

Analysis of the Cultural Elements of Enamel-Colored Porcelain in Qing Dynasty Based on the Theory of Cultural Three Levels

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DOI: <https://dx.doi.org/10.47772/IJRISS.2024.805145>

Received: 27 April 2024; Accepted: 21 May 2024; Published: 20 June 2024

ABSTRACT

Based on the theory of three levels of culture, this study analyzed the cultural elements of enamel-colored porcelain in Qing Dynasty by using experimental methods. In the process of research, first of all, 10 experts in the field of porcelain design were invited to use Delphi expert consultation method to sort out and summarize 42 representative enamel-colored porcelains in Qing Dynasty from 100 enamel-colored porcelains in Qing Dynasty stored in Beijing Palace Museum and Taipei Palace Museum. Secondly, this study invited 16 designers from porcelain fields to conduct individual analysis of the cultural elements of these 42 enamel-colored porcelains in Qing Dynasty. In addition, this study divided 16 designers into two groups for focus group discussion. Finally, this study used thematic analysis to analyze the results of focus group discussions. The result of this research shows that the three levels of enamel-colored porcelain culture in Qing Dynasty contain 9 elements. That is, the pattern, color, shape, and material in the outer tangible level, the craftsmanship, function, usage experience in the middle behavioral level, and the allusion, cultural peculiarity in the inner intangible level. This research can provide a theoretical framework for further clarifying the cultural characteristics of enamel-colored in Qing Dynasty and the design methods of inheriting and innovating enamel-colored.

Key Word: Outer tangible level, Middle behavioral level, Inner intangible level, Cultural element, Visual expression, Behavioral experience, Connotation interpretation, Innovation.

INTRODUCTION

Research Background

In the process of globalization, the trend of openness and integration of world culture is deepening, which promotes the change and renewal of national culture to some extent (Ibodulla Ergashev, Nodira Farxodjonova, 2020). However, in the process of seeking compatibility through a certain degree of standardization, the problem of homogenization becomes more and more obvious, which makes the identity and tradition of the culture of a nation and a country in danger of being lost. This phenomenon prompts people to gradually realize the importance of their local culture (Shen S T, Woolley M, Prior S, 2006., Bordeford, 2017). In the perspective of globalization, the Chinese government attached great importance to the inheritance and development of China's excellent traditional culture, advocating the innovation and

development of excellent traditional culture from the perspective of China's modernization, and in 2021, the 14th Five-Year Plan for the inheritance and development of China's excellent traditional culture was promulgated. Xi Jinping proposed that in order to meet people's spiritual and cultural needs and promote cultural self-confidence, it is necessary to promote the creative transformation and innovative development of Chinese excellent traditional culture (Zhou Jianming, 2023). In addition, Xi Jinping made it clear at the symposium on the inheritance and development of Chinese culture that "efforts should be made to continue the Chinese context and promote the creative transformation and innovative development of Chinese excellent traditional culture" (Shao Lei, 2023). At present, there are some excellent innovative works of traditional cultural relics in China's modern design, and the "Wenjun Vase", a special porcelain product for the Beijing 2022 Winter Olympic and Paralympic Games, embodies the perfect combination of China's excellent traditional culture and Olympic culture. The designer of the bottle integrated the Olympic elements into the white porcelain body, reflecting the humanistic feelings of China's hollow in thought. In terms of shape, the traditional Chinese simple and slender plum bottle with flowing lines is innovated, which echoes the rhythm of ice and snow in the Winter Olympics. Throughout China's macro market, under the influence of the trend of innovation, the product design field has set off a trend of creation with culture as the foundation and innovation as the soul.

The essence of design belongs to culture, which is a way to express the spiritual level as a form of excellent material culture (Zhang Fuye, 2020., Richard Buchanan, Victor Maglin, 2010). At the same time, with the development of society and culture, as well as the demand for inheriting and innovating culture in the new era, design has the responsibility to reflect culture, which is reflected in the cognition and overall grasp of culture (Li Yanzu, 2020). In the context of the new era, modern design is an innovative culture and a design based on culture. The design works need to deeply reflect the history of culture and integrate ancient and modern times (Harakenya, 2006., Yu Suihuai, Ao Qing, Zhao Danhong, 2022), take the responsibility to understand the culture of a nation, a country, and an era.

Enamel-Colored Porcelain Culture in Qing Dynasty

Culture is a complex whole that includes knowledge, belief, art, morality, law, custom, etc. (Edward Tylor, 1913). Enamel-colored porcelain is an important part of Chinese traditional culture. The firing time of enamel-colored porcelain was from the 55th year of Kangxi to the 54th year of Qianlong, spanning the three dynasties of Kangxi, Yongzheng and Qianlong, and the production lasted a total of 73 years (He Qi, Yu Minquan, 2018., Zhou Sizhong, 2008., Guo Zhenhao, 2022). The Yongqian period of the Kang Dynasty was a prosperous period in Chinese history (Hong Bo, 2002), which brought an unprecedented prosperity of porcelain production in the Qing Dynasty, among which enamel-colored porcelain was the peak representative of Chinese porcelain (Guo Zhenhao, 2022., Zha Shuxiang, 2019., He Qi, Yu Minquan, 2018., Li Yingpin, 2019). Enamel-colored porcelain with diverse shapes and beautiful ornamentations is the product of the integration of Chinese and Western cultures. It represents the consciousness of the emperors in the Qing Dynasty and is used by the emperors (Jing Juan, 2011., Wang Guoxi, 2018., Gao Mingjing, 2021).

Today, under the social background of cultural awakening and the need for innovation, the production of contemporary enamel-colored porcelain has got rid of the shackles of the feudal system, and its target audience is no longer the emperor, but thousands of consumers (Zhou Sizhong, 2006). Product innovation needs to understand its cultural symbolic attributes and apply culture to design to make up for the lack of experience of designers (Bao Defu, 2017., Krippendorff, Butter, 1984). The cognition of the unique cultural elements of enamel-colored porcelain is the initial stage of the innovation of enamel porcelain, and on the basis of the understanding of the cultural evolution of traditional enamel-colored porcelain, it is endowed with new characteristics of The Times, so as to realize the connection between the achievements of Qing Dynasty enamel-colored porcelain and the national cultural characteristics of the new era.

Research Question

Under the background of national culture rejuvenation and national culture confidence, enamel-colored porcelain, as a part of traditional Chinese culture, has attracted certain research attention. In view of the lack of systematic and comprehensive analysis and review of the elements of enamel-colored porcelain culture in the current research. The research question of this study is based on the cultural three-level theory. What are the cultural elements of enamel-colored porcelain in Qing Dynasty? This question is broken into three sub-questions:

RQ1: What are the elements of the outer tangible level of Qing Dynasty enamel -colored culture?

RQ2: What are the elements of the middle behavioral level in the enamel-colored culture of the Qing Dynasty?

RQ3: What are the elements of the inner intangible level of enamel-colored culture in the Qing Dynasty?

LITERATURE REVIEW

Conceptual Clarification

The basic gist of the theory of cultural three levels

Leong and Clark proposed a framework for studying culture (2003), and they divided the cultural hierarchy into three levels: the external visible level, the intermediate behavioral level, and the internal intangible level. On this basis, Lin Rongtai et al. sorted out and summarized the specific elements of product culture corresponding to the three levels of culture (2007). Specifically speaking, the outer tangible level includes visual expression such as colors, materials, shapes, patterns, lines, and details and so on. The middle behavior level contains behavioral experience such as function, operability, convenience, safety, and craftsmanship and so on. And the inner intangible level contains connotation interpretation such as the allusion, cultural peculiarity, emotion and so on.

The practicability of the three-level theory of culture

Liu G G et al. (2021) pointed out that cultural elements include special elements such as symbols and taboos and universal elements such as values, beliefs, attitudes and behavioral intentions. Baudrillard (2019) integrates culture into products by constructing three levels of culture: material design (shape, material, totem, etc.), intermediate physical design (agreed behavior), and metaphysical design (psychological inner dimension of design). This is consistent with the basic connotation of the generalized cultural hierarchy theory of Lin Rongtai et al. In specific applications, Xu Qixian (2004) explores Taiwan's indigenous culture and extracts its cultural characteristics into a cultural product design program. Bao Defu (2017) explained that designers can design and express culture-based products by comparing specific elements corresponding to the three levels of culture. Based on the three levels of culture, he built a cognitive research system of cultural products, a design method of cultural products, and an interactive evolution system of cultural products. Li Wenhao (2017) analyzed the correlation between cultural level and design level, sorted out the characteristics of different levels of culture, proposed to extract cultural elements from the appearance level, behavior level and emotional level, and then applied them to the design of cultural and creative products. Chen Feihu et al. (2018) constructed a Uyghur daily necessities design model from the perspective of physical state, behavior and mentality. Chen Guodong et al. (2019) proposed a four-diamond design model for cultural creative design based on three cultural levels. Chen Pei (2023) explained, screened and extracted elements of Mawangdui's health culture by levels of cultural stratification theory, and on this basis, created element design library to guide innovative design.

To sum up, the three-level theory of culture has been applied to the product field. This theory has important reference value for the interpretation of cultural elements. Based on the three-level theory of culture, this study can make full use of cultural resources to build the framework of cultural elements of enamel-colored porcelain, and at the same time provide direction and theoretical basis for the next step to analyze the characteristics of cultural elements and the transformation of culture into design.

Empirical Review

Many scholars carry out innovative understanding and development of products from different angles. In order to meet the needs of user experience, performance is the most important attribute when it comes to application products (Anwar, Vermol and Siran, 2022). A set of pattern designs with different design structures can help designers solve performance-related aesthetic design development problems. Hassan et al., (2021) believes that there are some negligible experimental fragments and fresh collection of these types of patterns. On the basis of meeting the performance requirements, the cultural elements are “activated” and integrated into the new era characteristics to enhance the identity and experience of the product culture. In the field of research on the inheritance and innovation of enamel-colored porcelain in the Qing Dynasty, many researchers have provided insights from different cultural elements. Wang Guoxi (2018) analyzed the characteristics of the craftsmanship and porcelain body of enamel-colored porcelain, proposed that the craftsmanship of enamel-colored has inheritance and profound national culture, and advocated that in contemporary times, art creators should create excellent enamel-colored porcelain works from the aspects of theme, artistic conception, techniques and forms. The modern expression of enamel-colored porcelain needs to start from the aspects of material, color glaze, shape, technique and cultural integration, and apply Chinese and Western aesthetic thoughts to modern porcelain art practice (Li Yingpin,2019).In terms of the development and innovation of enamel-colored porcelain, Liu Yu (2021) took Jingdezhen Xiongjianjun Enamel-colored Porcelain Co., Ltd. as an example to explain that enamel-colored porcelain has rich cultural value, aesthetic value, technological value and economic value, and proposed that the native culture of local nature has become an important resource for the reconstruction of Jingdezhen porcelain culture and economy. Although the above research has important reference value for exploring the direction of innovation of enamel-colored porcelain, it lacks the in-depth analysis of the culture contained in enamel-colored porcelain of the Qing Dynasty.

Liu Yuan (2020) revealed the main decorative features of enamel-colored porcelain of Kangxi, Yongzheng and Qianlong in Qing Dynasty from the aspects of decorative content, enamel color, technology, and Chinese and Western culture. Wang Qingli (2021) explained that enamel-colored porcelain in the Qing Dynasty was the product of the emperor’s aesthetic needs and studied the evolution characteristics of the expression techniques of enamel-colored porcelain in the Qing Dynasty during the cultural exchange with the spread of Western learning in the east from the perspective of the fusion of court porcelain technology and Western foreign culture. Guo Zhenhao (2022) elaborated the characteristics of Kangyongqian enamel-colored porcelain from the aspects of porcelain body, type, subject matter and style, and expounded that the western craft and the emperor’s personal aesthetics were the driving forces for the emergence and development of enamel-colored porcelain. These studies explain the characteristics of enamel-colored porcelain from different cultural elements but based on the theory of three levels of culture, the cultural elements involved in these studies are not comprehensive and systematic.

The characteristics of cultural elements are the important content connecting culture and product design. A cultural concept is formed by the focus of various cultural elements. Under the joint action of these elements, culture presents diverse and different characteristics (Pan Yunhe, 2011., Baodefufu, 2017). Based on cultural theories, this study will systematically explore the cultural elements of enamel-colored porcelain in the Qing Dynasty and provide a theoretical framework for a comprehensive analysis of the cultural characteristics and innovative methods of enamel-colored porcelain in the Qing Dynasty.

METHODOLOGY

Excavation of Cultural Elements Based on Experimental Research

Enamel-colored porcelain is optimized at the level of abstraction, which helps to improve the quality of its innovation and facilitates the communication between designers. In addition, designers consider a pattern as a style (Anwar, 2016). For example, the paper (Anwar et al, 2015) validates the category of design patterns as three abstract-level patterns in which designers describe and express how to organize simple elements or simple patterns to obtain subsystem patterns. When designers create a design feature, they can use domain-driven design patterns (Anwar and Diana, 2022) to easily arrange data related to classified components into a certain design format. Based on the theory of cultural levels and related design patterns, this paper excavates cultural elements from traditional cultural relics in order to better understand the past and create cultural products that meet the needs of the future (Dong Yannan, 2017). In addition, through experimental research, this research will identify and excavate the cultural elements contained in Qing Dynasty enamel, providing a framework for modern porcelain designers to create cultural, inheriting and creative enamel-colored porcelain.

Experimental Research Method

Firstly, through Delphi expert consultation method, 42 representative enamel-colored porcelains of Qing Dynasty were sorted out and summarized. Secondly, this study invited 16 subjects based on the three-level theory of culture to identify these cultural elements of Qing Dynasty enamel-colored porcelain and record them in written form. Thirdly, the researchers divided the subjects into two groups for focus group discussion to elaborate and analyze the findings of the previous stage. And the researchers recorded the stage. Finally, the researchers used the method of content analysis to analyze the discussion results of the focus groups.

I. Data Acquisition

Delphi method of expert consultation

Delphi expert consulting method is a subjective and qualitative expert consulting method pioneered by O. Helm and N. Dalke in the 1940s and initiated by RAND Corporation in the United States, which is essentially a method of anonymous group communication, that is, there is no contact between experts and no discussion. The general process is to collect, organize, summarize, feedback and modify the opinions of experts through multiple rounds, and finally get the basically unanimous opinions of experts.

At present, the number of enamel-colored porcelain in circulation in the world is not more than 500 pieces, of which 40 pieces are stored in the Palace Museum in Beijing, about 300 pieces are stored in the Palace Museum in Taipei, and a few are stored in foreign museums and personal collections (Zhou sizhong, 2006., Liuyu, 2021). This study is based on the collections of the Palace Museum in Beijing and the Palace Museum in Taipei. Through direct observation and archival data, 100 cases of six types of enamel-colored porcelain in Qing Dynasty such as bowls, bottles, cups, pots, plates and boxes are obtained.

In this study, Delphi expert consultation was carried out to select 100 enamel-colored porcelains in Qing Dynasty. In order to avoid herd mentality and "leader effect", this study adopted online and anonymous method. The implementation steps was as follows.

- (i) The Researcher organized a panel of experts. The group consisted of 10 experts in the field of porcelain.
- (ii) The researcher provided the experts with 100 pictures of Qing Dynasty enamel-colored porcelain and corresponding profiles of enamel-colored porcelains, and asked them to select 42 representative pictures.

- (iii) The experts presented their own forecasts and reasons based on the materials.
- (iv) The researcher summarized the opinions of the experts and then distributed the first round of summaries to the experts in an anonymous form. On this basis, the experts further modified. In this way, the ideas were revised round by round until a consensus was reached.
- (v) The researcher conducted a comprehensive analysis of the opinions of the experts.

After four rounds of Delphi, experts selected 42 pieces of representative enamel-colored porcelains in the Qing Dynasty, including bottles, bowls, plates, cups, pots, plates, boxes. In the first round of expert analysis results, experts selected 18 identical representative enamel-colored porcelains in the Qing Dynasty. In the second round of expert screening results, 10 enamel-colored porcelains were added. Then, in the third round of screening, 9 enamel-colored porcelains were added. Until the fourth round of expert consultation, the selection proposals for 42 enamel-colored porcelains were agreed. In this study, the legends of the above mentioned samples were marked with serial numbers, and the necessary introduction to the legends was made, which can be used as materials for experimental research.

II. Individual Analysis

Based on the theory of three levels of culture, the subjects were asked to perceive 42 enamel-colored porcelains in Qing Dynasty analyzed and selected by experts, which provided the original parameters for analyzing the cultural elements of enamel-colored porcelain.

Subject characteristics

This study mainly adopted the method of stratified sampling. A total of 16 people participated in the test, including 8 males, accounting for 50%, and 8 females, accounting for 50%. These personnel designers with professional learning experience in porcelain design, had a good interest in the design innovation of culture-based porcelains, and had 4-6 years of design experience.

Outline of individual analysis

The content identified by the subjects corresponds to the “three-level theory of culture” from Lin Rongtai et al. The Outer tangible level corresponds to the recognition content in which colors, materials, shapes, patterns, lines, and details can be perceived. Mid behavioral level corresponds to the perception of function, operability, convenience, safety, and craftsmanship in the content. Inner intangible level corresponds to the recognition of content that can perceive allusion, cultural peculiarity, emotion. (Figure 1).

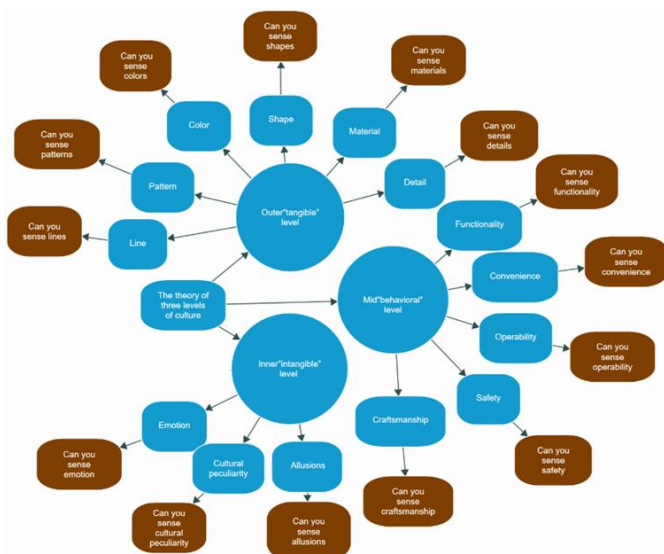


Figure 1 The corresponding relationship between the content of recognition and the three-level theory of culture

The steps of individual analysis

A total of 16 data were collected in this experiment, of which 16 were valid analysis data. The process of experiment collection and statistics is as follows:

- (i) The researcher sent 42 pieces of enamel-colored porcelains online to the participants.
- (ii) The researcher briefly introduced the main purpose and test content of the experiment to the subjects and obtained the informed consent of the subjects.
- (iii) During the experiment, the recorder asked the subjects to identify the cultural elements according to the content outline and described them in written form.
- (iv) The researcher conducted statistics on relevant data

III. Focus Group Discussion

Process

- (i) The participants were divided into two groups.
- (ii) Based on the results of the previous test, the two groups conducted online discussions on the cultural elements of enamel-colored porcelain in Qing Dynasty through the Tencent conference.
- (iii) It is required to open the whole video, and the duration is maintained at 1 hour.

In the process of focus group analysis, most designers analyzed the three levels of culture, and only a few designers analyzed the two levels of culture.

Method of data analysis

This study used the thematic analysis method of qualitative research to analyze the experimental results of the stage. The analysis method focused on similarities and differences, took the description of cultural elements of enamel-colored porcelain in Qing Dynasty as the analysis object, and interpreted the data through thematic analysis. The process of thematic analysis mainly followed the six-stage process proposed by Braun and Clarke (2006), that was, getting familiar with the experimental data, generating the initial code, finding the theme, reviewing the theme, refining and redefining the theme, and reporting the results.

RESULT

The Results of Individual Analysis

After the experiment on the identification of cultural elements of 42 Qing Dynasty enamel-colored porcelains, the researchers conducted statistics and analysis on the data from the subjects, and obtained the perceived frequency of the corresponding elements in the three-level theory of culture. According to the statistical results, at the outer tangible level, the perceived rate of lines and details is less than 50%, while the perceived frequency of colors, patterns, shapes and material is 100%. In addition, the perceptual frequency of cultural elements at Mid behavioral level and Inner intangible level was lower than that of the outer tangible level. This reflects the fact that the outer tangible level of the culture is easier to identify than the other levels. In the Mid behavioral level, the perceived frequency of functionality is higher than 90%, the perceived rate of craftsmanship and operability is higher than 60%, and the perception of convenience,

operability, and safety is lower than 50%. In the Inner intangible level. The participants perceived cultural peculiarity more frequently than 90%, allusions more than 70%, and emotion less than 50%. (Table 1)

Table1. Statistics on the identification datum for cultural elements of enamel—colored porcelain in Qing Dynasty			
items		Perceived number	Perceived frequency
Outer tangible level of Culture Reflected in Porcelain	color	16	100%
	material	16	100%
	shape	16	100%
	pattern	16	100%
	line	4	25%
	detail	2	12.5%
Mid behavioral level of Culture Reflected in Porcelain	function	15	93.8%
	operability	12	75%
	convenience	2	12.5%
	safety	4	25%
	craftsmanship	10	62.5%
Inner intangible level of Culture Reflected in Porcelain	cultural peculiarity	15	93.8%
	allusion	12	75%
	emotion	5	31.3%

The Results of Focus Group Discussion

According to the experimental results of the stage, a total of 132 data coding units were summarized in this study, and three rounds of data coding, thematic identification and review were carried out based on the thematic analysis method. In the process of thematic analysis, this study summarized the cultural elements of enamel-colored porcelain in Qing Dynasty and produced 9 sub-dimensions under 3 core dimensions. The three core dimensions cover the visual expression of the outer level, the behavioral experience of the middle level, and the interpretation of the connotation of the inner level. The 9 sub-dimensions are the pattern, color, shape, material, craftsmanship, function, usage experience, allusion, cultural peculiarity.

FINDINGS

Elements of the Outer Tangible Level (Table 2)

The elements of the outer tangible level of enamel-colored porcelain culture in Qing Dynasty include the pattern, color, shape, and material. Patterns refer to the use and combination of traditional patterns. The colors include the matching and combination of traditional colors. The shapes of enamel-colored porcelain refer to the traditional morphological characteristics of porcelain. Materials refer to the traditional materials on kaolin and enamel pigments. These elements embody the external visual expression of enamel-colored porcelain.

Table 2. Elements of the outer tangible level of enamel-colored porcelain culture in Qing Dynasty

Core Dimensions	Subdimensions	Dimensional analysis	Examples On Original Statement
Visual expression	pattern	To use traditional patterns	Pattern refers to the decoration on the surface of enamel-colored porcelain, including patterns, inscriptions, seals, poems, auspicious characters, such as “longevity”, and they are combined in different forms. Enamel-colored porcelain is decorated in very rich colors, which includes traditional colors of ornamentations, inscriptions, seals, poems, auspicious words, and they are matched harmoniously. Different types of enamel-colored porcelain also have different traditional styles, such as bowls with large bowls and small bowls. The material of enamel-colored porcelain refer to porcelain made of kaolin and traditional enamel pigment.
		To combine patterns	
	color	To use traditional colors	
		To match colors	
	shape	To use the traditional morphological characteristics of porcelain	
	material	To use traditional materials	

Elements of the Mid Behavioral Level (Table 3)

The elements of the mid behavioral level of enamel-colored porcelain culture in Qing Dynasty include three aspects: function, craftsmanship and usage experience. The function includes utility and decoration. In the experiment, the craftsmanship felt by the subjects mainly includes the painting technique and the decorative technique. The usage experience of enamel-colored porcelain culture refers to the memories it can awaken. These three elements reflect the experience behavior of consumers using products and designers creating products.

Table 3 . Elements of the mid behavioral level of enamel-colored porcelain culture in Qing Dynasty

Core Dimensions	Subdimensions	Dimensional analysis	Examples On Original Statement
Behavioral experience	function	To have decorative function	Enamel-colored porcelain is to meet the needs of daily necessities, but also to meet the spiritual needs of the decoration
		To have utility	
	craftsmanship	To use traditional Painting craftsmanship	The combination of traditional Chinese painting and Western painting promoted the progress of enamel-colored porcelain
		To use traditional decorative craftsmanship	In the decorative techniques of enamel-colored porcelain in the Qianlong period, the main picture of various compositions or shapes is arranged on the colored ground similar to the brocade pattern.

	usage experience	To awaken the memory of history	To feel the luxurious court life
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Elements of the Inner intangible level (Table 4)

The inner intangible the cultural elements of enamel-colored porcelain in Qing Dynasty contain allusions and cultural peculiarity. The allusions of enamel-colored porcelain mainly refer to the philosophy of the story, the fun of customs. The cultural peculiarity of enamel-colored porcelain reflect the enamel-colored porcelain in Qing Dynasty had the symbolic meaning, aesthetic interest, poetry culture, traditional thought. The above elements reflect the consciousness resonance caused by the connotation of enamel-colored porcelain culture.

Table 4 . Elements of the Inner intangible level of enamel-colored porcelain culturein Qing Dynasty			
Core Dimensions	Subdimensions	Dimensional analysis	Examples On Original Statement
Consciousness resonance	allusion	To embody the philosophy of the story	Among the decorative themes of enamel-colored porcelain, there are mother and child pictures, landscape figures with plot and story.
		To embody the fun of customs	Enamel-colored porcelain with chrysanthemum as the theme reflects the custom of appreciating chrysanthemums in the Qing Dynasty.
	cultural peculiarity	To embody the symbolic meaning	Most of the patterns are symbolic.
		To embody aesthetic interest	The enamel-colored porcelain of Kangxi, Yongzheng, and Qianlongeach has their unique aesthetic styles.
		To use poetry culture	Some Ornamentations of enamel- colored porcelain from the Yongzheng and Qianlong periods are incorporated into the poems.
		To embody traditional thought	The patterns in enamel-colored porcelain also reflect traditional Chinese thought.

DISCUSSION

Based on the theory of three levels of culture, this study summarized the cultural elements of enamel-colored porcelain in Qing Dynasty through experimental research. The whole process of this experiment was through Delphi expert consultation, individual analysis, focus group analysis and data analysis, which

shows the rigor, depth and induction of this study. By integrating the elements of different cultural levels of enamel-colored porcelain, for the first time in this research field, experimental methods are used to study the cultural connotation of enamel-colored porcelain and reveal its multi-level cultural dimensions, which is conducive to researchers to further clarify the theory of cultural characteristics of enamel-colored porcelain, and also provides a cultural theoretical framework for contemporary designers to carry out the inheritance and innovation of enamel-colored porcelain

However, this study has some limitations. First of all, the subjects participating in this experimental study are designers in the field of porcelain. Due to their limited knowledge and literacy, they may miss some valuable materials. In order to ensure the quality of the experimental study, the participants in this study have 4-6 years of design experience. Other designers and experts in the field may also have a wider range of knowledge and insights, so integrating the knowledge data and collection techniques of different types of porcelain researchers may be the focus of future research. Second, this study did not capture innovative insights among all subjects, so future studies should include additional content not observed in current studies when independently analyzing factors at each level. In addition, subjectivity analysis cannot be used to summarize in-depth insights about the cultural characteristics of enamel-colored porcelain, and the current experimental data have not yet clarified the deep characteristics of each cultural element. Therefore, the research on the cultural characteristics of enamel-colored porcelain in Qing Dynasty also needs to focus on the various dimensions involved in the culture of enamel-colored porcelain, and further summarize deeper knowledge.

CONCLUSION

The integration of cultural elements into product creative design has gradually become a new trend in the global market (Lin, R. T., Cheng, R., & Sun, M.X., 2007; Dong Yeonan 2017). This research is devoted to exploring the cultural elements of the inheritance and innovation of enamel-colored porcelain, based on the theory of cultural hierarchy of enamel-colored porcelain in Qing Dynasty, and using the experimental research method, to carry out the research on the cultural elements of enamel-colored porcelain in Qing Dynasty. In this study, 16 subjects who met the experimental criteria were selected to identify the cultural elements of enamel-colored porcelain. On this basis, through focus groups, subjects were grouped to focus on the cultural elements of enamel-colored porcelain. Finally, in this study, thematic analysis was used to analyze the experimental data. In the analysis results, this study summarized the cultural elements of enamel-colored porcelain in Qing Dynasty, which consists of 3 core dimensions and 9 sub-dimensions, as well as the specific contents corresponding to each dimension. However, there are some limitations in this study, among which the most important point is that this study did not capture the deep characteristics of each cultural element of enamel-colored porcelain in the Qing Dynasty through experimental research. As a unique element, cultural elements can both enhance product identification and enhance customer experience (Lin, R. T., 2007). Therefore, the cognition of various elements of enamel-colored porcelain Kangxi, Yongzheng and Qianlong dynasties has far-reaching significance for the inheritance and innovation of contemporary enamel-colored porcelain and the development and innovation of traditional culture (Liu Yuan, 2020). Based on the research on the cultural elements of enamel-colored porcelain in Qing Dynasty, this research field has put forward a need to further explore the characteristics of its various elements.

ACKNOWLEDGEMENT

We would like to acknowledge The Ministry of Higher Education Malaysia for the financial support and acknowledged the generous participation of the interaction designers in the research. Fully appreciate The Ministry of Higher Education Malaysia for the financial support under the FRGS grant with Sponsorship Grant No. FRGS/1/2021/SSIO/UITM/02/38 and registered under UiTM Research Management Centre File No. 600-RMC/FRGS 5/3 (177/2021)

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