
The Creation Of Pottery Product Analyzed From Jia Gu Wen Calligraphy Identity

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Abstract:

Advancements in science and technology are expanding ancient civilization studies, with Jia Gu Wen, the first complete set of Chinese characters, discovered in 1899 and inscribed in 2017. The research aims to analyze and study Jia Gu Wen's calligraphy identity, as well as to create pottery products based on this unique style. This interdisciplinary research study utilizes philology, calligraphy, design, and sculpture knowledge to examine Jia Gu Wen's transformation into pottery, analyzing characteristics, publishing works, and satisfaction. The state is focusing on protecting "Jia Gu Wen" and ceramic art as intangible cultural heritage. Researchers extract Jia Gu Wen's characteristics to create ceramic works, promoting active protection and innovative development. Researchers created Chinese characters using various methods such as pictographic, indicative, associative, phono-semantic, transliteration, and loan. The number of Jia Gu Wen, both with single pictographic characters and those with two pictographic characters (ideographic characters), ranges from 618 to 672. Field research at museums in Thailand and China, along with the potter's art studio, explored the experimental design process of pottery creation using Jia Gu Wen. The design strategy integrated theoretical research and practical experiments using four techniques: relief, modeling, hollowing, and patching. The research is preserving "Jia Gu Wen" and ceramic art as intangible cultural heritage. Researchers conducted five design experiments to transform ancient characters into modern ceramic works, using glaze for colorful characters and pinching, molding, and engraving for three-dimensional shapes. The study also explored clay's role in creating people's shapes. Studying Chinese calligraphy and ceramics, with Jia Gu Wen's significant role in Chinese civilization, can protect ancient culture, promote industry development, and create unique artistic styles.

Keywords: The creation of pottery product, Jia Gu Wen calligraphy identity

Introduction

The study of ancient civilization is expanding due to advancements in science and technology. Jia Gu Wen, a key figure in ancient Chinese civilization, is not only the first complete set of Chinese characters but also a significant carrier of Chinese culture. China, known for its pottery, has mastered pottery-making technology since the Neolithic Age 10,000 years ago. This chapter provides a brief historical background for Jia Gu Wen's calligraphy and pottery works. Jia Gu Wen, a Chinese art form, originated during the late Shang Dynasty, the second dynasty in Chinese history. During this time, rulers began inscribing characters on tortoiseshells and animal bones for rituals and divination. The first discovery of Jia Gu Wen was in 1899 at the Yinxu site in Anyang City, Henan Province. In 2017, the Memory of the World Register inscribed it after over 100 years of excavation and research. In November 2022, scientific archaeology discovered over 150,000 pieces of jia gu wen in China, excavating over 35,000 of these pieces. The number of single words in Jia Gu Wen has exceeded 4,000.

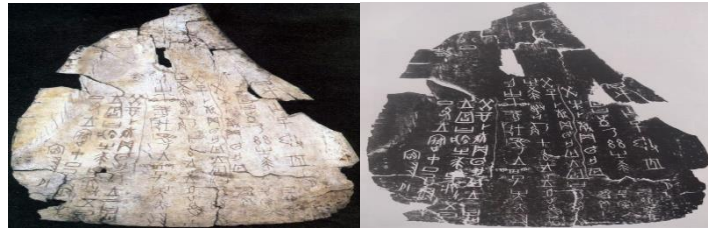


Figure 1. Xiaotun Beijia 8-Collection 10405
 (Source: Jia Gu Wen Collection/Edited by Guo Moruo, Beijing: Zhonghua Book Company, 1982)

Jia Gu Wen calligraphy is a treasure of Chinese civilization, showcasing the wisdom and creativity of ancient ancestors and reflecting their aesthetic concepts, spiritual pursuits, and cultural heritage. Pottery, an important item in ancient life, carries rich historical information and cultural connotations in its decorative patterns and text shapes. The Dawenkou pottery urn in Shandong (4200–2600 BC) is a precious heritage left by our ancestors, with pictographic symbols carved on the surface. Studying Jia Gu Wen's calligraphy and pottery works is not only an exploration of ancient civilization but also a significant contribution to the inheritance and development of traditional culture. Pottery, with its colorful decorative patterns and exquisite craftsmanship, has become an important representative of ancient Chinese art and reflects the aesthetic concepts and fashions of the time. Written records on pottery provide valuable historical information on various aspects of ancient society, such as politics, economy, military, and culture.



Figure 2. Symbols on Dawenkou pottery vessels from Shandong (4200–2600 BC)
 (Source: National Museum of China)

Research on Jia Gu Wen's calligraphy and pottery has made significant progress in recent years, with scholars increasingly focusing on these fields. However, current research has limitations, such as a lack of comprehensiveness in identifying Jia Gu Wen's calligraphy characteristics and a lack of systematic analysis of pottery creation. To extract these characteristics and apply them to modern pottery products, a challenging and innovative artistic exploration is needed. Ceramic works can incorporate Jia Gu Wen characters, with their strong "pictographic" features, to create unique utensils or sculptures inspired by these characters. The shaping method of ceramic art can display this unique beauty, offering a new visual enjoyment and cultural experience.

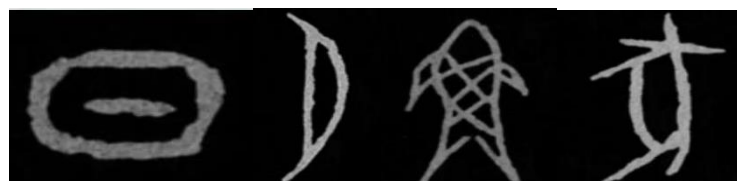


Figure 3. Sun, Moon, Fish, and Pig (Source: ©2013 Calligraphy Dictionary ICP No. 09037507-1)

Through carving or painting techniques, Jia Gu Wen's calligraphy can enhance the artistry and comprehension of the calligraphy's charm. The color characteristics of Jia Gu Wen can also be used in glaze treatment, making ceramic works more colorful and layered. However, there are challenges in integrating Jia Gu Wen's calligraphy with ceramic works, such as balancing the two art forms and maintaining their original characteristics. This study aims to address these issues by conducting in-depth research on Jia Gu Wen's calligraphy and pottery creation, providing new ideas and directions for the inheritance and development of traditional culture. The study aims to address these shortcomings and provide new ideas for the inheritance and development of traditional culture. This study explores the use of Jia Gu Wen calligraphy in pottery products and ancient writing systems. Jia gu wen, dating back 3,000 years, has various character configurations and emphasizes symmetry and balance. Characters are created using four methods: pictographic, indication, and pictophonetic. The structure and layout are simple but still follow basic construction principles of Chinese characters. Jia Gu Wen also contains a variety of variants and shapes, reflecting the diversity and flexibility of ancient characters. The contents of Jia Gu Wen mainly involve sacrifices, divinations, and records. Divorces are the most common content, recording fortunes and disasters asked about by nobles during sacrificial activities. These records provide information about the Shang Dynasty society's religious beliefs, social politics, economy, and culture. The class structure and hierarchy also reflect the roles and responsibilities of different individuals in society.

In conclusion, studying the combination and innovation of Jia Gu Wen calligraphy and pottery is of enormous significance. It not only helps protect and inherit the essence of ancient Chinese culture but also enhances people's sense of identity and pride in tradition, contributing to social harmony and development.

Research Objectives

1. To study and analyze Jia Gu wen calligraphy identity
2. To create pottery products from Jia Gu Wen calligraphy identity

Conceptual Framework

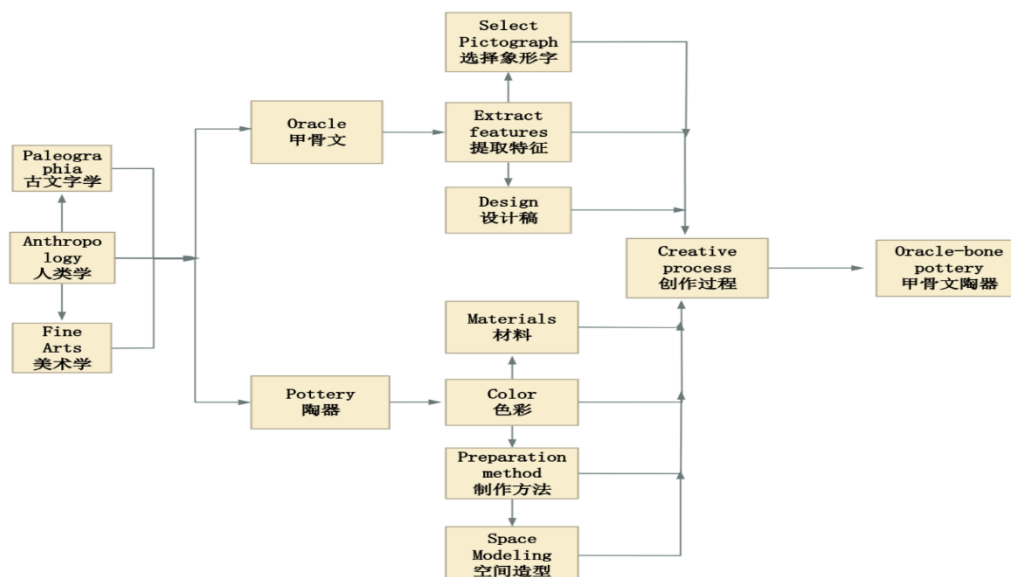


Figure 3. Conceptual framework diagram (Source: Researchers, 2024)

The research process involved analyzing Jia Gu Wen's calligraphy features through literature analysis, expert interviews, and field investigations. The calligraphy features were extracted, and a pottery product plan was designed. The research resulted in exploring new

products, extracting features, designing drawings, clay sculptures, and firing. The product release and satisfaction analysis were conducted, considering aspects like materials, extraction features, production process, firing temperature, shape, glaze color, and design meaning.

Literature Review

1. Characteristics and analysis of oracle bone calligraphy

The Oracle bone script, an ancient Chinese writing system, serves as the prototype for modern Chinese characters and is considered one of the most significant Chinese characters. Discovered in China as the earliest documentary record, Oracle bone script has now become a worldwide academic discipline. Ceramics, combining water, fire, and earth, are considered the art of earth and fire, sintering into utensils and showcasing human creativity and emotions in material form. Oracle bone inscriptions have been the subject of extensive research on calligraphy characteristics, with both domestic and foreign scholars conducting in-depth exploration and analysis. The study began in the early 20th century and has grown with archaeological excavations and the abundance of oracle bone materials. Analysis of stroke structure, pen skills, and decorative style has revealed the unique artistic charm and cultural connotation of oracle bone calligraphy. Comparing oracle bone calligraphy with other scripts has provided inspiration for modern calligraphy creation.



Figure 4. Oracle bone inscriptions and parts (Source: photographed by researchers, Henan Provincial Museum)

Originating in southwestern Northeast China, the Hongshan Culture spreads throughout the Rehe area 5,000 to 6,000 years ago. It consists of two major pottery systems: sand-tempered gray pottery and clay red pottery, with clay red pottery being more prevalent. The basic shape of Hongshan culture pottery is the cylindrical jar, with a large mouth, small bottom, and straight belly wall. The decorative style is the zigzag pattern, often combined with cylindrical jars. Clay-red pottery, mainly black, red, and purple, features dragon scale, linked flower, and chessboard patterns.



Figure 5. Painted pottery jar of Hongshan culture (Source: <https://dp.pconline.com.cn/>)

Mesopotamia, a region between the Tigris and Euphrates rivers, is one of the earliest human civilizations. The Sumerians created irrigation agriculture, handicrafts, commerce, and cuneiform writing. Cuneiform writing, with wedge-shaped strokes, evolved from pictographic pictures around 3400 BC to wedge-shaped strokes for convenience and meaning expression. The writing system underwent evolution during the periods of the Babylonian, Assyrian, and Persian empires, ultimately succumbing to the collapse of the Persian Empire in 330 BC. .



Figure 6. Cuneiform (Font design/Edited by Yang Zhaohui, Xia Qi, and Xiang Tianshu. Beijing: Chemical Industry Press, 2020.7)

Research on ceramic art creation in foreign countries is increasingly focusing on interdisciplinary methods, combining ceramic works with disciplines like anthropology, sociology, and psychology. The focus is on the function and role of ceramic works in contemporary society and their application in modern life. However, there are still shortcomings in current research, such as strengthening traditional skills, exploring new materials and processes, and exploring the functions and roles of ceramic works in contemporary society. Future research should strengthen interdisciplinary cooperation and exchanges to promote the continuous deepening and development of ceramic art research. Pottery unearthed in the Czech Republic and Croatia in the past has raised doubts about the true history of European ceramics. The dating and calculation of these cultural relics have raised doubts about the true origins of European ceramics.

2. Oracle bone inscriptions and pottery

This paper explores the application of oracle bone script in logo design and its aesthetic value. The Chinese Fine Font Project has launched an Oracle bone script library, providing a reference for logo design. Researchers emphasize the unique artistry and historical heritage of oracle bone scripts and their advantages in shaping specific artistic images. The study of ancient Chinese characters, such as pictographic, indicative, ideographic, and phono-semantic characters, provides insights into their complexity and diversity. The study of ancient Chinese official hats focuses on the history and form of these hats, analyzing the Chinese characters in oracle bone inscriptions and bronzeware script. A cognitive network model for oracle bone characters related to animals is developed using cognitive neuroscience methods and computer technology, effectively capturing the correlation between characters and achieving a high accuracy rate on the test data set. Ceramics, such as pottery, are also studied to better understand the connection between pottery and the origin of Chinese agricultural civilization. The production technology of ancient pottery has evolved with the continuous improvement of production technology, resulting in both aesthetic and practical functions. Pottery patterns in the Han Dynasty reflect social culture, beliefs, daily life, and foreign exchanges, providing insights into the social history and culture of the time. The paper discusses the application of traditional cultural elements in modern ceramic art design, focusing on China's 5,000-year history and culture. It highlights the importance of rethinking modern design and applying traditional ceramic cultural elements to enhance the uniqueness and cultural connotation of products while preserving and promoting the Chinese nation's culture. Aran Wanichakorn explores the development of pottery souvenir products in Koh Kret, Nonthaburi, Thailand, focusing on strategic logo design and product production to meet the needs of domestic and foreign tourists. Pinar Baklan Onal explores the Op-Art trend and personal practices in contemporary ceramic art, while Wanda Gardner explores the relationship between ancient kilns and modern ceramics. Christian analyzes the relationship between Taoist principles and color symbolism in Ming

Dynasty ceramic painting, providing valuable reference values for understanding the artistic characteristics and cultural connotations of Ming Dynasty ceramic painting.

3. The study of pottery

Ceramic Materials Science is a vital field that involves understanding the physical and chemical properties of ceramic materials, their composition, structure, performance, and more. Mastering art techniques such as painting and sculpture, as well as design principles and aesthetic concepts, can enhance the artistic value of ceramic works. Ceramic production involves multiple steps, such as molding, drying, and firing, which require mastery of the corresponding process flow and technical requirements. To create pottery works, one needs to apply subject knowledge in materials science, technology, art and design, physics and chemistry, and history and culture. These disciplines help create pottery works with basic art skills and design capabilities, drawing inspiration from different historical periods and regions. During the firing process, mastering knowledge of physics and chemistry, such as temperature control and gas emission, is necessary to ensure the pottery achieves the ideal hardness and color. History and culture are also important subjects to consider when creating pottery works. Understanding the status and role of pottery in human history and culture, as well as the production techniques and characteristics of pottery in different civilizations, will help creators incorporate cultural elements into their works and enhance the connotation and value of their works. Various methods of creating pottery include mold forming, blank forming, and manual forming. Ceramic sculpture widely uses mold forming, particularly for complex or large works. Manual forming relies on the manual skills of the maker to shape the pottery works. Carving, scratching, and engraving are essential techniques in pottery making. Relief carving, also known as bas-relief, is a decorative technique that uses various methods to create a three-dimensional effect. The creation steps involve designing patterns, carving and hollowing, finishing and improving, and firing and molding. Pasting, another common decorative technique in pottery making, involves pasting pre-made patterns, mud pieces, mud strips, and other materials onto the pottery body using mud or other adhesives. In conclusion, carving, scratching, and engraving are all essential techniques in pottery making, enhancing the beauty and artistic value of the pottery.

Research Methodology

This interdisciplinary research explores Jia Gu Wen's transformation into pottery works, combining knowledge from philology, calligraphy, pottery design, and sculpture. The study aims to analyze Jia Gu Wen's characteristics, transform them into pottery, publish the works, and investigate satisfaction. The research method includes questionnaire surveys, expert interviews, literature analysis, field surveys, and interdisciplinary design experiments.

Research Tools

Researchers conducted a study on Jia Gu wen, a traditional Chinese art form, using questionnaires and a combination of quantitative and qualitative analysis. They surveyed 70 calligraphers, ceramic artists, and designers to collect data. The researchers then conducted interdisciplinary research, combining Jia Gu Wen's two-dimensional art form with pottery's three-dimensional art form. They aimed to create a three-dimensional pottery design that preserves ancient text symbols while conforming to modern aesthetics. The experimental process involved designing five products using four pottery methods: relief, pinching, hollowing, and pasting. The researchers also sought feedback from experts and professors, recording and analyzing it to make adjustments in the next step of the design experiment.

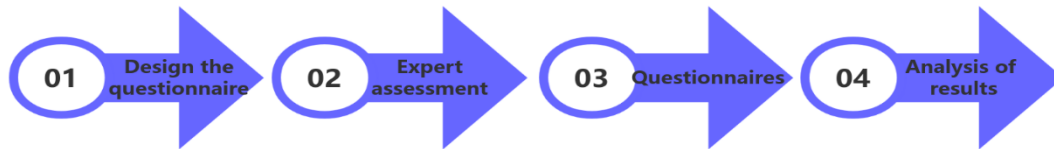


Figure 7. Professional Questionnaire Survey Process

This study utilized qualitative research to improve a pottery design plan. Qualitative research is a method that focuses on understanding and analyzing the essence of a research object, obtaining detailed, in-depth information through in-depth interviews, observations, and text analysis. Natural settings facilitate a more realistic representation of the participants' experiences. Researchers primarily collect non-quantitative data, including text, images, and videos, and analyze it using logical reasoning and historical comparison. Qualitative research is subjective, requiring researchers to remain objective and avoid personal bias. The study used three methods of qualitative research: conducting interviews, focusing on expert opinions, and observational research. Interviews provide rich firsthand information, while expert opinions reflect participants' views and experiences, increasing the authenticity and credibility of the research. Observational research involves observing experts and people in natural situations, using semi-structured questions to ensure clarity and openness. In conclusion, qualitative research is a valuable method for understanding and improving pottery design plans, but it requires a balance of objectiveness and personal bias to ensure the best results.



Figure 8. Expert semi-structured interview process

Interdisciplinary Experimental Methods

This study aims to protect intangible cultural heritage by combining Jia Gu wen, an ancient cultural symbol, with pottery, a traditional craft. Researchers used doctoral dissertations, design works, and publications to develop a design framework for integrating Jia Gu Wen and pottery. They focused on extracting Jia Gu Wen's features, analyzing its lines, structure, and cultural connotations, and transforming these into three-dimensional design elements. The researchers also incorporated the artistic elements of Jia Gu Wen into the pottery, ensuring it retains traditional skills while showing distinctive characteristics. This innovative design experiment requires a combination of professional knowledge, aesthetic vision, and profound cultural heritage to ensure the pottery accurately conveys the cultural value contained in Jia Gu wen.

Data Collection

The researcher employed literature analysis and field investigation as research methods when studying Jia Guwen and pottery. Existing literature and field investigation provided the characteristics of Jia Gu wen and the pottery production methods.

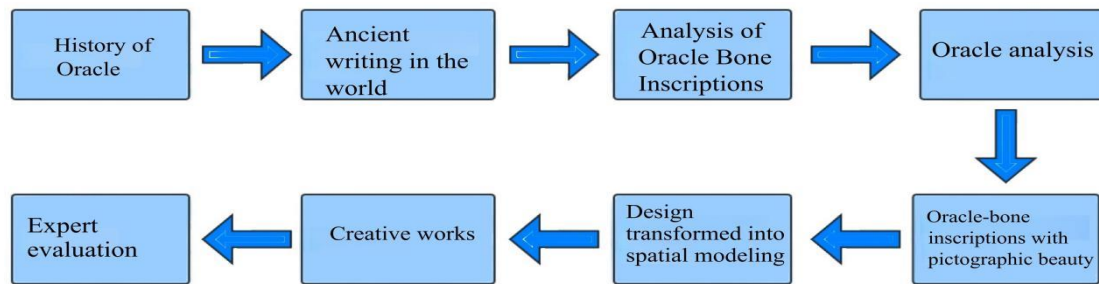


Figure 3.1 Jia Guwen data collection flow chart

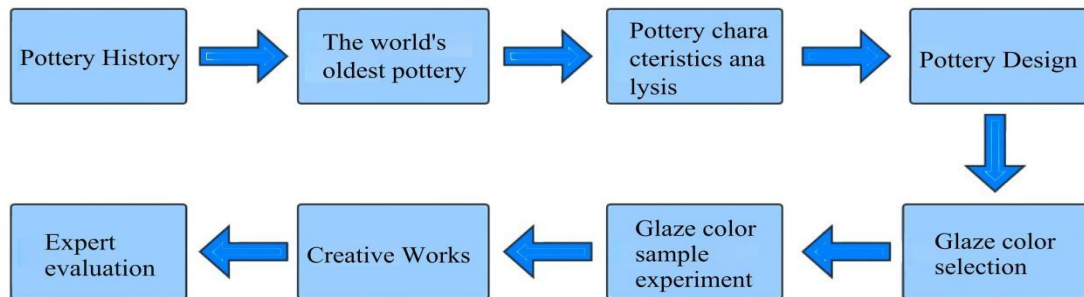


Figure 9. Pottery data collection flow chart

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Research Process

The study consists of three phases: preparation, which involves literature collection and analysis, and completion, which involves field research and design. The first phase involves on-site visits to museums and ceramic studios to gather firsthand information. The second phase involves studying Jia Gu Wen's calligraphy features, conducting questionnaire surveys and expert interviews, and creating design drafts for pottery works. The third phase involves completing five works, publishing them in exhibitions, conducting satisfaction surveys, and revising the paper writing. The research methods used in this study will enter the experimental stage of ceramic design.

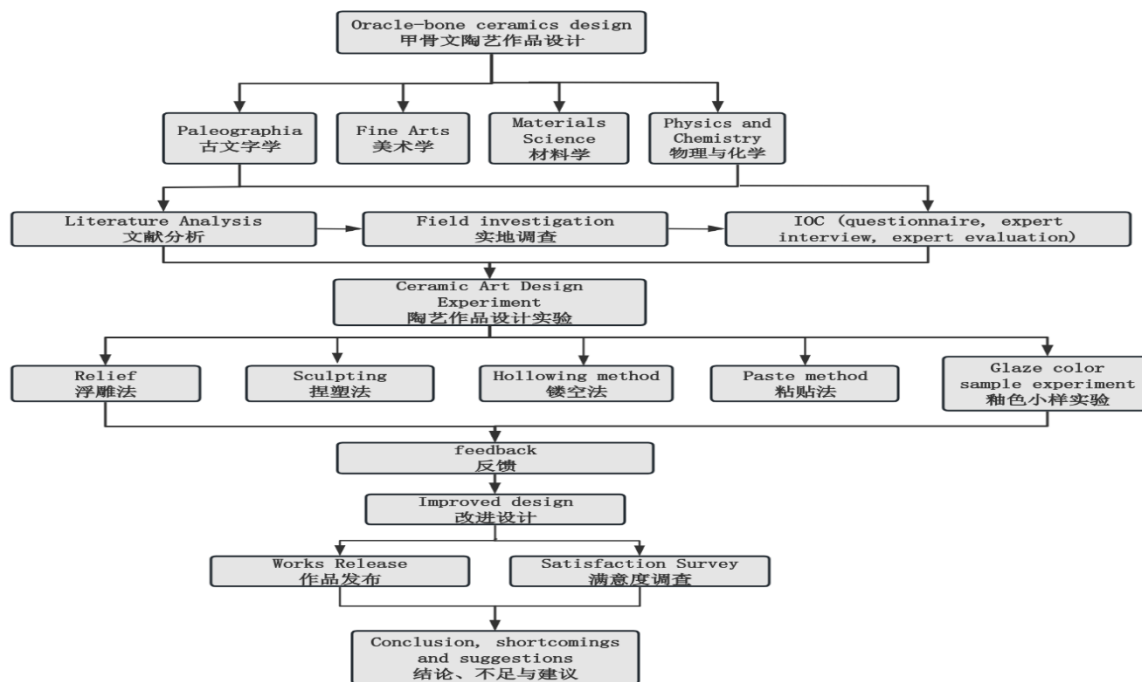


Figure 10. Research method flow chart





Results











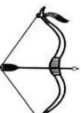











The state places significant importance on protecting "Jia Gu Wen" and "ceramic art" as intangible cultural heritage. Researchers extract Jia Gu Wen's characteristics to create ceramic works, promoting active protection and innovative development. This study aims to clarify Jia Gu Wen's characteristics and use them to create ceramic art, highlighting its significance in inheritance and innovation.

1. Aesthetic Analysis of Jia Gu Wen's Calligraphy Characteristics

The creation of Chinese characters originated from an ancient legend involving Cangjie, the historian of Emperor Huangdi. Cangjie studied Chinese characters based on knotted ropes and the footprints of wild animals, collecting, sorting, and using patterns and characters passed down among ancestors. Scholars later followed Xu Shen's "Six Methods of Creating Characters" in "Shuowen Jiezi-Xu," which include pictographic, indicative, associative, phono-semantic, transliteration, and loan. While indicative characters serve as abstract symbols in the absence of concrete images, pictographic characters outline the appearance characteristics of objects. Pictophonetic characters combine two or more independent characters to express new meanings. Phono-semantic characters consist of two components: the radical and the phonetic component, signifying the character's meaning or category. Transferred characters use the same radical or component to express the same thing and have the same meaning. Loan characters are borrowed to represent the meaning of a word according to its sound, such as "令," which originally meant "command," and "令," which means "county magistrate." However, later researchers believe that the legend of Cangjie alone is just a legend and that he may have been the organizer of Chinese characters.

Table 1: Six ways to make words (Source: Researchers, 2024)

Hieroglyphic s				
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Six ways to make words Six Books Character Creation		tripod	car	sheep	
	word referring to things Indicative Characters	 → 	 → 	 → 	
	knowing words Pictograph	 → 	 → 	 → 	
	phonogram	 → 	 → 	 → 	
	transfer word				
	borrowed words Loanwords				
		"老" and "考" The original meaning is elder . Belongs to "word usage" .			
		Human orders are called "orders" and heaven's orders are called "ming". Belongs to "Words" "Ling" means "human order" and "Ming" means "heavenly order". This is a "word usage method" .			

Chinese characters, such as Jia Guwen, originated from pictographic writing and evolved through the "Six-Character Method of Creating Characters." Indicative characters, based on pictographic characters, add abstract symbols to express themselves. Ideographic characters combine two or more pictographic characters, while phono-semantic characters consist of a radical and a phonetic radical. Researchers conducted an inductive analysis and found that pictographic characters are most suitable for pottery works, followed by ideographic characters. The Jia Guwen characters with obvious pictographic beauty are a combination of pictographic and ideographic characters. Pictographic characters have a simple outline of physical forms or characteristic parts, resembling pictures but with a significant aesthetic feature: vivid, simple, unsophisticated, innocent, and interesting.



Jia Gu wen with simple outline

Jia Gu wen with characteristics

Figure 11. (Source: ©2013 Calligraphy Dictionary ICP No. 09037507-1)

Chinese scholars have collected statistics on Jia Gu wen, a type of writing system that originated in the Chinese language. Ma Jinglun and Li Xiaoding have identified 1,226 and 1,225 recognizable Jia Gu Wen characters, respectively. These characters can be divided into pictographic and ideographic characters, with pictographic characters being single-character characters. The number of pictographic characters in Jia Gu wen accounts for 18% to 23% of the total number of recognizable Jia Gu wen. The ancients also created characters by combining pictographic and ideographic characters, known as "ideographic characters." The proportion of ideographic characters in the total number of recognizable Jia Gu Wen is about 32%. The number of Jia Gu Wen with single pictographic characters and those with two pictographic characters (ideographic characters) ranges from 618 to 672, representing approximately 50% to 54% of the total Jia Gu Wen. Jia Gu Wen draws inspiration from various categories, such as the human body, organs, animals, plants, astronomy, geography, and architecture. The ancients' wisdom and observational abilities led to the creation of beautiful characters. The inspiration for creating characters in Jia Gu Wen comes from human beings' careful observation and high-level induction of utensils, creating a unique and vivid pictographic beauty.

2. Experimental design process

This study explores the experimental stage of pottery creation and design using Jia Gu Wen. Researchers conducted field research at museums in Thailand and China, as well as the potter's art studio. They studied and observed Jia Gu wen, sought inspiration, and conducted interdisciplinary creative combinations. The research yielded satisfactory results, confirming that the pottery works aligned with the creative methods used in the experimental process. The researchers visited seven museums in Thailand and China, covering over 6,000 kilometers, laying the foundation for future research.



Figure 12. Distribution map of 11 researchers' museum visits (Source: Researchers, 2024)

The research focuses on exploring the creation of ceramic works using Jia Gu Wen's calligraphy characteristics. The researchers conducted five design experiments, utilizing literature analysis, field investigation, questionnaire surveys, expert interviews, data collection,

and statistics. The researchers transformed ancient characters into modern three-dimensional ceramic works, revitalizing their significance in modern society. Scholars and experts from Guangzhou Academy of Fine Arts, Jingdezhen Ceramics University, Guangzhou Xinhua College, and Foshan Arts and Crafts Association have recognized the completed design drawings. Experts believe these works have high interdisciplinary innovation significance, communication value, and artistic value. They recommend using glaze to make the ancient characters more colorful and starting with easy-to-read ones. Ceramic designs can draw inspiration from the pictographic characters in Jia Gu Wen, employing techniques such as pinching, molding, and engraving to create three-dimensional shapes.

3. Research and formulation of design strategy

This interdisciplinary study explores the use of ancient Chinese characters, Jia Gu wen, in ceramics. The study focuses on transforming Jia Gu Wen calligraphy into three-dimensional ceramic works, considering cultural factors and national culture. The design strategy integrates theoretical research and practical experiments, employing four techniques: relief, modeling, hollowing, and patching. The researchers conducted experiments on the characters "人," "草," "fish," "door," and "孕" to explore the philosophical spirit and characteristics of Jia Gu wen.

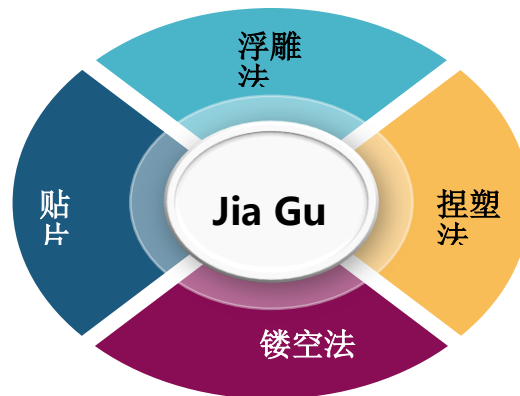


Figure 13. Schematic diagram of Jia Gu wen's ceramic art creation method (Source: Researchers, 2024)

Traditional pottery methods involve kneading, rubbing, pressing, dropping, and beating clay to break its original structure, resulting in a more delicate, compact, and firm clay. Jia Gu Wen's character "孕" signifies a woman's pregnancy, not just human ones. Its main feature is the protruding belly of the "女" and the fetus in the abdomen. Xu Shen's "Shuowen Jiezi" explains it as "wrapping a child."

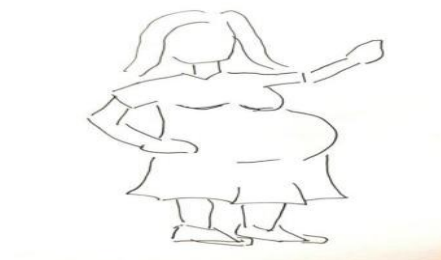


Figure 14. (Researcher 2024)

Jia Gu Wen's character "鱼" resembles a fish with a head, body, fins, and tail. The ancient Chinese character is lively, with symmetrical fins and wide mouths. The head is usually facing upwards for engraving or molding convenience. Some bronze characters have horizontal shapes. The researchers used clay to create a relief effect, representing human survival, reproduction, safety, development, and the relationship between people and their feelings. They created a rectangular clay board with different shapes of "people" and used mud to stick them one by one. They then glued the clay to the board, filling in small holes and leveling the surface. The clay was then dried and glazed. The design inspiration came from the sculpture "Laozi and Tao Te Ching" by Chinese sculptor Wu Weishan. The clay pieces were selected based on the basic proportions of the upper and lower limbs, and the image of a baby was represented inside the abdomen.



Figure 15. The ceramic work of " Fish " is being created (Researcher, 2024)

The "人" character is painted with transparent white, while the base is made of light star vermilion and light graphite. The colors of the head, feet, and hands correspond to different races. The "pregnant" bottom works employ a flowing glaze, covering the body in white and thickening the back, torso, and upper limbs. The "grass" work uses five-color porcelain glaze, with the grass painted blue and fruit green and the tip of the grass painted with glass green, bamboo yellow, goldfish yellow, and transparent white. The "fish" character employs a flowing glaze, using Kunmianbai as the base glaze and applying goldfish yellow, white, and glass green.

4. Creation and implementation process

"Guan Zi Quan Xiu" suggests that the best plan for a lifetime is to plant people, illustrating the long and arduous task of cultivating talents. Researchers used clay to create various shapes of "people," reflecting human survival, reproduction, safety, development, and the relationship between people and human feelings.





Figure 16. Modeling method - ceramic creation of "grass" (researcher, 2024)

Create a rectangular clay board with dimensions of 40 cm, 25 cm, and 3 cm. Poke small holes in the board and use mud to stick "people" one by one on it. Glue the "people" of different sizes one by one, filling the small holes and leveling the board. Stick shorter "people" in the gaps to enhance the sense of irregularity and layering. After making the sample, check the details, scrape off the excess clay, and blow away the dust. Place the clay in a cool place to dry and glaze the next step. Researchers use clay pieces of different shapes to create ceramic art, drawing the body of a baby and drooping hair. Shape three rectangular clay pieces into a three-dimensional trihedron, drawing a fish pattern. Dig out unwanted clay and hollow out the fish's eyes. Grass is a product of nature, with tenacious vitality. Create an image of a three-petal grass and use small stones to shape the pottery. Create a door leaf by pressing a piece of clay into a circle and carving out unwanted parts. Glue the four doors around the round tray, representing the earth and the door being open to the whole world.

5. Glazing

Ceramic glaze is a crucial aspect of ceramic art, enhancing the beauty and durability of ceramic products. It consists of a mixed layer of vitreous and crystals attached to the ceramic blank surface. The two main types of porcelain glaze are overglaze and underglaze, where overglaze enamel is applied by painting on the glaze and then fired. Changsha Kiln in the Tang Dynasty created the smooth, durable, and easy-to-wear underglaze color. Tang Sancai, or Tang Dynasty three-color glazed pottery, uses yellow, green, and white colors, as well as blue, brown, and black. This colorful glaze is an epoch-making milestone in the history of Tang Dynasty ceramics. Five-color porcelain matured in the Ming Dynasty and reached its peak during Emperor Kangxi's reign. Red, yellow, blue, green, purple, and other colors primarily make up the glaze of five-color porcelain. Pottery glaze is an important decoration and protective layer on the surface of pottery that adds rich colors and textures. Common types of pottery glazes include transparent glaze, which is colorless and transparent, and crackle glaze, which presents a natural and unique texture during the firing process.



Figure 17. Glazing process of the 91 “門” character work (researcher, 2024)

The technique of crystalline glaze involves the addition of crystalline material to the glaze layer, resulting in a smooth, shiny, and three-dimensional surface. Colored glaze, on the other hand, adds colorants like metal oxides to the glaze layer, presenting a specific color after firing. This adds richness and variety to the pottery's surface, increasing its artistic value. The "人" character is painted transparent white, while the "pregnant" bottom works using flowing glaze techniques. The "grass" work uses five-color porcelain glaze, with the stone part painted with light graphite, dark blue, and iron red. The "fish" character employs a flowing glaze, using Kunmianbai as the base glaze and applying goldfish yellow, white, and glass green. The "door" work uses light graphite, armor glaze, and bamboo yellow. The base disc represents the earth.

Conclusion and Recommendation

The state prioritizes protecting "Jia Gu Wen" and "ceramic art" as intangible cultural heritage, using its characteristics for innovative development and inheritance.

1. Characteristics and analysis of oracle bone calligraphy

Chinese characters, such as Jia Guwen, originated from pictographic writing and evolved through the "Six-Character Method of Creating Characters" in "Shuowen Jiezi·Xu." These characters, which are based on the knotted ropes and footprints of wild animals, serve as abstract symbols and outline the appearance characteristics of objects. They are most suitable for pottery works, followed by ideographic characters. The ancients also created characters by combining pictographic and ideographic characters, known as "ideographic characters," which account for about 32% of the total number of recognizable Jia Gu Wen. The ancients' wisdom and observational abilities led to the creation of beautiful characters, drawing inspiration from various categories, such as the human body, organs, animals, plants, astronomy, geography, and architecture. After consulting ancient Chinese scholars, calligraphers, and artists, they selected Jia Guwen, a Chinese character with pictographic features, for ceramic works, meeting the requirements of ceramic shaping and firing.

2. Experimental design process

The study investigates pottery creation and design using Jia Gu Wen, a calligraphy technique. Researchers visited seven museums in Thailand and China, examining the calligraphy characteristics and conducting five design experiments. They transformed ancient characters into modern three-dimensional ceramic works, revitalizing their significance in modern society. Experts believe these works have high interdisciplinary innovation, communication value, and artistic value. They recommend using glaze for colorful characters and using techniques like pinching, molding, and engraving for three-dimensional shapes.

3. Research and formulation of design strategy

This interdisciplinary study explores the use of ancient Chinese characters, Jia Gu wen, in ceramics. Researchers used four techniques: relief, modeling, hollowing, and patching, transforming Jia Gu Wen calligraphy into three-dimensional ceramic works. The characters "人," "草," "fish," "door," and "孕" were used to explore their philosophical spirit and characteristics. The clay was used to create relief effects, representing human survival, reproduction, safety, development, and the relationship between people and their feelings. The design inspiration came from the sculpture "Laozi and Tao Te Ching" by Wu Weishan. The clay pieces were selected based on their basic proportions, and the image of a baby was represented inside the abdomen.

4. Creation and implementation process

"Guan Zi Quan Xiu" suggests planting people as the best plan for a lifetime. Researchers used clay to create various shapes of "people," reflecting human survival, reproduction, safety, development, and the relationship between people and human feelings. They created ceramic art, such as a baby, fish, grass, and door leaf, highlighting the importance of cultivating talents and the relationship between people and the world. The clay pieces were carefully dried and glazed to create unique and meaningful art pieces.

5. Glazing

Ceramic glaze is a vital component of ceramic art, enhancing the beauty and durability of products. It consists of a mixed layer of vitreous and crystals attached to the ceramic blank surface. There are two main types: overglaze and underglaze. Tang Sancai, a three-color glazed pottery, uses yellow, green, white, blue, brown, and black colors. Five-color porcelain matured in the Ming Dynasty and reached its peak during Emperor Kangxi's reign. Common types include transparent, crackle, crystalline, and colored glazes. Examples of pottery glaze include "人" characters, "grass" works, "fish" characters, and "door" works.

Recommendations

Chinese calligraphy and ceramics are intangible cultural heritages, with jia gu wen being a significant part of Chinese civilization. The study of the combination and innovation of these two art forms has significant implications. It helps protect and inherit the essence of ancient Chinese culture while also promoting the development and innovation of the cultural industry. The combination of calligraphy and pottery can create unique artistic styles and aesthetic experiences, meeting people's growing spiritual and cultural needs. This research also has academic value, providing a deeper understanding of ancient Chinese culture's history and development and revealing the connection between ancient and modern society. It also has social significance, as it promotes social harmony and development, enhancing people's sense of identity and pride in traditional culture. Therefore, it is crucial to support and promote this research.

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