

Understanding User Needs for Creative Marine Culture Products: A Grounded Theory Approach

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Abstract: Cultural and creative products speak about culture, history, and a country's identity. Under the consumption mode of the new era, designers can create excellent cultural and creative products only by accurately grasping the consumers' demand for the value of the products. This study aimed to explore the issues and expectations within maritime cultural creative product. Grounded theory was used to conduct user interviews. A three-level coding method to code, analyze and construct logical relationships for the interview texts according to the principles of grounded theory was also used. In-depth analysis of the demand value of local consumers was conducted to explore the design path of marine cultural creative products, to improve the effective docking of supply and demand in the product market. The study results showed that users' needs for marine cultural creative products mainly include nine core concepts (aesthetic value, display value, aesthetic taste, cultural impression, memory empathy, utility value, individual needs, performance value, and service value.) and functional value. Moreover, cultural and creative products designed on the basis of this research can gain a competitive advantage in the market, enhance the vitality of the surrounding marine cultural and creative market, and play a vital role in the inheritance, protection and development of marine culture. In future research, integrating scientific quantitative methods can aid in making experimental data more precise.

Keywords: Cultural and Creative Products, Grounded Theory, Theoretical exploration, User Needs, Marine Culture.

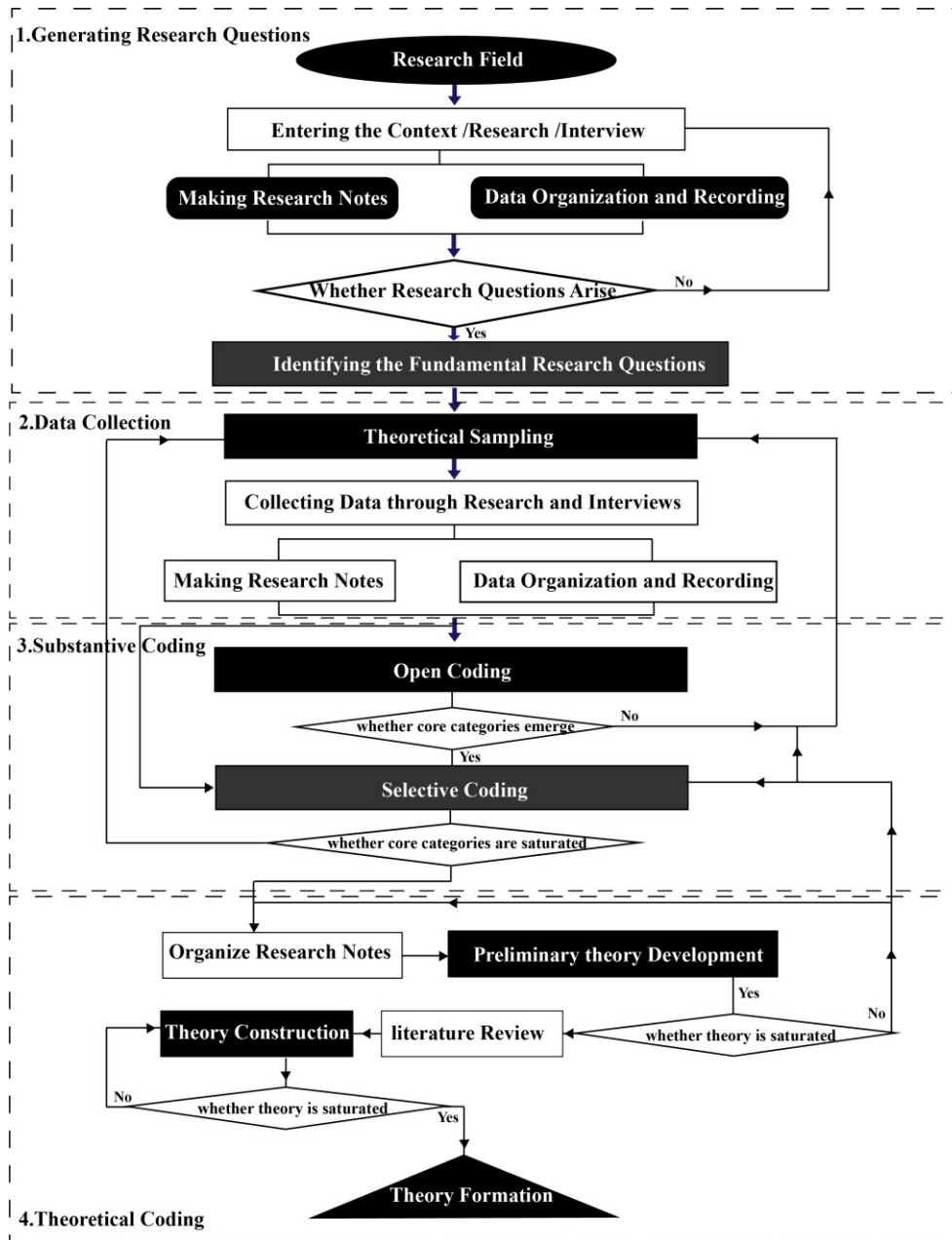
1. Introduction

With the continuous advancement of social science and technology, people's living standards are gradually improving, and their demands for products are no longer solely focused on functionality[1]. Instead, products with cultural significance and profound meaning are increasingly favored[2]. As a result, many cultural and creative products have garnered attention in today's society. Among them, maritime culture constitutes a part of human history and cultural heritage. The historical development of many nations and ethnic groups is closely intertwined with maritime culture, thereby giving rise to its rich diversity[3]. In conjunction with concerns about environmental preservation and climate change, there is a growing focus on marine ecology and species diversity[4]. Exploring the development of creative products rooted in maritime culture serves a dual purpose. On one hand, it enhances people's understanding of maritime culture, and on the other hand, it satisfies users' demand for products with spiritual value, while also contributing to the stimulative role of social and economic aspects[5].

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Maritime culture is a significant component within the history and cultural heritage of humanity. It carries a diverse array of national memories, traditions, and wisdom[6]. The ocean holds unique symbolic meanings and emotional connections within different civilizations, serving as a vital symbol of national and cultural identity[7]. It is one of the Earth's largest ecosystems, with vast marine ecologies and species diversity. Additionally, maritime culture plays a significant role in driving industries such as tourism and leisure[8]. As society evolves and cultural exchanges become increasingly frequent, maritime culture has emerged as a crucial domain for creative product development. Cultural and creative products, in particular, play an essential role in preserving cultural heritage, fostering cultural exchanges, enhancing cultural value, and elevating the quality of life[9]. Maritime culture creative products, with their unique themes and cultural significance, are captivating an increasing number of consumers and creators. However, despite the market's keen interest in these products, there exists a lack of profound understanding regarding the genuine needs and preferences of users. One of the scholars, X Liu, pointed out that, in modern society user behaviors and habits are constantly evolving, rendering traditional product-centered design approaches less relevant to contemporary demands[10]. One of the scholars, Wang Jinhong, argued that, only by delving into a comprehensive understanding of user needs and habits can products that align with user expectations be crafted [11]. Scholar Xu, F argues that the current market of marine cultural creative products lack understanding of the concept of culture and is disconnected from the concept of consumer habits [12]. In response to these problems, designers need to find a way to develop marine cultural creative products that meet the needs of users. As society progresses, people's thought processes are also evolving. Therefore, designers need to promptly understand user requirements to create products that align with these needs. After reviewing relevant literature, it has come to light that there is insufficient research on user demands for maritime cultural creative products in the context of the new era. This study took the value of consumer demand as the research perspective, and researched the demand expectation of marine cultural creative products, to deeply understand the user's demand, motivation and expectation for marine cultural creative products. It also summarized and analyzed user needs based on the research results. The study aimed to explore the consumer's perception of product value, explore the development direction of marine cultural creative products on this basis, provide certain theoretical guidance for the effective organization of the subsequent design and development of cultural and creative products and be a basis for the realization of the fusion of the significance for the realization of the fusion of the industrial exhibition of marine culture and the market economy.

This study initiated from a user perspective to explore issues and expectations within maritime cultural creative products. Grounded theory is characterized by precision, utility, flexibility, and legitimacy. This research was based on the classic grounded theory for problem exploration. The research process is illustrated in [Fig. 1], encompassing four aspects: formulation of research questions, data collection, data processing, and theory construction. In accordance with this principle, a model embodying the user demand value of maritime cultural creative products was globalization and the digital age, the market potential of maritime cultural creative products is increasingly pronounced. Ocean tourism and marine experiences are gradually becoming new choices for leisure and cultural consumption. Due to historical and cultural factors, and lifestyle preferences, this research primarily focused on individuals from the East Asian region. The primary focus of this study was to explore the correlation between everyday product design and maritime culture, excluding artistic forms such as literary works, which fall beyond the scope of this research. Through research involving as many representative users as possible, more recommendations were gathered to more scientifically explore user demand theories.



[Fig. 1] Research Process Diagram

2. Literature Review

2.1 Concept of Grounded Theory

The Grounded Theory, proposed by American scholars G.L. Strauss and A.L. Corbin in 1967, is a qualitative research methodology. Its core concepts are "Grounded" and "Theory," emphasizing the induction of theory from data rather than guiding research by pre-existing theories[13]. Simultaneously, Grounded Theory underscores the discovery of new concepts and theories from practice and data, Social Science theories are constructed by researchers, based on their observations and interactions with the research question and the subjects or participants[14]. They comprehensively gather and analyze data, and then induce, construct, and test the theories based on their theoretical sensitivity. This allows them to provide reasonable interpretations of research phenomena and issues, predict or guide future developments, making Grounded Theory one of the mostly used scientific methods in qualitative

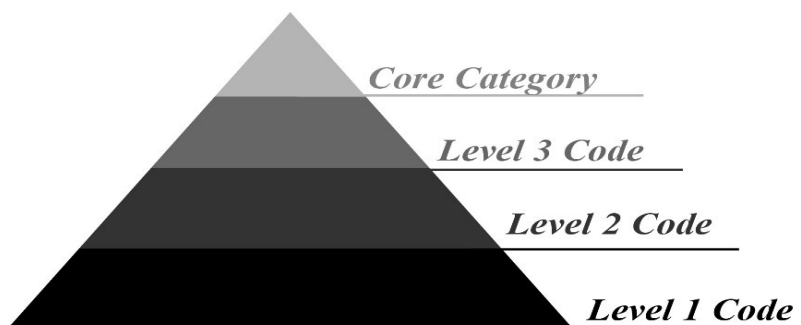
research.

Appropriate research methods help cultural and creative product designers to extract and rationally transform consumer needs into design concepts, which will help them to subsequently design a successful program[15]. Compared to other research methodologies within the realm of design, Grounded Theory, as a representative qualitative research method in the academic field, emerged slightly later. Nevertheless, this research approach is distinct in that it relies extensively on empirical data and employs a bottom-up logic analysis to ultimately construct theoretical models[16]. In grounded theory research, no a priori theoretical assumptions are made. It starts from design and early sampling, proceeds to data acquisition, continues with bottom-up data analysis, core concept extraction, and logic relationship construction, and concluded by presenting the final theoretical outcomes.

Grounded Theory is a well-defined procedure used to generate conceptual hypotheses that help address specific concerns. It is not a closed-process methodology like some statistical methods. Currently, Grounded Theory is primarily divided into three major schools, as shown in [Table 1], with the most classic being the Classic Grounded Theory. The analytical process of Classic Grounded Theory involves first-level coding (open coding), second-level coding (axial coding), third-level coding (selective coding), and testing theoretical saturation, as depicted in[Fig. 2] [17].

[Table 1] Branches of Grounded Theory School Table

Factions	Characteristic
Claser’s	Empiricism (Objective)
Strauss & Corbin’s	Interpretivism (Subjective)
Charmaz’s	Constructivism (Integration of Subjective and Objective)



[Fig. 2] Emergence Structure Diagram of Core Categories

2.2 Current Status of Cultural and Creative Product Research Based on Grounded Theory

As society progresses, there is a growing need for emerging research to define the issues arising from current cultural and creative products and propose corresponding solutions and design concepts. Among these, Song Na[18] based on Grounded Theory research, has explored the design concepts of products related to Mongolian culture. This scholar utilized Grounded Theory to conduct field interviews, performed coding analysis and logic relationship construction on the interview texts, and applied the user demand value representation model as a guiding principle in the design process of cultural and creative products. This approach facilitated the selection of creative sources and extraction of cultural elements for Mongolian cultural and creative product design. It effectively guided product design, innovation, and brand enhancement, and as a result, contributed to the inheritance of Mongolian culture and the vibrancy of the local cultural and creative market.

Scholar Luo JiaHuan[19] conducted a design research on Qiantang River tourism cultural and creative products based on Grounded Theory. This study found that users' aesthetic and functional demands are the core requirements for cultural and creative products. Aesthetic demands include style, packaging, color, and quality. Functional demands consist of four primary categories, namely practicality, memorability, collectibility, and portability. Innovative demands encompass three initial categories, which are design creativity, conceptual innovation, and form innovation. Emotional demands are essential factors driving users' purchases of regional cultural and creative products and include aesthetic sensibility, interactive experience, and emotional resonance. This scholar's research provides valuable insights for developing regional cultural and creative products.

Scholar Zhang AnHua[20] conducted research and analysis on the cultural gene inheritance and design transformation of ancient Chinese dynasties, specifically focusing on the Southern Dynasties, by integrating Analytic Hierarchy Process (AHP) and Grounded Theory. Based on the theory of memes (Mimeme), this scholar extracted the typical forms, patterns, colors, and other overt visual factors of relevant cultures, and latent semantic factors. These factors were then combined with Grounded Theory interviews to analyze user preferences and demands for cultural and creative products. Utilizing Grounded Theory as a qualitative research approach, the scholar explored the cultural demands of users pertaining to the Southern Dynasties.

From the above-mentioned research analyses, it is evident that Grounded Theory is a commonly used qualitative research method for studying user demands for cultural and creative products. Currently, most scholars primarily focus on investigating user demands related to cultural and creative product categories centered around regions or ancient traditional cultures. However, there is currently no specific qualitative research on user demands for maritime cultural creative products. With the increasing pursuit and significance of maritime culture, there is a strong research necessity to explore user demands for related cultural creative products.

3. Research Design

3.1 Research Process

3.1.1 Research Instrument

To obtain consumers' current usage experiences of maritime cultural creative products and their expectations for future product development, this study employed a semi-structured interview approach. To ensure the interview data's high credibility, the interviewing experiences of other scholars were referred to, combined with interviews based on consumers' experiences with purchasing cultural and creative products. The interview guidelines primarily encompassed the following questions as shown in [Table 2] with adjustments made to the specific interview context based on interactions during the user interview process[21].

[Table 2] User Interview Outline

Numbering	Main Interview Questions
1	Are you familiar with cultural and creative products? Have you purchased cultural and creative products related to maritime culture?
2	What maritime cultural souvenirs have you purchased, and have they fulfilled your purchasing needs?
3	Are you satisfied with the maritime cultural creative products you have purchased or encountered in the market?
4	What kind of maritime cultural products would you like to be able to purchase?
5	What characteristics or features of maritime cultural creative products do you value the most?
6	Which elements of maritime culture would you like to see incorporated into cultural and creative products, or how would you like them to be integrated?
.....

During the actual interview process, the researcher guided the interviewees to expand on the original questions based on the current context, ensuring the rationality and richness of the raw research data. Before each interview research session begin the research team selected a small group of individuals for a pilot interview to validate the appropriateness of the interview guidelines design.

3.1.2 Data Source and Sample Selection

Due to reasons such as school summer vacations and company holidays, the interview process for this research was primarily conducted through a combination of online and offline methods. A total of 15 participants were interviewed in this study. All participants in this study provided their informed consent for the public disclosure of interview information. Specific details about the research participants are presented in the [Table 3], with the research period spanning from June 2023 to August 2023. In accordance with the nature of Grounded Theory research requirements, each participant engaged in an in-depth conversation averaging around 15-25 minutes based on the interview guidelines. Following the semi-structured interview approach, researchers encouraged participants to extend discussions beyond the outlined topics based on the actual situation during the interviews.

[Table 3] Interviewee Basic Information

Sample Information	Project	Number of Individuals	Percentage(%)
Gender	Male	6	40%
	Female	9	60%
Educational Level	Below Bachelor's Degree	2	13%
	Bachelor's Degree	3	20%
	Bachelor's Degree and Above	10	67%
Occupation	Student	9	60%
	Professor	3	20%
	Company Employee	3	20%
Frequency of Cultural and Creative Product Purchases	≥ 3	10	67%
	< 3	5	33%

3.1.3 Interview Results Processing

Theoretical saturation in the Grounded Theory experiment refers to the state in which no new concepts and categories emerge during the analysis process[22]. Therefore, in this study, coding process was conducted simultaneously during the interview process until the information provided by the interviewees became repetitive and no new nodes could be added as interview conclusions. Second the obtained coded data was subjected to data coding analysis. Nodes based on the research themes and interview results were established, and further analysis was conducted according to the established structural model.

3.2 Implementation of Data Coding

3.2.1 Open Coding

Open coding is the first step in information coding, where primary categories are derived solely from the users' interview records, devoid of the researcher's subjective imagination and judgment. Throughout the coding analysis process, all the information covered in the interview data design remains open. In this study, each sentence was meticulously analyzed based on the users' interview text, applying suitable labels for categorization. Through iterative comparison and content organization, effective information was gradually summarized and consolidated, transforming the original conversation material into

conceptualized and categorized core vocabulary. This process demanded continual adjustments by the researchers to refine the coding content and enhance the compatibility of concepts, contributing to the emergence of core categories later on. By reviewing the original interview text, 168 pieces of valuable information were obtained. Duplicate occurrences were removed, and semantically similar concepts were merged, classified under the same category, and represented by new concepts. Eventually, 41 concepts were identified, resulting in 28 initial categories. Further details are shown in [Table 4].

[Table 4] "Open Coding" Process for Ocean Culture Creative Product Demand Research Based on User Interviews

Interview Statements	Conceptualization	Initial categories
I previously purchased a seashell craft, and it looks very nice when placed at home.	Exquisitely crafted	Decoration
The impression that I currently have of ocean-themed creative products available in the market is that they often revolve around marine creatures as their main design elements, which can be quite monotonous.	Combining a diverse range of ocean cultural elements	Personalization
Most of the current marine culture creative products have a similar design pattern, as if they are mass-produced in a factory. If combined with ocean conservation concepts, I believe this would be more meaningful.	Igniting the desire to purchase	Shape
	Cannot simply imitate.	Innovation
For me, I place greater emphasis on the functionality and symbolic meaning of ocean culture creative products. First and foremost, I consider the appearance – if it includes certain unique symbols that excite me. If the product also reflects the distinctive features of the local ocean culture, I would purchase it and gift it to my friends, sharing the experience with them.	Incorporation of environmental conservation principles.	Environmental conservation.
	Showcasing Local Features	Distinctiveness
	Easy to Display	Display
	Exquisite	Patterns
In ocean culture, marine resources have given me a deeper understanding of the ocean. If environmental concepts could be integrated, I believe it would have a positive promotional impact.	Conducive to Sharing	Conveyance
	Ecological conservation	Environmental protection
I have been living in a coastal city since I was young. I believe that ocean culture creative products should also serve as a form of popularization and promotion of ocean knowledge. This way, people can gain an understanding of some knowledge.	Dissemination of knowledge	Cultural dissemination
	Reflecting historical and cultural aspects	Historical value
The functionality of these ocean culture creative products may not need to be extensive, just small everyday products that are frequently used. Because using and seeing such products repeatedly in daily life can leave a deeper impression on me.	Daily use	Practicality
	Portability	Convenience
If I were to make a purchase, the marine cultural creative product would either need to be highly meaningful, offer great value for money, or have a well-designed appeal that makes it worth buying.	Meaningful symbolism in the creation	Novelty of the product
	Meaningful symbolism in the creation Reasonable pricing	Cost-effectiveness
	Showcasing local marine characteristics	Recognizability
The unique materials used in marine culture creative products would pique my curiosity, and if the texture of the materials is comfortable to touch, it would also be pleasing.	Comfortable to touch	Texture
	Unique materials	Personalization
Those that appear more upscale, have good quality, and come in exquisite packaging can be taken back to give as gifts to friends.	Good quality	Quality
	Exquisite packaging	Packaging
	Gifts for friends and family	pass on to sb else
What I desire is the kind of product that, years later, when I see it, can evoke the unique memories that belong only to me.	Easy to evoke memories.	Emotional connection
	Reflecting local characteristics.	Recognizability
The deep color of the ocean deeply attracts me, and I love the vastness of the sea. If the product could also have unique colors and patterns like the ocean, that would be great.	The color of the ocean	Color
	Patterns of the product	Patterns
Marine culture should be a unique culture that represents the harmonious coexistence between humans and nature. If these cultural concepts are combined with modern technology, it can better align with the development of the era and meet aesthetic needs.	Alignment with era development	Sense of the Times
	Cultural concepts	Cultural Dissemination
It would be great if ocean-themed creative products could be categorized based on the target audience, thus catering to different user needs. This is because my aesthetic preferences and	User needs	Requirements
	User differences	Values

lifestyle concepts are different from those of my mother.		
If everyday products are infused with ocean culture, it's likely that the purchase rate would be higher.	Frequent use	Practical
Different regions have diverse maritime cultures, and the design of ocean culture creative products should be developed and researched in conjunction with the local culture.	Showcasing distinct regional features	Differentiation
	Displaying local maritime culture	Presentation
	Standing out	Personalization
Marine cultural elements possess diversity; however, most cultural and creative products currently tend to select oceanic elements too uniformly, lacking uniqueness.	Diversity of marine elements	Diversity
	Distinctive features of marine elements	Distinctiveness
I believe the primary purpose of the ocean culture creative products I purchase might be to enhance my spiritual needs. I find non-functional collectible products more appealing to me.	Having collectible value	Historical value
	Evoking travel memories	Scenario
I prefer slightly cute cultural and creative products, so I can give them to my younger brother. It would be best if they are also drop-resistant to prevent any harm to him.	Resistant to falls and durable	
	Preventing injuries	Safe
I am a student with limited financial capability, and many cultural and creative products are relatively expensive for me.	Good quality and affordable	Price

3.2.2 Axis-oriented encoding

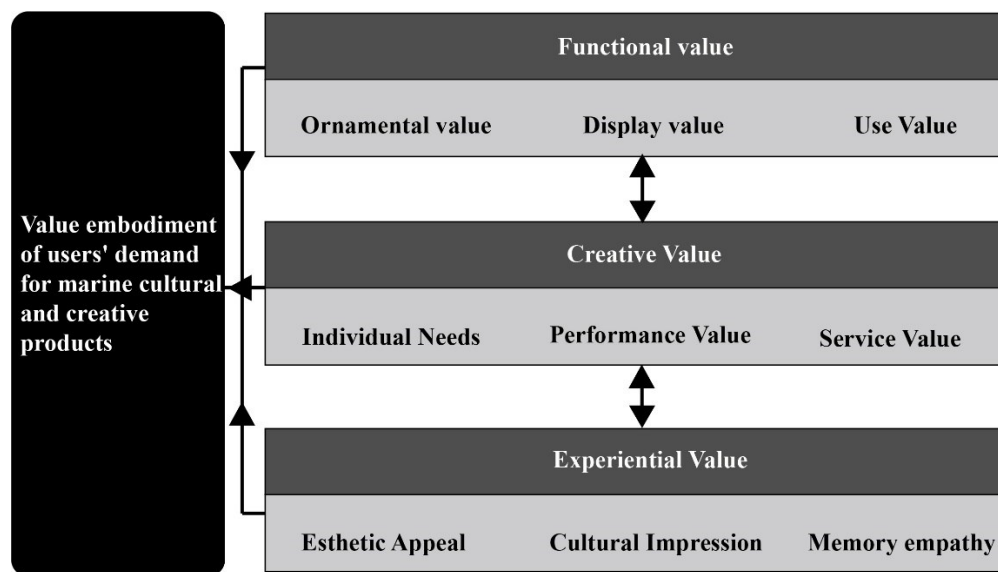
Axis-oriented encoding is based on open coding and further explores the connections between concept clusters and initial categories, and the relationships among different categories. Given that the connections between independent categories were not clear in the current stage, the obtained 34 initial categories were returned to the original sentence data, then, associations between various concepts and the logical relationships between concepts and categories were analyzed. This process established associations and divisions between categories, leading to the extraction and refinement of nine more abstract and representative "main categories": aesthetic value, display value, aesthetic taste, cultural impression, memory empathy, utility value, individual needs, performance value, and service value. These nine main categories, covering the 28 initial categories, represent the primary points of user demand for ocean culture creative products, as shown in detail in the [Table 5].

[Table 5] "Focused Coding" Process for Ocean Culture Creative Product Demand Research Based on User Interviews

Serial number	Independent category	Main category	Serial number	Independent category	Main category
1	Shape	Aesthetic value	15	Practicality	Utility value
2	Pattern		16	Quality	
3	Color		17	Safety	
4	Packaging	Display value	18	Environmental-friendliness	Performance value
5	Display		19	Convenience	
6	Decoration		20	Innovation	
7	Personalization	Aesthetic taste	21	Recognizability	Individual needs
8	Sense of the times		22	Differentiation	
9	Emotional appeal		23	Novelty of the product	
10	Historical value	Cultural impression	24	Values	Service value
11	Cultural dissemination		25	Cost-effectiveness	
12	Scenario		26	Price	
13	Diversity	Memory Empathy	27	touch and feel	Service value
14	Communication		28	needs	

3.2.3 Selective Coding

Selective coding is derived from axial coding by identifying core categories that play a central role through comparison. It involves analyzing the relationships between core categories and other categories, further reflecting the embryonic form of constructing theory. In this phase of this study, the goal was to achieve saturation in the core categories[23]. First, based on the interview data, a thorough analysis of the logical connections and associations among the main categories was conducted. Core categories that can play a central role were extracted. These core categories were obtained through qualitative analysis of the main categories and represent macro factors that influence users' perception of ocean culture creative products. Second through multi-level coding and deep analysis, the core categories were linked to other categories to form a theoretical model. Finally, focusing on consumer needs and values, a model was constructed that embodies the demand value of ocean culture creative products. The core categories of this model are functional value, experiential value, and innovative value as shown in [Fig. 3].



[Fig. 3] User Demand Value Expression Model for Ocean Culture Creative Products

3.2.4 Theory Saturation Testing

According to the principles of Grounded Theory and based on the three-level coding process, the remaining interview data was analyzed and condensed. It was found that no new categories beyond the 12 main categories previously identified emerged from the remaining textual information. This demonstrates that with ample preliminary research preparation and a sufficient sample dataset, the model has reached theoretical saturation. Therefore, this study did not anymore explore or analyze the interview data.

4. Exploration of Optimization Strategies for User Needs

4.1 Functional requirements

Functional requirements encompass user needs and values related to observation, usage, and display. These aspects were frequently mentioned by users during their interviews. Regarding aesthetic value, most interviewees were drawn to ocean culture creative products due to their unique appearance, design, and colors. As stated in Conrad Norman's book on design psychology, such products influence users'

instinctive psychology and effectively attract their attention[24]. Functional requirements are sometimes referred to as behavioral needs. In interviews, some users mentioned that they buy such unique products as gifts because they feel inclined to share interesting products with friends and family, thereby highlighting the behavioral aspect. Additionally, the user experience with the product strengthens their trust and establishes a strong connection between the user and the product. The display value is manifested both in the product's attractive appearance and in the emotional expression that users share within themselves. During user interviews, it was observed that when users acquire products they like, their descriptions and desire to share are positive. This aligns with the reflective aspect of user influence mentioned in design psychology literature. Ocean culture creative products involve a unique design and development process. An excellent designer should not only emphasize a product's performance but also consider its impact on consumer behavior and emotions. The emotional attributes associated with ocean culture creative products are likely to create a lasting connection, particularly in aspects of commemoration, decoration, and collection. Therefore, in this final category, designers should begin with users' desires for positive experiences with cultural and creative products, infuse the product with clear emotional attributes, and emphasize its functional properties. This approach is vital for creating ocean culture creative products that closely match user needs.

4.2 Innovation Requirements

Innovation requirements encompass individual needs, service value, and performance value as the three core categories. Among these, individual needs were the most frequently mentioned in the interviews. Many interviewees expressed that current ocean culture creative products in the market lack uniqueness and seem mass-produced. Moreover, users feel that designers have not fully met their expectations regarding the application of ocean culture elements, which, according to users, should not only involve marine life but also incorporate ocean history, culture, activities, and environmental aspects of different regions. This would lead to a more diverse range of creative ocean culture products. Idea innovation, though mentioned by a minority of respondents, is an important "intangible" aspect of design[25]. Some participants favor designers' innovative ideas, indicating that designers should boldly innovate and use cutting-edge concepts to stimulate consumer desires. Carrier innovation, on the other hand, constitutes a tangible aspect of innovation.

Regarding service value, some participants suggested that while ocean culture creative products embody regional uniqueness, it would be beneficial if the designer could clearly define the target consumer group during the design and development process. Consumers are diverse, and for future development and prominence of ocean culture creative products, designers need to better categorize consumer groups, thereby promoting diverse consumption. Insert space terms of performance and value for money, respondents mainly stressed the importance of avoiding significant price differences compared to similar functional products in the market. High prices discourage consumers from purchasing ocean culture creative products. The need for designers to make rational use of special ocean culture-related materials, presenting the product's value for money more reasonably and uniquely, and enticing consumer desires must be emphasized.

4.3 Experiential Requirements

Regarding cultural impression, some interviewees mentioned that they purchase cultural and creative products when visiting coastal cities mainly to experience the region's cultural uniqueness, which leaves a lasting impression. They want to satisfy their spiritual needs by buying cultural and creative products that remind them of these impressions. Therefore, in the development process of ocean culture creative products, designers should consider whether to add interactive or explanatory features to achieve

cultural dissemination and regional representation. Alternatively, designers can fully showcase the local characteristics during the product's development. In terms of aesthetic interest, respondents suggested that ocean culture creative products should be combined with the aesthetics of contemporary society. Designers should not solely focus on showcasing ocean culture features, potentially overlooking changes in societal aesthetic structures.

Regarding memory empathy, it shares similarities with the display value core category mentioned earlier. However, in this context, users desired products with good interactive functionality to evoke a sense of nostalgia. Interactive experience refers to all the interactive information that users can perceive and touch during the usage process; it's a subjective feeling for users. Through research and analysis, it is evident that with the evolution of time, respondents no longer seek two-dimensional spatial experiences from cultural and creative products. Instead, they anticipate a three-dimensional spatial experience that offers deeper, more diverse, emotional, personalized, and unique immersive experiences from multiple angles.

5. Conclusion

Guided by Grounded Theory, Grounded Theory, this study conducted interviews and surveys to explore user requirements for ocean culture creative products. Data mining, concept extraction, and logical construction were employed, creating a consumer demand value model. The model was used to interpret and analyze functional, experiential, and innovation requirements. The study confirms that understanding user needs is critical to the development of creative marine cultural products. These needs are fundamental to the success of the product and therefore need to be given high priority in the design and development process.

Functional requirements, representing users' core demands, suggest that designers should innovate in product design and functionality. Innovation requirements, being pivotal in consumer purchases, emphasize innovation and catering to consumer needs to create unique products. Experiential requirements differentiate products and highlight their cultural and unique features to attract consumers. Inspired by ocean culture, designers extracted cultural elements, imbuing cultural and creative products with aesthetic, display, utility, aesthetic taste, cultural impression, memory empathy, individual needs, performance, and service values. The nine core concepts and three primary value levels of the demand value model interact and merge, forming the foundational value support for ocean culture creative product design. This is expected to enhance consumer demand, stimulate market vitality, promote ocean culture art, drive innovation through heritage, and radiate in the new era. The findings from this study contribute to enhancing designers' ability to create maritime cultural creative products that align with consumers' expectations in the context of the new era. This research provides theoretical support for the future improvement of marine-related products.

Qualitative research, often employing interviews and surveys, implies diversity and breadth in samples, which could be potential limitations. Subjectivity and bias of researchers in qualitative research might minimally influence outcomes. Future research should merge qualitative Grounded Theory studies with quantitative research for a more scientific understanding of user needs. Future studies should also focus on emerging trends and demands. By researching technological advancements, societal changes, and cultural trends, researchers can predict future shifts in user demands and strategically plan for product development.

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