argument of Mugge et al. (2009b) about the impact of personalized merchandise appearance on its emotional bond, it is possible to involve the user in the design and tailor the solution to fit his or her personality.

Personalized design of Luoshan shadow creative merchandise requires a specific situation, target stage, and participation. Multi-stakeholder engagement has significantly impacted a design program (Kaneko et al., 2017). It is necessary to consider factors such as designers, users, and constraints in its design situation. Therefore, it is necessary to fully consider a target market's needs and consumers' preferences in designing Luoshan shadow creative merchandise (Gao & Song, 2022). Designs that are too complex or simple do not match the consumer aesthetic trends and buying habits. The findings showed that personalization based on rhetorical situations could benefit such goods. Personalization brings better preference matching, products, services, and communication to users (Vesanen, 2007).

In short, results of this study showed that elements of visual rhetorical situations (VRS) affect the personalized design of Luoshan shadow puppet creative merchandise (LSPCM). However, further research into how visual rhetorical situation elements affect these merchandise design personalization requires observing users' behaviours and reactions during actual use to understand how they react to and accept different situation elements. The analysis of these behaviours and responses can provide a foundation for

optimizing design strategies, ensuring that the final products align with consumers' aesthetic and functional needs, thereby enhancing the products' market competitiveness.

5.2.2 Effect on Design Elements

The results of this study indicated that the visual rhetorical situations (VST) affected how Luoshan shadow creative merchandise design elements were selected. Most respondents supported this expectation. Based on the findings, visual rhetorical situations assisted designers in choosing elements such as patterns, colours, and details (Figure 5.2) that align with the context and thematic background of each situation, problem, and objective. This approach helped create visual effects that accurately convey the intended message and story of the merchandise..

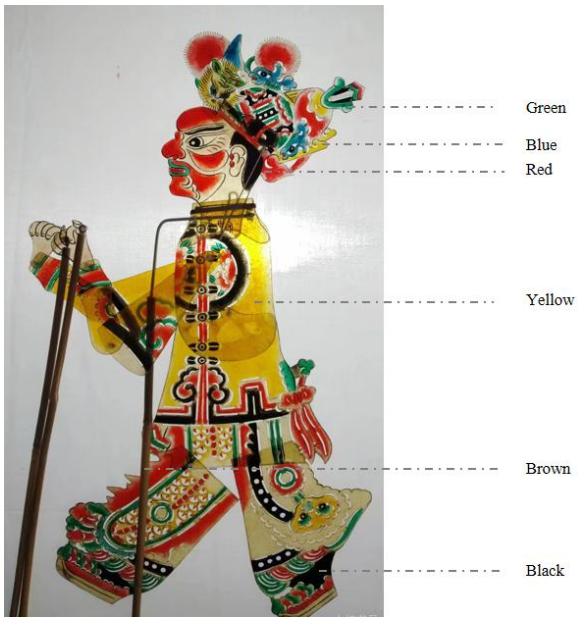


Figure 5.2: Luoshan Shadow Figure and Colour Elements

Unexpectedly, a choice of design elements in a design practice may be affected by technological and production constraints. A possible explanation for partial support could be derived from the fact that design element choices may be affected by sustainability

considerations. Designers must consider environmentally friendly elements choices, such as selecting recyclable materials and energy-efficient designs, which would promote sustainable design practices (Kasarda et al., 2007). Some scholars believed that selecting design elements required considering materials and technologies compatible with a Luoshan shadow production process to ensure its implementation and quality (Yang, 2020).

Research on creative merchandising showed that designers were more likely to show good creative thinking in visual-rhetorical situations. This may be due to the guiding effect of visual rhetorical situations that made designers more inclined to use contrary elements and concepts in creative merchandising. Design creativity refers to novel, unique, and creative ideas and concepts generated during design. It is a design solution that solves a problem, meets a need, or creates value through a designer's unique thinking and creative approach (Taura et al., 2010). Various creative situations and creative behaviours interacted to promote creative expression and different creative outputs (Woodman et al., 1993). From the findings of visual culture communication, it was clear that a concept's key elements and features are based on design function, form, user interaction, and structural orientation (Yilmaz et al., 2011). Therefore, the direction of Luoshan shadow creative merchandise creativity may be why these interviewed experts believed all design elements should be related to transmitting cultural values, emotional experience, and awareness. In contrast, some experts in the design of cultural and creative goods believed that an element of design creativity is multidimensional and not limited to a visual cultural communication research result (Li & Chang, 2018). Hence, this may explain why this study highlighted the characteristics of effective creativity in response to visual rhetorical situations.

Several studies argued that there was a need to balance tradition and modernity when designing creative merchandise for Luoshan shadow puppet (LSP). These goods should maintain the traditional characteristics and cultural connotations and adapted to a modern consumer's needs and aesthetic tendencies (Kang, 2022). However, some creative merchandise design studies have reported that designers have found that the choice and use of design elements in Luoshan shadow creative merchandise was much more conservative than shadow creative merchandise from other regions (Hao, 2021). The findings showed that combining these design elements and market demand could create such goods with unique appeal and innovation. Designers needed to gain a deeper understanding of user culture and find strategies to use culture as a resource for product development (Popovic et al., 2007). Therefore, the application of design elements was affected by user needs. The selection of design elements of Luoshan shadow creative commodities should be determined according to the target users and market demand, which could be combined with its traditional cultural characteristics and modern aesthetic concepts to create unique and creative goods.

Although this study followed previous researchers' findings of using rhetorical situations as a reference for product design element selection, selecting design elements for Luoshan shadow creative merchandise may not have been adequately integrated and innovatively considered by designers concerning what the target users need and market trends. Indeed, situations provided multiple perspectives on interactions, different kinds and amounts of detail, and helped designers manage many consequences of particular design actions. It could also help designers identify, capture, and reuse generalities and address the challenge that technical knowledge often needs to meet technical design needs (Carrol, 1999). This may partly explain the results of this study that for designers, selecting

appropriate design elements in a particular merchandising situation could convey a specific emotion, meaning, or message.

The choice of merchandise design elements is related to the consumers' psychological and behavioural responses (Bloch, 1995). Hence, the initial design goals of such goods are linked to what consumers ultimately respond to psychologically and behaviourally. Moreover, good Luoshan shadow creative merchandise design could attract consumers' attention, communicate with them, and added value to a product by improving a relevant quality of use experience (Kang, 2022). Designers consciously incorporated user culture when designing products and found strategies to use culture as a resource for product development (Popovic et al., 2007). Therefore, designers must get inspiration from a selection of Luoshan shadow elements in this kind of merchandise, which combined traditional culture with modern design to create design works with unique cultural characteristics and creativity. Its cultural value could be better used in product development and artistic design creation, which is closely related to our lives (Li, 2017). The results of this study showed that users' demand for what makes these Luoshan shadow creative goods unique is manifested in their desire to demonstrate individuality and distinctiveness by choosing their unique elements, shapes, and colours. Also, because there was a close relationship between the design situation and how the elements of these creative goods were selected and used, their selection was affected by factors such as culture, style, and popular trends when considering their design.

In conclusion, the results of this study showed that future research on how visual rhetorical situations (VRS) affected a selection of Luoshan shadow elements in creative merchandise needed to investigate both market demand and user preferences on element

selection. Suitable choices of design elements helped to convey merchandise emotions and themes, emphasized uniqueness and individuality, captured consumer attention, matched the target audience, and maintained brand image and consistency. All these reasons made selecting elements a critical consideration in the creative merchandise design of Luoshan shadow. Furthermore, future research should empirically test visual rhetorical situations' effect on design elements and provide designers with guidelines and references regarding the selection and use of Luoshan shadow elements in creative merchandise.

5.2.3 Effect On Merchandise Design Style

The results of this study supported what was expected from those elements in the visual rhetorical situations (VRS) associated with the style of Luoshan shadow puppet creative merchandise (LSPCM). Results from participant interviews supporting this expectation suggested that a design situation significantly impacted product style. Designers needed to comprehensively consider various elements of design situations, such as cultural characteristics, market demands, functions, and uses, to select suitable styles to create a merchandise's image and characteristics. A style does not belong exclusively to its designer, as it emerges from interaction and negotiation with those for whom it is intended. Moreover, stylistic judgement is not an optional add-on to basic functionality but an integral part of all human creativity (Cattani et al., 2020). Clearly, this style choice was driven by what their users wanted to ensure that a merchandise met their expectations and needs.

Unexpectedly, few experts among those interviewed mentioned that the design situations significantly affected the style of Luoshan shadow creative merchandise. Results from this study also showed that different design situations would require different design

styles. The usability of design products depended on consistency with their user's favourite preferences (Tonkinwise, 2011). The design situation could determine market positioning and target users, but design could be particular, and the design situation was always partially uncertain (Schön, 1988). If the target user was a younger demographic, the design style may be more fashionable and modern to catch their attention and resonate with them. A design style may be cleaner and more professional if the target user was an established professional to show a brand's professionalism and reliability. Furthermore, design needed to be motivated by the complexity of problem situations, which could be used as a system transformation (Dorst, 2019). The design situation could also determine cultural and geographical factors (Xu, 2022). From the results of the correlation analysis, there is a significant correlation between design elements and design style (Table 5.1). Design elements reflect the uniqueness of the design style through specific combinations and usage patterns, influencing its expression and visual effect. Findings of the analysis show that the specific tendency to use design elements and the expressive features of design style are closely linked, suggesting that design style largely determines the functional and aesthetic expression of those elements, while the choice and arrangement of the elements concretise what is theoretically and practically possible in terms of design style.

Table 5.1: The Relationship between Design Elements and Design Style

	Products with distinctive appearance and shape	Style
Products with distinctive appearance and shape (Deisign situation)	1(0.000***)	-0.146(0.018**)
Style	-0.146(0.018**)	1(0.000***)

Note: ***, **, and * represent significance levels of 1%, 5%, and 10%, respectively.

This study found that designers needed to understand a target market's cultural background and aesthetic concepts to create a design style that meets local tastes and preferences. This was because different regions and cultures understand beauty and aesthetic preferences differently. It was not surprising to find that the concepts of culture and design are intertwined, and these changes brought about by the evolution of culture both reflect and determine design development (Moalosi et al., 2010). One possible explanation for this phenomenon could be derived from merchandise design practices. Previous research showed that the impact of visual rhetorical situations (VRS) on product style could be expressed as a more accurate representation of design intent and match with their target market. Different findings from interviews, questionnaires, and design practice showed that style reflected certain features used to illustrate cultural contexts and social aspects. Styles are entities with specific essential attributes (Chan, 2000). The design style is a representative design form formed by the ideas of different times, local characteristics, and penetrating thoughts. A typical stylistic form is often closely related to the design context and is characterized by ideas and patterns that must be present in its creation (Wen & Kao, 2005).

Bell, et al. (1991) proposed using aesthetic and social values to explain preferences for product style about personality and overall effect. Designers must interpret and innovate traditional art's aesthetic elements, spiritual connotations, and artistic attitudes when analysing a popular style design technique (Li et al., 2021). Therefore, Luoshan shadow creative commodities should not only retain a traditional feature of shadow, but also match the aesthetic needs of modern consumers (Xia et al., 2021). Choosing the style of Luoshan shadow creative merchandise considers various factors, such as a combination of tradition and modernity, use of colours, expression of storytelling, and innovation and

personalization, to create unique and attractive merchandise. Various aspects of visual rhetorical situations (VRS) affected the style of merchandise design, including target audience, product use environment, functional needs, and cultural and geographical factors. The expression of a merchandise should be a carrier of its context of use and design (Bodker, 1998). Therefore, designers needed to consider these factors during their design process to ensure that the design work matched the situation and meets what consumers need and expect.

Different design situations would demand and affect the product's style differently. The results of this study showed that future research on what effect visual rhetorical situations visual rhetorical situations (VRS) have on Luoshan shadow creative merchandising styles needed to investigate actual market research and consumer feedback. Furthermore, future research should test the reliability and validity of this study's findings.

5.3 Effect of Visual Rhetorical Structure on Luoshan Shadow Creative Merchandise Design Thinking (Hypothesis 2)

Rhetorical structure is an artistic technique used in linguistic expression to achieve what is intended using skilful linguistic organization and rhetorical devices. In design creativity, rhetorical structures can be used to communicate and enhance the intent and emotion of a design. An effective structure helps to convey its core message. What is the best structure depended on the message to be conveyed and the expectations of the audience (Thelwall, 2019). The core of the visual structure connects various visual elements presented to their audience with a theme. Only a reasonable and practical articulation of what these visual elements have to do with creative merchandising can make their users receptive to the theme.

The study confirms the significant impact of visual rhetoric structures (VRST) on the creativity of Luoshan shadow puppet creative merchandise design (LSPCMD). In-depth interviews with 26 Luoshan shadow puppet artists, designers, and cultural scholars reveal that visual rhetoric elements, such as exaggeration, metaphor, and parallelism, play a crucial role in shaping the design concepts, expressive methods, and visual presentation of these products. These elements enhance the cultural expression of the merchandise and increase the emotional resonance and experiential value for users. Specifically, visual rhetoric structures (VRST) aid designers in more effectively conveying the unique artistic charm of Luoshan shadow, making the creative merchandise more appealing.

These findings are consistent with previous research, which has established the importance of visual rhetoric (VR) in enhancing the expressiveness and attractiveness of design creativity. However, a systematic exploration of its application to Luoshan shadow puppet creative merchandise had been lacking. This study fills that gap, verifying the specific impact of visual rhetoric structures (VRST) on design creativity and revealing their practical application in the design process. These findings provide empirical evidence for future design practices and related research.

5.3.1 Effect on Visual Hierarchy

Research shows that to make design language appropriately and favourably express what designers want to express, “rhetoric” becomes an essential part, directly affecting the good or bad effect of their works (Zhi, 2014). Rhetorical structure can be realized through various relationships, such as contrast, causality, and generalization structures. Rhetorical structures are characterized by rhetorical relationships that reflect semantic and functional

judgements about what is happening across the text to which they connect (Smith, 2017; Marcu, 2000).

Visual hierarchy organizes visual elements, such as elements, shapes, colours, and textures in design, to create a layered visual effect that directs the viewer's attention. From a design perspective, a more substantial visual hierarchy means a product will generate more eye movement in its user. A more robust visual hierarchy may mean that information that directs external attention can be communicated more effectively (Urano et al., 2021). The findings from this study showed that through judicious use of visual hierarchy, designers could create a sense of importance, focus, and hierarchy in their works, enabling viewers to understand better and experience design work. Meanwhile, the visual hierarchy focuses on effective communication, visual identity, and campaigns (Eldesouky, 2013).

This study focused on how rhetorical structure affected the visual hierarchy of Luoshan shadow creative merchandise design (LSPCMD). A relationship between how a designer wants to interpret a product and how it is interpreted is often represented as a communication process (Crilly et al., 2008). Designers tend to create associations between products and elements through a rhetorical relationship, such as causal relationships, where a merchandise is linked to other elements (e.g., people or things) through advertising visuals so that they have a causal relationship. This causal relationship may be established through the product's relationship with those who typically use it or with symbolic areas. Using visual techniques to draw the user's awareness to a visual focal point, they can establish an impression from cause to effect and ultimately accept what they are being sold. The results of this study showed that rhetorical relationships could be used to differentiate merchandise from competitors in the marketplace through their design and expression in

the visual hierarchy of goods. A unique rhetorical relationship could highlight the characteristics and uniqueness of Luoshan shadow creative merchandise and make these goods more eye-catching.

Besides that, the results of this study found that the rhetorical structure could build a visual hierarchy and focus on creative merchandise by presenting a comprehensive presentation of Luoshan shadow's elements of this structural application effectively. However, the next focus of continued research was how to attract users quickly, organized an excellent visual structure, and quickly made users understand and accept it. The visual hierarchy of this type of merchandise needed to create a clear visual back-and-forth relationship, as well as differences in size, importance, or depth between different elements. This meant a designer could flexibly use rhetorical structures to establish visual hierarchy and focus according to specific design goals and creative needs to achieve better design results.

In conclusion, future research on how rhetorical structures influence creative merchandise to establish visual hierarchy and focus is an exciting and promising area. The design principles and guidelines for using rhetorical structures to establish visual hierarchy and emphasis in a Luoshan shadow creative merchandise design will be studied.

5.3.2 Effect on Creative Merchandise Themes

While rhetorical relationships emphasize a particular association or connection in language expression to enhance an expression and to attract a reader's or listener's attention, it is equally possible to achieve a product's thematic and visual expression through specific rhetorical devices and structure. Very few respondents mentioned rhetorical relationships as a way of conveying information and emotion through interacting

and organizing elements. The results of this study showed that it was possible to emphasize themes intended to be expressed by merchandise through different rhetorical relationships used in the Luoshan shadow creative merchandise.

Prior research suggested that design and rhetoric communicate information to each other through brand concepts familiar to designers and ethos familiar to rhetoricians (Engbers et al., 2013). The use of visual rhetoric in a product's form, colour, and material design could better convey the designer's design intent, facilitating an expression of its function and method of operation and better refining its image (Zhao & Yao, 2019). Unexpectedly, this study also showed that the impact of visual rhetorical structures (VRST) on such merchandising themes could vary depending on which designer was involved. Some informants argued that designers' styles, aesthetic concepts, and creative philosophies influenced their rhetorical structures in the Luoshan shadow creative merchandise design. Some designers may prefer a clean, modern style and favour using direct and clear rhetorical methods to express a design's theme and concept concisely. While other designers may prefer a more complex, layered style, they may use more rhetorical methods, such as metaphors and similes, to give more depth and substance to their designs. Perceptions of conceptualization outcomes may be influenced by what designers perceive as their cognitive style (Silk et al., 2021). For some respondents, each designer could bring different ideas and expressions to these Luoshan shadow creative merchandises through their unique rhetorical structure.

Moreover, the emphasis of visual rhetorical structures (VRST) on themes and stories emphasized in Luoshan shadow creative merchandise could be attributed to what it does through the use of various rhetorical approaches and expressions to convey specific

meanings and emotions. The themes of a merchandise are the core ideas, values, and emotions that the merchandise seeks to convey. Rhetorical structures could emphasize, highlight, and communicate these themes by choosing appropriate rhetorical approaches and modes of expression. To explain the meaning that users may derive from product design, an exciting source is to consider what elements of a work are and what rhetorical roles they may play. To capture an audience's interest, designers may sequence design elements chronologically or in story form (Durgee, 2003). This study found that by using rhetorical structures to emphasize themes and stories in Luoshan shadow creative merchandise, designers could link abstract concepts or emotions in themes and stories to concrete images, symbols, or concepts. These creative merchandises conveyed a sense of what has been described as "a set of ideas, assumptions, beliefs, values or interpretations of the world by which a culture or group operates" (Foss, 2004). Among them, the story of Luoshan shadow represented typical traditional Chinese culture and values: the importance of courage, wisdom, and solidarity, while also conveying a pursuit of justice, friendship, and faith (Fang, 2009). The findings from this study suggested that rhetorical structure could help designers emphasize, highlight, and communicate a product's theme by choosing the right rhetorical approach and mode of expression. Meanwhile, rhetorical structure played an essential role in the visual, idea, or creative expression of Luoshan shadow creative commodities so that users could better understand and feel the core concepts, values, and emotions a product tries to convey.

The special attention paid to rhetorical relations as a means of argumentation has only recently stood out (Labrador et al., 2014; Wildfeuer, 2018). As design may have important visual-rhetorical properties, a rhetorical structure usually provides clues about the 'structure' as understood by the user (Bateman et al., 2012). Therefore, the rhetorical

structure influenced the thematic expression of Luoshan shadow creative merchandise. Future research on how visual rhetorical structures influence creative merchandise themes in Luoshan shadow requires investigating participants' responses to such creative merchandise themes with different visual rhetorical structures (VRST).

5.3.3 Effect on Brand Image of Creative Merchandise

The findings supported what was expected regarding rhetorical structure affecting the brand image of the creative merchandise design of Luoshan shadow. Product design ideas should be consistent with a brand's positioning and image. The results of this study showed that rhetorical relationships could help brands shape their brand image and positioning through storytelling. A related literature review suggested that designers seek a dynamic between their graphic designers, audiences, and communicative content, repositioning graphic design within a rhetorical relationship that could convey the values and personality of those designs (Buchanan, 1992). Therefore, a convincing and engaging brand story of Luoshan shadow creative goods could be constructed by using rhetorical relationships, thus attracting consumers' attention, and establishing an emotional connection with them.

The brand would have a more profound connotation, which was more of a reflection of the individuality and character of a product. Whereas merchandise design should communicate the brand's values, personality, and target audience to enhance brand recognition and identity, it provided buyers with a means of identifying and specifying them (Murphy, 1992). Not surprisingly, branding involved both the personal aspect and symbolic aspects of a merchandise. Through design innovation and user interaction, it was possible to create product experiences that delight, satisfy, and emotionally resonated with

users. Because novelty affects how fantastic a product is, and coolness affects enjoyment value, which affects consumers' attitudes (Im & Lee, 2015). Research in rhetoric showed that one way in which design and rhetoric communicated information to each other was through brand concepts familiar to designers and ethos familiar to rhetoricians (Engbers, 2013). Similarly, the present study was conceptually consistent with research on the influence of visual rhetoric on product branding. This study found that rhetorical relationships could trigger consumers' emotional resonance with a creative merchandise brand of Luoshan shadow. Through skilfully using rhetorical relationships, brands could convey emotional messages and stimulate emotional resonance in consumers, thus enhancing their identification and loyalty to such creative merchandise brands.

Rhetorical relationships could also help establish an irreplaceable brand for the Luoshan shadow creative merchandise. The findings showed that designers increased users' sense of identity and emotional connection by telling stories about Luoshan shadow's history, heritage, and what lied behind its merchandise creation, as well as its connection to Luoshan shadow's cultural traditions and values, which in turn made such creative merchandise irreplaceable. Brands form powerful associations with one user, which created user adhesion. User stickiness is centred on the brand and builds user attachment and loyalty to the brand. Thus, using rhetorical relationships, brands could emphasize what was unique, advantageous, and valuable about such goods so that consumers recognized the difference between those brands and their competitors, enhancing their market competitiveness.

In short, the results of this study suggested that a brand could communicate specific brand values, cultural context, or personality traits of Luoshan shadow creative goods by

choosing appropriate rhetorical relationships, which could distinguish them from competitors in the marketplace. Furthermore, there is a need for future research on how rhetorical relationships contribute to the non-replaceability of these merchandise brands and how they enhance their marketing communications.

5.4 Effect of Visual Rhetorical Strategies on Luoshan Shadow Merchandise Design Results (Hypothesis 3)

Through the in-depth application of the theoretical framework, specific recommendations can be made for the creative merchandise design of Luoshan shadow puppet (LSP). These recommendations are derived from extensive research on relevant literature, in-depth thematic analysis, and the synthesis of insights gained from design practice. By integrating these approaches, robust suggestions are developed that are well-suited to the creative design of Luoshan shadow puppet merchandise. This part introduces how visual rhetorical strategies (VRSG) affect Luoshan shadow puppet merchandise design effects, including communication of symbolic meaning, enhancement of artistic aesthetics, establishment of brand image, enhancement of market competitiveness, and enhancement of user experience.

Visual rhetoric strategies (VRSG) provide a theoretical framework for transforming visual elements and symbols into effective information and emotional expression. In creative merchandise design, designers employ these strategies to understand and utilize images, colours, and forms, thereby enhancing the expressive power and appeal of such designs. This approach assists designers in conveying their design intentions accurately through semiotics and visual rhetoric methods, enabling the products to captivate the audience visually (Figure 5.3).

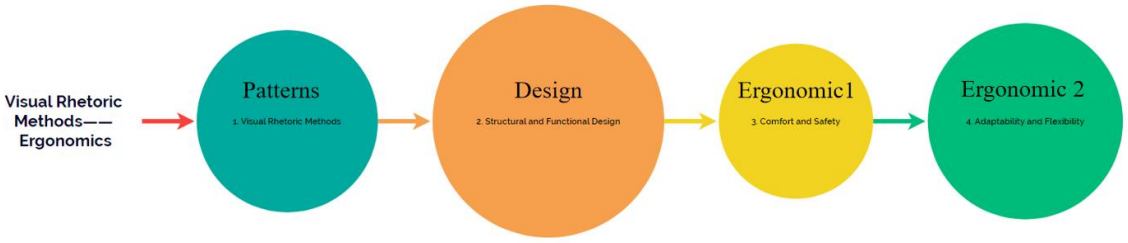


Figure 5.3: Aspects of Visual Rhetorical Methods Influence Creative Merchandising Design

As a traditional art form, Luoshan shadow puppet (LSP) possesses a unique visual language and rich cultural symbols. In creative merchandise design, integrating elements of Luoshan shadow puppet with contemporary design needs through visual rhetoric strategies allows designers to translate these traditional art elements into marketable merchandise. This design approach preserves the cultural essence of Luoshan shadow, making it more competitive in the modern market.

5.4.1 Effect on Ergonomics of Creative Merchandising

Current researchers highlighted the rhetorical function of design artefacts (Atzmon, 2010). The results of this study showed that visual rhetorical strategies (VRSG) could enhance the ergonomic efficacy of Luoshan shadow creative merchandise. Effective co-design methods required meaningful communication between the users and designers, and an ethic of dialogue could guide effective and ergonomic technical design methods (Salvo, 2001).

Moreover, ergonomics plays a vital role in combining products with user-friendly design and creating aesthetic values in products (Akita, 1991; Tosi, 2012). It was found that there is a relationship between visual rhetorical strategies and ergonomics of Luoshan shadow creative goods. It can improve the ergonomics of Luoshan shadow creative

commodities by designing and expressing visual elements. An emphasis on the importance of nature for industrial design as a project methodological practice of inspiring entities that are efficient from their user's functional-emotional point of view is made by resorting to a general conception of rhetoric in design (De Castro & Ins, 2010). Based on the results of this study, designer used visual rhetorical strategies, such as contrast and symbolism, to highlight and emphasize important information or functions in these creative merchandises, allowing users to quickly capture critical information and improve the efficiency of their use. On the other hand, rhetorical strategies provided solutions that addressed what users needed and expected while optimizing those creative merchandising designs for efficiency, comfort, and safety in a body's use.

Ergonomics studies how adaptations and interrelationships between the human body and the working environment affect a product's attractiveness. Some of the participants in this study suggested that visual rhetorical strategies (VRSG) could be used to optimize the ergonomics of Luoshan shadow merchandise via their products' size and scale design. Considering the differences in body size and proportions of different users, designing appropriately sized merchandise ensured that users could comfortably hold, operate, and use it. The designer's study of sensory principles could construct and generate possibilities for emphasizing phenomena in industrial product design. Literature by Zhao and Yao (2019) suggested using visual rhetoric in product design shapes to produce better morphological aesthetics and more efficiently communicate how a merchandise was to be used. Proper structure and visual appeal are just as important as the content itself, as thoughtful organization and design can help users find their product easy to use rather than burdensome (Jackson, 2000). Therefore, the ergonomics of Luoshan shadow creative

merchandise required designers to use visual rhetorical strategies (VRSG) to ease their users' use burden.

Another possible explanation was that visual rhetorical strategies (VRSG) could optimize a Luoshan shadow merchandise's ergonomics through an operational interface or structural layout. Reasonable arrangement of the position and spacing of these structures enabled their use to come naturally to a user, reduced unnecessary movement of one's hands or body, and improved the efficiency and comfort of their use. Once users have pleasantly used such goods, customers are more psychologically motivated to seek out the same brand (Qiu et al., 2017). The findings from this study were consistent with previous research on how visual rhetoric (VR) influenced its use in merchandise design and may stem from the fact that the design of Luoshan shadow merchandise also needed to focus on its user experience to enhance their satisfaction through visual rhetorical strategies (VRSG).

In short, what designers could do is to reduce users' discomfort in using Luoshan shadow creative goods and reduce their risk of fatigue or even injury by reasonably choosing the size, shape, and material of these design elements. Furthermore, selecting appropriate materials, textures, and surface treatments to provide goods with a comfortable feel and texture when touched improves both users' tactile experience and operational comfort (Zhao & Yao, 2019). This research showed that visual rhetorical approaches could optimize the ergonomics of Luoshan shadow merchandise and improve how efficiently, comfortably, and safely they are used by all users. Future research should maximize understanding of what goes into improving ergonomics by validating a different visual rhetorical strategy on a Luoshan shadow creative merchandise's ergonomics.

5.4.2 Effect on User Experience of Creative Merchandise

In this study of creative merchandise design based on visual rhetoric (VR) for Luoshan shadow puppet (LSP), the core concepts of visual rhetoric theory and its practical application in design are key focuses. visual rhetoric (VR) theory primarily concerns how to convey specific information and emotions through visual elements. Its core concepts include semiotics, image rhetoric, and visual narrative, which assist designers in understanding and utilizing images, colours, and forms to enhance the expressiveness of the design.

Designers analyse traditional visual elements of Luoshan shadow puppet (LSP), such as shapes, colour schemes, and patterns, and transform these elements into creative and culturally significant merchandise designs. This approach preserves the traditional artistic charm of Luoshan shadow puppet while innovatively attracting modern consumers' interest. Additionally, visual rhetoric theory emphasizes the interaction between images and viewers, encouraging designers to focus on the effectiveness of visual elements in the creative process to enhance the visual appeal and emotional resonance of the merchandise. Under this theoretical guidance, the design faithfully represents the traditional artistic features of Luoshan shadow puppet, employing innovative visual expressions to make the products more contemporary and market-competitive, thus achieving effective transmission and promotion of traditional culture.

The findings from the expert interviewed and validation supported the view that visual rhetorical strategies (VRSG) affected a user's experience of the Luoshan shadow creative goods. Previous research, for instance by Seliger (2014) argued that there was a power of visuals to trigger emotion and increase drama, which had attracted much interest

from psychologists, communication researchers, and designers. Visual rhetoric (VR) is used for persuasion in product design. Meanwhile, the rhetorical method could not be transmitted to other parties as intended by the designer, and communicating was not about conveying information but rather about giving them stimulus, and such stimulus also included an individual's distinctive personality.

Following is an explanation of a potential reason why visual rhetoric affected the users' experience discovery of Luoshan shadow puppet creative merchandise (LSPCM). The literature review survey indicated that visual rhetoric (VR) focused on studying issues of message visualization, which has unique communication attributes, as well as visual art expression (Hu, 2016). Visual rhetorical analysed of design work in terms of form, creation, and used complement existing research methods in visual culture studies and design theory (Atzmon, 2010). In this study, visual rhetorical strategies (VRSG) were one of the critical aspects of innovation and the use of creative merchandise in Luoshan shadow. Considering rhetoric provided a way to link theory - ideas about what the world is like and how we should live - more closely to practical action and the creation of various products and experiences (Buchanan, 2001). All the merchandise vividly illustrate how we should live our lives. Researchers used three rhetorical themes - iconic, emotional, and spiritual - to understand how products persuade and influence users (Ballard & Koskela, 2013). The user experience of Luoshan shadow creative goods could be affected by factors like those conceptualized above.

For example, a user experience of Luoshan shadow creative goods may be affected by specific rhetorical approaches, which leave meaning for consumer acceptance. This was because specific visual rhetorical approaches could better implant what was designed into

consumers' minds (Hu, 2016). This type of product design emphasized specific human characteristics through humorous rhetoric to enhance their reliability. Image-centered visual rhetoric could reflect objective facts or ideas more directly and communicate with their audience through a holistic and three-dimensional information network, especially in digital creative products, (Chen & Zhou, 2022). These indicated that Luoshan shadow creative commodities were both practical and emotional. The visual rhetoric "touched" them and evoked a sense of self. Design practices resonated with discourse in ways primarily driven by thoughtful rhetoric. It was easy to find designs that aimed to exhort or dissuade by using patterns of appeals designed to influence a user's response (Kelly, 2014). These equally affected a higher user experience of Luoshan shadow creative merchandise.

Using rhetorical strategies by designers could also enhance both the manipulation and usability of these goods. Emphasizing a key feature of Luoshan shadow creative goods through rhetorical strategies would make it easier for users to find and use these functions. For example, the researchers designed children's dinner plates using bright colours and a fish pattern to highlight critical areas. Indeed, creative products were designed with their users' needs and habits in mind, making them more natural and comfortable to operate (Zhang et al., 2013). More importantly, when designers used visual rhetorical strategies to design such creative merchandise, they could create creative merchandise with strong usability of Luoshan shadow to meet the needs and expectations of target users.

The results of this study showed that further research into how visual rhetorical strategies (VRSG) affected a user's experience with this type of merchandise was of great importance. Designers could use these strategies in a more targeted way to enhance the appeal, emotional resonance, visibility, and user-friendliness of what was being

merchandised, thus providing a better user experience. User experience practice is, at its core, a rhetorical endeavour (Rose & Tenenberg, 2016). In addition, users gathered rhetorical meaning by interacting with the material form of these design artefacts, which they also used to bring rhetorical messages to the artefacts (Atzmon, 2010). The visual-rhetorical approach gave an interactive character to what is expressed in design, allowing those who express it to engage in autonomous psycho-cognitive activities based on an empathetic visual-rhetorical pattern (Hu, 2016). As creative goods that relied heavily on the visual form of traditional elements, users could be delighted and satisfied by using visual rhetorical strategies (VRSG).

5.4.3 Effect on Creative Merchandise Aesthetics

The results of this study supported the idea that visual rhetorical strategies (VRSG) influenced the aesthetic effects of Luoshan shadow creative merchandise. Most participants supported this expectation. Designers could influence what was aesthetically appealing about the creative merchandise of Luoshan shadow by using appropriate visual rhetorical strategies to create unique, aesthetically pleasing designs with emotional expression and storytelling. As a three-dimensional image, product modelling takes on such roles as information transmission, emotional expression, and function carrying. It also faces such problems as representation strategies and persuasion techniques (Zhao & Yao, 2019). Besides that, the form has to be able to satisfy its users' aesthetic and emotional needs. The research findings showed that morphological aesthetics in Luoshan shadow creative merchandise design used visual rhetorical methods to shape the merchandise to produce better aesthetics. Furthermore, visual rhetorical design methods prescribed an overall operation, and there would be endless ways to express each rhetoric, giving designers plenty of space to be creative (Zhu, 2009). The results of this study showed that

visual rhetorical strategies (VRSG) could make Luoshan shadow creative goods aesthetically distinctive by creating unique design elements and visual effects. Designers could use various visual rhetorical techniques such as colours, patterns, and shapes to create a unique, creative, and aesthetically appealing design.

Visual rhetorical strategies (VRSG) affecting the aesthetics of Luoshan shadow puppet creative merchandise (LSPCM) may be attributed to its wide variety of rhetorical methods. It used design rules to associate the design artefact's form with a particular design effect. Design rhetoric attempted to capture how design techniques and final results were linked (Schneller, 2015). VRSG could connect the aesthetics of Luoshan shadow creative merchandise with users through design elements such as colours, patterns, and shapes and techniques such as composition and perspective. Some designers researched what visual tools were available and aimed to discover ideas to make the design solution as convincing as possible (Halstrøm, 2017). On the other hand, for these goods, users did not just buy them for use but in pursuit of individual-based aesthetic preferences and values. Such arguments led users to seek high-quality Luoshan shadow creative goods and superb craftsmanship. They appreciated careful design and craftsmanship in its details and the choice and processing of materials. Furthermore, users' pursuit of merchandise aesthetics was diversified, and different users had different preferences and values. Beyond simply making a merchandise more pleasing, product aesthetics could influence consumer inferences about functional attributes (Crolic et al., 2019). This explained why designers needed to pay attention to what was aesthetically appealing about these creative goods and why VRSG could influence the aesthetic of LSPCM.

Moreover, the visual rhetoric strategy could enhance the aesthetic value and artistic power of Luoshan shadow creative commodities by designing and expressing visual elements. Durgee (2003) and Zhao (2019) had similar views. Their studies showed the relevance of visual rhetorical strategies to the aesthetics of merchandise design. Durgee (2003) found that visual design was understood as a rhetorical process and seek ways to improve effectiveness. Designers could create a harmonious, balanced, and aesthetically attractive visual experience by using the visual elements of Luoshan shadow, enhancing what was aesthetically pleasing about these creative goods. Interviews and creative merchandise design practice showed that visual rhetorical strategies (VRSG) could create a sense of beauty and harmony by carefully matching design elements such as colour, pattern, and shape. These rhetorical strategies could better refine a product's image and increase its aesthetic value and emotional attributes (Chen & Zhou, 2022; Zhao & Yao, 2019). Furthermore, the visual rhetorical strategies (VRSG) designers use could be understood as an iterative process: testing new rhetorical techniques' effectiveness during a design process. Scholars focused on the use of merchandise as a means of communicating information to an end user. Design processes and final merchandise became expressions of aesthetic concepts (Joost et al., 2006). The results of this study showed that designers could use such principles as colour theory, proportion and contrast, and such effects as visual balance and fluidity to make Luoshan shadow creative merchandise aesthetically uniform, harmonious, and beautiful.

Using rhetorical strategies to enhance an aesthetic effect also involved both visual and tactile, auditory, emotional experience and cultural significance in many aspects of Luoshan shadow creative goods. Designers should be able to work in innovative ways to fulfil a variety of aesthetic elements related to creative goods that require thought, such as

pattern, sound, image, material, and process innovations (Hao, 2021). These aspects could increase such creative goods' interest, vividness, and artistry, making them more attractive and unique.

Conclusively, rhetorical patterns are part of a designer's creative approach, providing proven solutions to design problems and tasks (Joost et al., 2006). The significance of visual rhetorical strategies (VRSG) is to create design work that is attractive, unique, and emotionally resonant (Zhu, 2009). These strategies can help designers focus a user's attention and create visual impact, delight, and emotional resonance with users (Han, 2022). The findings from this study showed that designers could enhance the aesthetic effect of such creative goods by using visual rhetorical strategies (VRSG) appropriately and making them more attractive and distinctive, thus increasing users' liking and willingness to buy.

5.4.4 Effect on Communication of Creative Merchandise

The purpose of visual rhetoric (VR) is to bring the communication message to be noticed by its readers and to achieve maximum comprehension and acceptance. As a result, issues of its effectiveness have been a critical focus of research throughout the theoretical framework of visual language (Hu, 2016). Various rhetorical patterns affected design works and their use in specific situations, making them humorous and easy to understand, enhancing their quality, and persuading users in their communication (Chen & Zhou, 2022). Also, it could convey the brand's personality, values, and style through visual design and presentation, which allows an audience to perceive and emotionally resonate with it (Han, 2022). According to Feng (2003), it was crucial to use appropriate rhetorical strategies to maximize the effectiveness of advertisements and product communication because visual

rhetoric is the technique and method of selecting and configuring various visual components used in communication to maximize its effect.

For Luoshan shadow creative merchandise operators in today's competitive creative merchandise market, establishing an attractive brand image is the key to standing out in a competitive market. To increase brand awareness and merchandise sales, operators must develop effective brand-building and marketing strategies, including positioning, promotion channels, and publicity campaigns. McQuarrie & Phillips (2016) used classic rhetoric to illuminate what is relevant to merchandise and visual branding. However, if designers are to master the full range of rhetoric, they could not ignore the development of new products and brands. It was clear that the brand resorted to emotional appeals characterized by moral solid and social overtones (Mangiò et al., 2021). Brands were adapting their advertising and communications efforts to a large extent to maintain resonance and engage their users. One way in which design and rhetoric communicate with each other was through brand concepts familiar to designers and ethos familiar to rhetoricians (Engbers, 2013).

Visual rhetorical strategies (VRSG) could create visuals that connected with target users based on their aesthetic preferences. Product design could implicitly make certain statements and set a symbolic tone (Durgee, 2003). This was because different rhetorical strategies could give different communication effects to a design work. For example, association-type rhetoric connected the logic of a firm's existing markets to its emerging markets (Lee & Paruchuri, 2008). Product design relied on various vocabularies to provide various means of expression (Lu, 2011). Using these visual rhetorical patterns in design could more graphically conveyed what emotions and meanings were contained in the

content of a work. When a design evoked emotional resonance in users, it subconsciously reduced their resistance and thus impacted them from awareness to action. This study found that by connecting with target users, Luoshan shadow creative merchandise could better attract their interest and attention and improve communication.

In addition, visual rhetorical strategies (VRSG) provided a more complete path for communicating Luoshan shadow creative goods. The rationale of Li et al. (2022) was that visual elements and design could be used to communicate the message and value of a product, allowing it to be better integrated with cultural concepts, designer creativity, user needs, and marketing. Designing exciting and compelling social media and digital marketing content through rhetorical techniques such as images and symbols, contrast, and repetition are used to attract users' attention and engagement. Images and symbols are intuitively expressive and symbolic, which can enhance the visual impact and emotional resonance of these creative merchandise communication messages by selecting appropriate images and symbols. A complete path for communicating creative merchandise of Luoshan shadow is available through visual rhetorical strategies (VRSG). It has an impact on conveying their message and improving the effectiveness of communication.

In conclusion, this study showed that visual rhetorical strategies (VRSG) have a multifaceted impact on product brand positioning and market competitiveness, which could bring significant influence and competitive advantage to the brand of Luoshan shadow creative merchandise through brand storytelling, emotional resonance, brand personality and voice, and enhancement of market communication effects. Applying rhetorical knowledge and system to a design process allowed for a fundamental understanding of the leading forces between designers, media, and users (Joost et al., 2006).

This is why visual rhetorical strategies (VRSG) can enhance the communication effect of this type of goods and improve brand awareness and merchandise recognition.

5.5 Summary

This chapter restates the aim of this study, focusing on the results and discussion arising from the data collected and analysed, and discusses those findings explained in Chapter Four. The results of this study show that visual language rhetoric is a modification of the visual language of Luoshan shadow creative merchandise, enabling a more precise and vivid visual display of the designer's intention. As described in this chapter, through this research, there is an opportunity to develop a process of innovative design of creative merchandise for the Luoshan shadow that accompanies current times. Visual rhetoric can help Luoshan shadow creative goods succeed in the marketplace and achieve sustained development and growth. It will give such creative merchandise design a broader development prospect if properly applied.

This chapter is subdivided into five sections and provided a detailed discussion of the study findings. The first section is an introduction of this chapter. The second section discussed the impact the visual rhetorical situations have on the design individualization, elements, and style of Luoshan shadow creative merchandise. In the third section, the effect of visual rhetorical structures (VRST) on the design thinking of Luoshan shadow creative merchandise is discussed, including establishing visual hierarchy, emphasizing themes, brand image, and market competitiveness. The fourth section discusses the impact of visual rhetorical strategies on the ergonomics, user experience, aesthetic effect, and communication effect of Luoshan shadow merchandise.

CHAPTER 6

CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

Rhetoric is gradually being applied to and is starting to play an increasingly significant role in various artistic disciplines. This research introduces the theories on visual rhetoric (VR) into Luoshan shadow puppet creative merchandise design (LSPCMD), allowing a broader development prospect for these merchandise designs.

This chapter summarizes the findings of this study. This chapter consists of four main sections: i) summary of findings; ii) implications of the findings; iii) recommendations of this study; and iv) limitations and directions for future research.

6.2 Summary of Findings

The aim of this study is to enhance the comprehensive quality of existing Luoshan shadow puppet creative merchandise (LSPCM) with a visual rhetorical approach. Designing these creative goods is a complex task that requires a process of design, production, and marketing, yet such goods are now considered deficient in innovation. Visual rhetorical strategies are practical tools to help designers enhance the innovation and effectiveness of such goods. Through the rational use of visual rhetorical strategies (VRSG), designers can enhance the appeal, recognition, emotional expression, and resonance of Luoshan shadow creative goods, increase their storytelling, and sense of plot, and enhance their artistry and creativity.

The main objective of this study was to determine the reasons and effective strategies for integrating visual rhetoric (VR) into the development of creative merchandise

based on Luoshan shadow puppet elements. To achieve this objective, this research integrated existing theories from the perspectives of visual rhetoric context, visual rhetoric structure, and visual rhetoric patterns, examining the necessity of employing visual rhetoric (VR) in such creative merchandise. The research explored a framework for the development of marketable Luoshan shadow puppet creative merchandise (LSPCM). This study provided empirical evidence to explain how VR influenced the LSPCM.

Delving into the first objective, the thematic analysis identifies Luoshan shadow puppet (LSP) elements as significant cultural resources for developing creative merchandise. These elements possess unique artistic forms and reflect a profound local culture and historical background. In the process of developing creative merchandise, these traditional elements can infuse the merchandise with distinctive cultural flavour and visual appeal, making them stand out in the market. The study further recognizes that the effective application of Luoshan shadow elements can enhance the cultural identity of the merchandise and facilitate the modernization of traditional art, meeting consumer demands for cultural depth and personalization. Therefore, the strategic integration of Luoshan shadow puppet elements is crucial for creating creative merchandise with cultural value and market competitiveness.

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application of Luoshan shadow puppet elements could enhance the cultural identity of the merchandise and facilitate the modernization of traditional art, meeting consumer demands for cultural depth and personalization. Therefore, the strategic integration of Luoshan shadow puppet elements was crucial for creating creative merchandise with cultural value and market competitiveness.

The third objective of this study was to find ways to develop creative merchandise for Luoshan shadow puppet (LSP) by incorporating visual rhetoric (VR) through design practice and analysis. To achieve this objective, the study began with detailed design practices that explored how to effectively integrate Luoshan shadow elements with visual rhetoric strategies (VRSG). This included the use of rhetorical devices in visual rhetoric (VR), such as symbolism, metaphor, and hyperbole, to develop innovative designs for traditional shadow art. In the design practice, various approaches were tried to integrate these rhetorical devices and evaluate their actual impact on the creative merchandise. Through these practices, the study identified several effective methods, including redesigning the shape of the shadow puppets to enhance their modernity, using the contrast of colours and patterns to boost their visual impact, and conveying the deeper meaning of traditional culture through symbolic elements. These methods not only allowed the Luoshan shadow elements to be fully represented in creative merchandise but also ensured that the merchandise appealed to the interests and needs of modern consumers.

6.3 Contribution to Research on Creative Merchandise Innovation

The main goal of this study is to establish a method to enhance the comprehensive quality of Luoshan shadow puppet creative merchandise (LSPCM) through visual rhetorical strategies (VRSG). The literature review and theoretical frameworks suggest that

only some studies have used visual rhetoric strategies in Luoshan shadow creative goods to enhance their quality. This study provides a new design approach. Contributions to the innovative and iterative development of such creative goods are obtained through research results using mixed research methods. The design approach is practical for such goods regarding uniqueness, innovation, and communication.

i) Contribution to research on methods of Luoshan shadow puppet creative merchandise design

This study engages in the innovative design of Luoshan shadow creative merchandise through visual rhetoric (VR). Moreover, the design method aims to increase the market attractiveness and competitiveness of Luoshan shadow creative merchandise. Through the creative use of visual rhetoric (VR), designers can break the traditional design framework and create distinctive Luoshan shadow creative merchandise to attract consumers' attention and interest. Visual rhetoric-based design aims to provide designers with an effective way of designing merchandise that conveys information, attracts attention, enhances brand image, creates an emotional connection with their users, and enhances their experience.

The design methodology covers three themes and offers a variety of design strategies to guide designers in expanding their thinking and creativity. These methods can help designers challenge traditional thinking patterns and create unique, creative, and expressive goods. In this study, the researcher searches for their intrinsic connections and essential differences through the intersection of literary and visual rhetoric. Then, an in-depth analysis of their design elements, design principles, and expression methods is carried out according to what is unique about the language of Luoshan shadow creative

goods to provide new paths and methods for the design and innovation practice of this kind of creative goods.

ii) Contribution to the study of communication effects of Luoshan shadow creative merchandise

Most creative goods need effective communication. The application of visual rhetoric (VR) can solve the problems faced in Luoshan shadow puppet creative merchandise design (LSPCMD) so that such merchandise will meet the current consumer demand and communicate both merchandise and traditional culture effectively. As emphasized in chapter 4 of this paper, visual rhetoric (VR) plays a vital role in the communication of Luoshan shadow creative goods. A clever use of visual elements and design strategies allows designers to capture the users' interest, convey the culture of Luoshan shadow, build a brand image, and convey the characteristics and story of a merchandise.

6.4 Recommendation

This study focuses on how visual rhetoric (VR) enhances the positive effects of Luoshan shadow creative merchandise. Although this study has some limitations, it still provides some suggestions for the innovative design of these goods. The recommendations include the following: (a) highlighting the characteristics of traditional shadow, (b) creating visual impact, (c) considering the user experience, and (d) sustainability.

(a) Highlighting the characteristics of traditional shadow

Luoshan shadow creative goods current design and comprehensive quality are low; their popularity could be better than similar goods. Typical images, lines, patterns of

Luoshan shadow, and traditional colours and textures are used in these creative merchandises to make them more in line with the theme of this art. In addition, highlighting the unique characteristics and artistic style of Luoshan shadow makes these creative merchandises distinctive and attracts much attention from consumers. Therefore, this can be achieved by using typical elements, traditional colours and textures, hand-crafted textures, storytelling design combining innovation and tradition, and providing a unique style of Luoshan shadow for creative merchandise.

Luoshan shadow creative commodities with high overall quality and highlighting the shadow characteristics are more competitive than low-quality goods. It is widely recognized that highlighting the characteristics of traditional shadow is beneficial to this type of merchandise design, as it can differentiate it from other competitors in the marketplace. Furthermore, highlighting what makes a traditional shadow a great merchandise can add value to a product. Consumers are usually willing to pay higher prices for merchandise with unique cultural values, which can improve the market positioning and profit margins of goods.

(b) Creating visual impact

Luoshan shadow creative merchandise should have its unique visual impact. In Luoshan shadow puppet creative merchandise design (LSPCMD), designers can use vivid colour contrasts, exciting shapes, and unique compositions to make their designs more attractive and unique. Visual rhetoric (VR) can provide innovative approaches and theories for these types of goods and an understanding of how visual elements can enhance their appeal and uniqueness for designers to expand their thinking.

Visual rhetorical strategies can help designers shape the brand image of Luoshan shadow creative goods. Therefore, designers can create a distinctive brand image through unique visual expression, making Luoshan shadow creative goods recognizable and memorable in the market. For a competent designer, this can be excruciating due to a lack of creative ability or knowledge of the subject matter. It could result in a design that is not visually appealing to the merchandise. Visual rhetoric as an innovative technique and theory can help designers overcome these difficulties and provide creative inspiration.

(c) Considering the user experience

Visual rhetoric is concerned with what looks good and should also consider the user experience. It needs to focus on the practicality and convenience of a product in Luoshan shadow creative merchandise design. A reasonable layout, easy-to-use functional design, and humanized detailing can enhance user experience and satisfaction. Moreover, many users will focus on the traditional characteristic experience of the Luoshan shadow. Therefore, it is crucial to maintain the traditional features and unique charm of the Luoshan shadow in all designs. Users usually buy these kinds of goods to experience traditional culture and art, so designers should try to retain the traditional elements, such as the image, colour, and texture of Luoshan shadow, so that users can feel the authentic culture.

Although it is essential to maintain traditional features, designers can combine Luoshan shadow puppet (LSP) with modern elements to create unique and creative designs. As a traditional handicraft, the quality and craftsmanship of Luoshan shadow are essential. Designers should cooperate with production artisans to ensure that the quality and craftsmanship of Luoshan shadow creative merchandise achieve high standards. This will

increase users' satisfaction with what they are getting and allow for better transmission and preservation of this traditional craft.

Designers can provide relevant educational and interactive experiences through merchandise design, allowing users to gain a deeper understanding of the stories and techniques of Luoshan shadow puppets. For example, relevant stories and introductions can be added to the packaging or descriptions of these goods, or some interactive goods can be designed so that users can participate in creating Luoshan shadow. As a matter of course, it is also one of the critical contents of future research to establish an excellent after-sales service system, respond to users' questions and feedback promptly, and solve users' doubts and confusions. This is because good after-sales service can increase users' trust in goods and brands.

In conclusion, Luoshan shadow's creative merchandise design's user experience needs to maintain its traditional characteristics while combining innovation with modern elements and focusing on quality and craftsmanship.

(d) Sustainability

Luoshan shadow creative merchandise must be sustainable, using renewable materials, extended lifespan, and optimized craftsmanship. Designers should consider recycling and reuse of products during the design process. Meanwhile, users are encouraged to participate in product recycling and reuse to establish a closed-loop circular economy system. Furthermore, designers need to consider its durability and ease of maintenance to prolong the life of a good. In addition, the production of such goods requires an optimized production process. Upcoming research will analyse how the production process works to identify and improve where resources are wasted. Continued

attention will be paid to optimizing the process steps for creative merchandise of Luoshan shadow and reducing energy consumption and waste generation in the production process.

6.5 Limitations and Direction of Future Research

Although this study provides some evidence that is important for further research on how visual rhetoric (VR) influences the Luoshan shadow puppet creative merchandise design (LSPCMD). There are some areas that seem to be primarily interesting as potential future research.

The first limitation of this study is a limitation of the interview sample. Considering the purpose of this study, the researcher mainly selects interview participants from Xinyang city, Henan Province, and questionnaire participants from several provinces in China. While these samples help examine visual rhetoric's impact on these goods, they may limit the scope of claims against specific populations. As Luoshan shadow puppet (LSP) is a traditional Chinese art form, its audience and users may have specific backgrounds and characteristics. Sample selection is limited to a specific group of people and may not provide a comprehensive understanding of the needs and preferences for Luoshan shadow creative merchandise design. This may limit designers' innovation in these creative merchandise design.

This second limitation of this study is that it emphasizes a mixed research methodology. Mixed research methods involve different data collection and analysis methods and require more research design and operational steps. Mixed research methods have an advantage in obtaining comprehensive and in-depth findings but also have some limitations. Because it is too cumbersome, resulting in increased complexity of this study, more time and resources are needed to complete it. Besides that, mixed research methods

require integrating and interpreting both qualitative and quantitative data. This requires a high level of data analysis and interpretation skills for the researcher to ensure that integration results are reasonable and reliable. Integrating and interpreting different types of data can be a challenge for researchers. A mixed research approach combines different theories and methods to answer research questions. However, there may be mismatches between different theories and methods, which may compromise the consistency and reliability of research results. The researcher needs to maintain consistency throughout the research process and ensure that there is a match between theory and methodology. Follow-up studies will allow for more in-depth exploration of the findings of this study to explore unexpected findings.

The third limitation is that the design practice is only a single merchandise type. Engaging in multiple merchandise design practices over time is worthwhile to consider what visual rhetoric can do. This study further enables designers, through practice, to gain a deeper understanding and application of visual rhetoric theories to improve creativity and expression in design while identifying and solving problems and challenges in practical design. This helps designers improve their designs' quality and effectiveness and provide more appropriate visual rhetorical strategies for suitable types.

The last limitation is the cultural context limitation. Luoshan shadow puppet (LSP) is a traditional Chinese art form, and its creative merchandise design research is mainly focused on the Chinese market and cultural background. This may limit the applicability and replicability of the findings to cover other cultural backgrounds and market needs. In addition, the localization of this study sample may result in limited representatives of its findings. For this reason, future research could fully account for different cultural

backgrounds and needs of a target market during their design process, balancing traditional cultural connotations with commercialization needs to ensure that the designed goods are understood and accepted in different cultural contexts. Meanwhile, challenges and issues arising from the constraints of cultural backgrounds are addressed in collaboration with stakeholders and practitioners.

6.6 Summary

This chapter concludes this study on Luoshan shadow creative merchandise design (LSPCMD) with the primary purpose is to determine how applicable visual rhetoric (VR) is in this type of design.The chapter is divided into six sections. The first part is an introduction. The second part is the summary of findings. The third part is a research contribution to creative goods innovation. The fourth section provides suggestions for future research. Part five covers the limitations and directions of this research.

The contribution of this study to the research of Luoshan shadow puppet creative merchandise (LSPCM) is twofold, i.e., expanding on the innovation of design methods and communication effects of these creative merchandise. Furthermore, the researcher proposes recommendations for this study, which are essential for visual rhetoric (VR) to improve Luoshan shadow creative merchandise design. Meanwhile, the researcher summarizes the study limitations, including sample limitations, research methodology limitations, design practice limitations, and cultural background limitations. Some of these areas are primarily interesting and will be used as potential future research.

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APPENDICES

Appendix A: Journal Publications

1. Xu, T**.**, & Shanat, M. B. H. (2023). Exploring the digital creative product design of Luoshan shadow based on Non-Fungible Tokens. *Art and Society*, *2*(3), 17-24.
2. Xu, T., & Shanat, M. B. H. (2023). A study of the problems of Luoshan shadow puppet creative product design. *Highlights in Art and Design*, *2*(3), 90-93.
3. Cheng, H., Xu, T. & Jiang, X. (2023). Reconstruction of Luoshan shadow communication in the context of cultural transformation. *Art and Performance Letters*, *4*(7).
4. Xu, T. & Jiang, X. (2022). On modern aesthetic diversion of Luoshan shadow play cultural and creative products. *Probe - Media and Communication Studies*, *4*(3).
5. Xu, T., Shanat, M. B. H., Le, B. C. K., & Zhang, W. (2023, July). Design of Modeling Elements of Luoshan Shadow Puppets Creative Goods Based on Deep Learning. In *2023 5th International Conference on Applied Machine Learning (ICAML)* (pp. 463-467). IEEE.
6. Xu, T**.**, & Shanat, M. B. H., Chen, J., Zhou, B, & Zhao Q. (2024). Virtual reality technology: An essential way of remediation for Luoshan shadow puppet. *EnCon2024*.
7. Xu, T., & Shanat, M. B. H. (2024). Visual rhetoric: An alternative method of designing Luoshan shadow creative products. *Humanities, Arts and Social Sciences Studies*, 145-157.

Appendix B: Information on Participants in Interviews

Table B.1: List of Participants

No.	Name	Occupation	Agency	Province	Category
01	Jian Chen	Desiger	Yunlong Packaging Company	Henan	A
02	Huan Cheng	Academia	Xinyang College	Henan	B
03	Changmei Du	Academia	Xinyang College of Agriculture and Forestry	Henan	B
04	Jinyun Huang	Corporate staff	Xinyang Bieyun Design Company	Henan	C
05	Xiaoxiao Ji	Academia	Xinyang College	Henan	B
06	Xiaofan Jiang	Desiger	Xinyang Beiyun Design Company	Henan	A
07	Manni Li	Academia	Xinyang College	Henan	B
08	Ke Lu	Academia	Sias University	Henan	B
09	Zixia Lv	Academia	Xinyang College	Henan	B
10	Lianqing Zhang	Academia	Xinyang College	Henan	B
11	Wujun Tang	Academia	Guangxi Normal University	Guangxi	B
12	Qinge Zhang	Desiger	Yunlong Packaging Company	Henan	A
13	Wei Zhang	Academia	Xinyang College	Henan	B
14	Hanyu Liu	Desiger	Yunlong Packaging Company	Henan	A
15	Changyun Chen	Academia	Xinyang College	Henan	B
16	Wenjin Xu	Academia	Luoyang Normal University	Henan	B
17	Xuetao Liu	Desiger	Zhenguo Design Company	Shandong	A
18	Xiaoli Zheng	Academia	Rizhao Vocational and Technical College	Shandong	B

Table B.1 continued

19	Ying Dong	Academia	Xinyang College	Henan	B
20	Kai Xie	Academia	Xinyang College	Henan	B
21	Jiabing Su	Corporate staff	Jingchuang Decoration Design Studio	Henan	C
22	Liuyang Shi	Desiger	Jingchuang Decoration Design Studio	Henan	A
23	Rong Xie	Academia	Xinyang College	Henan	B
24	Jun Xiang	Academia	Xinyang College	Henan	B
25	Gang Li	Academia	Jiangxi University of Finance and Economics	Jiangxi	B
26	Yuan Huang	Desiger	Yining Graphic Design Studio	Hubei	A

Table B.2: Participant Frequency Analysis (Source:Author)

Frequency analysis results				
	Choice	**No.**	**(%)**	**Cumulative percentage(%)**
Gender	Female	15	57.69	57.69
	Male	11	42.31	100.00
City	Anyang	1	3.85	3.85
	Fuyang	1	3.85	7.69
	Guilin	1	3.85	11.54
	Luoyang	1	3.85	15.38
	Rizhao	1	3.85	19.23
	Weifang	1	3.85	23.08
	Xinyang	16	61.54	84.62
	Zhengzhou	3	11.54	96.15
	Zhumadian	1	3.85	100.00
Occupation	Corporate staff	2	7.69	7.69
	Designer	7	26.92	34.61
	Academic	17	65.39	100.00
Age	27.0	1	3.85	3.85
	28.0	1	3.85	7.69
	29.0	2	7.69	15.38
	30.0	3	11.54	26.92
	31.0	4	15.38	42.31
	32.0	1	3.85	46.15
	33.0	2	7.69	53.85
	34.0	1	3.85	57.69
	35.0	2	7.69	65.38
	37.0	2	7.69	73.08
	38.0	3	11.54	84.62
	39.0	3	11.54	96.15
	42.0	1	3.85	100.00
Education	Master	19	73.08	73.08
	PHD	3	11.54	84.62
	Undergraduate	4	15.38	100.00
Total		26	100.0	100.0

Appendix C: On-line Semi-Structured Questionnaire

Structured Interview Outline Design

1. Essential Information

Questions:

1) Please briefly describe your educational and professional background and how you got involved in designing creative merchandise for Luoshan shadow?

2) What is your work experience in Luoshan shadow creative merchandise design? What specific projects have you worked on?

Record Form

Name		**Occupation**	
Major		**Agency**	
Age		**Design practice**	

2. About the Current Situation of Luoshan shadow Creative Commodities

Questions:

1) Please introduce the history and traditions of Luoshan shadow puppets and how it has developed in modern times.

2) As a traditional art form, how well known is Luoshan shadow puppetry in the local and international markets? What are the main audience groups?

3) What are the types and characteristics of Luoshan shadow creative merchandise?

4) What is the production process of Luoshan shadow creative merchandise? Are there any special skills and techniques involved?

5) What are the sales channels of Luoshan shadow creative commodities? How do they perform in the on-line and off-line markets?

6) Are there any challenges and difficulties, such as market competition, material supply or inheritance issues, that have affected the development of Luoshan shadow creative merchandise?

Record Form

3. About the method of designing creative merchandise for Luoshan shadow puppets

Questions:

1) What are the sources of inspiration and creativity behind the design of Luoshan shadow creative merchandise?

2) When designing Luoshan shadow creative merchandise, how to maintain a balance between traditional cultural characteristics and modern aesthetics?

3) Will the design process of the creative merchandise incorporate elements of local culture, history or stories? If yes, can you provide some examples?

4) Are there any special design tools or techniques, such as computer-aided design (CAD) or hand-drafting, for designing Luoshan shadow creative merchandise?

5) What is the process of designing such merchandise?

6) Are environmental protection and sustainability principles emphasised in the design? Have any measures been taken to minimise the environmental impact?

Record Form

Inspirations	Design Objectives	Design Tools	Design Process

4. Regarding the impact of visual rhetoric on Luoshan shadow creative merchandise

Questions:

1) What role does visual rhetoric play in Luoshan shadow creative merchandise? How does it enrich and enhance the visual appeal of the product?

2) How does visual rhetoric interact with the artistic elements of traditional Luoshan shadow to create more contemporary merchandise?

3) Are there any special design techniques or principles, such as contrast, repetition, alignment, etc., used to emphasise the visual appeal of Luoshan shadow creative merchandise?

4) Are there any special materials or textures used in the Luoshan shadow creative merchandise to increase the tactile experience and visual effect?

5) How does visual rhetoric help Luoshan shadow creative goods stand out in the market? How do they compare with competitors' products?

Record Form

Role	Visual Rhetorical Methods	Rhetorical Elements	Rhetorical Effect

5. Other Questions

1) In visual rhetoric, how can simplicity and complexity be balanced to ensure that Luoshan shadow creative merchandise is attractive without being overly complex?

2) How can visual rhetoric be used to emphasise the unique selling point or value proposition of creative merchandise?

3) Have modern tools such as digital technology or virtual reality been used to enhance the visual effect in the design of Luoshan Shadow Creative Merchandise?

4) How does visual rhetoric have different impacts in different product categories? How does it adapt to different market needs and trends?

Record Form

Appendix D: Picture Gallery

The following photos were taken during a study tour in Xinyang to better understand the characteristics of Luoshan shadow.



















Appendix E: Questionnaire 1

Luoshan Shadow Creative Merchandise Design Base on Visual rhetoric

Participant Information:

Xu Taotao is taking his PhD studies at the Faculty of Applied and Creative Arts, Universiti Malaysia Sarawak. His PhD research entitled: Designing creative merchandise based on Luoshan shadow puppet elements through visual rhetoric theory.

Objectives of Research

a.This study will investigate the challenges and types of creative merchandise production based on Loshan shadow puppet elements.

b.To measure visual rhetoric impacts in creative merchandise based on Luoshan shadow elements.

c.To propose a new design approach to creative product based on the Loshan shadow puppet elements through visual rhetoric.

What your participation will involve in this study

It will take you approximately 10 to 15 minutes to complete the questionnaire and please remember to complete all the questions. Please return the questionnaire to the researcher once it has been completed. Once you have completed the questionnaire please click on close and the system will automatically receive the questionnaire.

Notice to participants

The survey is conducted on an anonymous basis and the responses are not right or wrong. We also declare that the data collected in this survey will be used for academic research purposes only and will only be handled by professional researchers related to this topic for overall statistical analysis and will not involve any specific individuals or units.

For further details

If you are interested in this research topic and would like to know more about it, you can contact us, and we will be pleasure to share the results of this research with you. Contact: unimas2021@126.com.

If you have any complaint about this study or the results, please do not hesitate to contact the CGS office at Universiti Malaysia Sarawak, 94300 Kota Samarahan, Sarawak, Malaysia. You can contact: 082-582409/ 2436 / 2441.

If you are interested in our research topic and would like to know more about it, you can contact us, and we will be pleasure to share the results of this research with you. Contact email: unimas2021@126.com.

Thank you very much for taking the time to read the information brief and we sincerely appreciate your enthusiastic participation.

1. Which gender are you? *

○Male ○Female

2. What is your age? *

○under 25 years old ○26-30years old ○31-35 years old ○36-40years old

○41-45years old ○46+ years

3. What is your highest education attainment? *

○Primary ○High school ○Diploma ○University degree

○Postgraduate ○Others

4. Number of years you have worked： *

○1-5years ○6-10years ○11-15years ○16-20 years ○More than 21 years

5. What is your occupation?*

○Individual households ○Students ○Corporate employees ○Institutional and career staff ○Not in regular employment or not working

6. What is your favourite style of creative merchandise design？ *

○Modern style ○Classical style ○Contemporary style ○Expressionist style ○Craft style

○Others _____

7. Which of these is your favourite type of Luoshan shadow creative merchandise? *

○Electronic products ○Handicrafts ○Household goods ○Postcard book category ○Tourist souvenirs

○Others _____

8. Would you be willing to buy a creative merchandise about the shadow of Luoshan if it were available? *

○Yes ○No ○Others _____ *

9. If conditions permit, which is purpose when you purchase of Luoshan shadow creative merchandise? *

○Spreading traditional culture ○Access to learning knowledge ○Keep as a souvenir for yourself ○For family and friends ○Others _____

10. What is your acceptable unit price for the creative merchandise of Luoshan shadow puppets? （Prices here are in United States dollars） *

○Under $20 ○$21-50 ○$51-80 ○$81-110 ○$110-140

○More than $140

11. How do you feel about the characteristics of Luoshan shadow creative merchandise?*

	Not at all agree	Less agree	Neutral	Agree	Very agree
The origin of the product is unique	○	○	○	○	○
The cultural connotations contained in the product are distinctive	○	○	○	○	○
Products with distinctive appearance and shape	○	○	○	○	○
Products with a distinctive production process	○	○	○	○	○
The materials used to make these products are distinctive	○	○	○	○	○

12. How do you feel about the current design of Luoshan shadow creative merchandise?*

	Not at all agree	Less agree	Neutral	Agree	Very agree
Backward style	○	○	○	○	○
No character	○	○	○	○	○
Poor quality	○	○	○	○	○
Not ergonomic	○	○	○	○	○
Lack of materials	○	○	○	○	○
High prices	○	○	○	○	○

13. How do you feel about design factor of Luoshan shadow creative merchandise?*

	Not at all important	Less important	Neutral	Important	Very important
Colour	○	○	○	○	○
Material	○	○	○	○	○
Shape	○	○	○	○	○
Video	○	○	○	○	○
Sound	○	○	○	○	○

14. How important is following factors affect your decision before purchasing these goods *

	Not at all important	Less important	Neutral	Important	Very important
Price	○	○	○	○	○
Aesthetic	○	○	○	○	○
Ergonomic	○	○	○	○	○
Brand	○	○	○	○	○
Sentimental value	○	○	○	○	○
Function	○	○	○	○	○

15. What is the best materials in the future for the Luoshan shadow creative merchandise? *

	Not at all favourite	Less favourite	Neutral	Favourite	Very favourite
Plastic;	○	○	○	○	○
Wooden	○	○	○	○	○
Ceramic	○	○	○	○	○
Metal porcelain	○	○	○	○	○
Composite materials	○	○	○	○	○

16. Have you considered the role of design methods before you buy these creative items? *

	Not at all important	Less important	Neutral	Important	Very important
Exaggerated	○	○	○	○	○
Gradual change	○	○	○	○	○
Reorganisation	○	○	○	○	○
Association	○	○	○	○	○
Symbolic	○	○	○	○	○
Formal aesthetic rule	○	○	○	○	○

17. Do you think the element of design is important for luoshan shadow creative goods? *

	Not at all important	Less important	Neutral	Important	Very important
Form	○	○	○	○	○
Shape	○	○	○	○	○
Line	○	○	○	○	○
Colour	○	○	○	○	○
Texture	○	○	○	○	○
Size	○	○	○	○	○
Space	○	○	○	○	○

18. Do you think the principle of design is important for luoshan shadow creative goods? *

	Not at all important	Less important	Neutral	Important	Very important
Rhythm	○	○	○	○	○
Balance	○	○	○	○	○
Harmony	○	○	○	○	○
Contrast	○	○	○	○	○
Emphasis	○	○	○	○	○
Pattern	○	○	○	○	○

19. How do you think about the future design for these creative merchandises? *

	Not at all agree	Less agree	Neutral	Agree	Very agree
Original concept	○	○	○	○	○
Fine material	○	○	○	○	○
Favourable impression	○	○	○	○	○
Good efficacy experience	○	○	○	○	○

20. Would you like to suggest a better design for this type of merchandise?

_____

Appendix F: Reliability Analysis of the Questionnaire

Table F.1: Reliability Analyses of Design Influences

	Cronbach		
	Correction line total correlation (CITC)	Deleted α-factor for item	Cronbach α
Price	0.678	0.853	0.875
Aesthetic	0.648	0.859	
Ergonomic	0.737	0.844	
Brand	0.634	0.860	
Sentimental value	0.657	0.857	
Function	0.718	0.846	

Table F.2: Reliability Analyses of Design Methods

	Cronbach		
	Correction line total correlation (CITC)	Deleted α-factor for item	Cronbach α
Rhythm	0.787	0.900	0.918
Balance	0.757	0.904	
Harmony	0.778	0.901	
Contrast	0.766	0.903	
Emphasis	0.742	0.906	
Pattern	0.770	0.902	

Table F.3: Reliability Analyses of Design Elements

	Cronbach		
	Correction line total correlation (CITC)	Deleted α-factor for item	Cronbach α
Form	0.674	0.886	
Shape	0.705	0.883	
Line	0.734	0.880	
Color	0.697	0.884	0.898
Texture	0.706	0.882	
Size	0.732	0.879	
Space	0.666	0.887	

Table F.4: Reliability analyses of Visual Rhetorical Methods

	Cronbach		
	Correction line total correlation (CITC)	Deleted α-factor for item	Cronbach α
Rhythm	0.787	0.900	
Harmony	0.778	0.901	
Balance	0.757	0.904	
Contrast	0.766	0.903	0.918
Pattern	0.770	0.902	
Emphasis	0.742	0.906	

Appendix G: Validity Analysis of the Questionnaire

Table G.1: Validity Analysis of Design Influences

Validity analyses		
	Factor load coefficient	Commonality
	Factor 1	(common factor variance)
Original concept	0.781	0.610
Favourable impression	0.782	0.612
Fine material	0.795	0.632
Good efficacy experience	0.832	0.693
KMO Value	0.799	-
Bart's Spherical Value	330.506	-
df	6	-
p Value	0.000	-

Table G.2: Validity Analysis of Design Elements

Validity analyses		
	Factor load coefficient	Commonality
	Factor 1	(common factor variance)
Form	0.764	0.584
Shape	0.791	0.625
Line	0.815	0.665
Color	0.784	0.615
Texture	0.792	0.627
Size	0.814	0.662
Space	0.757	0.573
KMO Value	0.913	-
Bart's Spherical Value	936.843	-
df	21	-
p Value	0.000	-

Table G.3: Validity Analysis of Visual Rhetorical Methods

Validity analyses		
	Factor load coefficient	Commonality
	Factor 1	(common factor variance)
Exaggerated	0.803	0.645
Gradual change	0.800	0.640
Reorganisation	0.807	0.651
Association	0.815	0.664
Symbolic	0.793	0.629
Formal aesthetic rule	0.825	0.680
KMO Value	0.908	-
Bart's Spherical Value	798.165	-
df	15	-
p Value	0.000	-

Appendix H: Questionnaire for Feedback on the Effectiveness of Tableware Design

Greetings!

The purpose of this questionnaire is to find out what people say about the Luoshan Shadow Creative Dinner Plate in order to explore your perception of its value.

This questionnaire is purely academic research, anonymous, no right or wrong, we do not do a separate analysis of each questionnaire, all information is only used for comprehensive statistics, will be strictly confidential. Please feel free to fill out the questionnaire according to your actual situation.

1. Your current occupation:*

○Salesperson

○Marketing/Public Relations Officer Human Resources

○Clerical/clerical staff

○Technical/R&D staff

○Managers

○Academia

○Advisory/Consultancy

○Professionals (e.g. accountants, lawyers, architects, medical professionals, journalists, etc.)

○Other

2. Your gender is (single choice) [Single choice]*

○Male

○Female)

3. Your age is (single choice) [Single choice]*

○17 years old and below

○18-25 years old

○26-35 years old

○36-45 years old

○46 and above

4. Your highest level of education: [multiple choice]*

○A High school/secondary school and below ○B Post-secondary ○C Undergraduate ○D Master or above

5. What do you think of the styling of this children's tableware?

	Not at all agree	Less agree	Neutral	Agree	Very agree
Beautifully shaped					
Novelty					
Pursuing style					
Space-saving					

6. What do you think of the aesthetic value of this children's tableware?

	Not at all agree	Less agree	Neutral	Agree	Very agree
Original concept					
Beautiful elements					
Good materials					
Traditional culture					
Beauty of rhythm					

7. In your opinion, does the use of design elements emphasise the theme of the tableware?

	Not at all agree	Less agree	Neutral	Agree	Very agree
Line					
Graphic					
Color					
Size					
Material					

8. In your opinion, does the use of the design rules emphasise the theme of the tableware?

	Not at all agree	Less agree	Neutral	Agree	Very agree
Unify					
Distortion					
Exaggerated					
Harmony					
Repeatable					
Symbolise					
Metaphorical					

9. How do you feel about the use of cutlery?

	Not at all agree	Less agree	Neutral	Agree	Very agree
Better quality					
Good function					
Deep culture					
Unique style					
Reasonable price					
Good thinking					
Easy to use					