Research on digital protection and inheritance of traditional literature

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\textbf{ABSTRACT:} As an important carrier of Chinese culture, traditional culture plays a two-way role in function of social education and cultural communication. In recent years, digital technology has been constantly updated and developed, making the interaction between traditional culture and users more convenient, efficient, and flexible. Based on the communication status of traditional culture, this study analyzes the theoretical level of traditional culture and combines the three aspects of form, color and connotation in interaction design. This paper discusses the design method of combining traditional cultural characteristics with expression methods in digital context.

1 Introduction

With the rapid development of modern science and technology and the tremendous changes in communication methods, diversified information transmission methods have gradually integrated into all aspects of social life, and the inheritance and development of traditional culture should also seek new outlets. Therefore, in this information-dominant era, the traditional culture is combined with the technology of the times, and the cultural heritage contained in historical relics and the creation wisdom of the ancients are spread digitally, so that more people can feel the charm of traditional culture and achieve the purpose of inheriting culture.

1.1 Digital Communication Platform

The practice and technology of digital communication are changing with each passing day, but digital products of cultural communication still need follow-up research at the theoretical level. The existing research results of digital communication all mention the urgent problems of digital products of cultural communication. For example, the communication method is single and the communication result is not satisfactory. The theoretical research of communication needs to be strengthened. This article discusses the theoretical level of the digital application of cultural communication. There is no doubt that no matter how digital technology and digital practice are changed and updated, the application of digital communication always needs certain theoretical principles as guidance.

1.2 The overall characteristics of the digital platform

The most direct impact of digital technology on public education is to change the way people obtain and use information. It can be said that the digital age is a deep integration of the virtual environment and the real environment. Under the influence of this new type of education environment, people Access to information has the following basic characteristics

1.2.1 Break the boundaries of time and space.

The digital platform breaks the time and geographical limitations of the previous media. With the continuous development of modern science and technology, the openness of information content is the biggest advantage and characteristic of this digital communication. First of all, the communication platform is a public platform open to everyone, and the audience has the greatest right to independently choose information. Second, information recipients can learn about the shared information on the resource interaction platform anytime and anywhere, without being restricted by time and space. Third, the digital platform is an interconnected network platform, through the interactive operation of users on the platform, deepen the understanding of culture, to achieve the purpose of communication and inheritance.

1.2.2 Efficient dissemination of information.

In contemporary society, due to the popularization of new media, the channels through which people receive information are becoming more and more diverse. Various kinds of information flood all aspects of life,
constantly stimulating people's senses. Over time, people's interest in receiving long-form text messages decreases, and they tend to be more short and exquisite with pictures and texts. The use of digital platform to re-integrate the original information, extract the most valuable part of it, arrange the information according to the principle of visual habits and then deliver it to users. In this dissemination environment, users can quickly obtain main information, which greatly improves the efficiency of information dissemination.

1.2.3 Combination of multiple senses.

Compared with other information dissemination methods, digital technology has more sensory interactions, and digital education will also have a stronger experience. The digital platform effectively promotes the interactive social interaction of users in a virtual environment, and is accompanied by With the popularization of digital technology, the interactivity gradually penetrates into the real world and penetrates deeply into people's daily life.

1.2.4 Emphasize participation and feelings.

In the Internet era, sharing and commenting are the main ways people communicate on the Internet. At the same time, the transmission and sharing of network information also play a pivotal role in the current social information circulation. Digital mutual platforms emphasize users' participation and feelings at the ideological and spiritual level. Various communication methods such as expressing feelings and contributing works on the platform can expand the scope of traditional cultural information dissemination to achieve more powerful dissemination.

2 Related works

According to the "2018 China "Internet +" Traditional Culture Development Special Report", the Internet has become the primary channel for the public to understand traditional culture.

In the information age, the inheritance of cultural heritage and the realization of public cultural education should start from all aspects of life. The rapid development of new media has provided convenient conditions for the dissemination of traditional culture and has also changed the way of cultural dissemination. Under this form of communication, the traditional cultural industry should also constantly look for new paths to meet new communication needs. Digital technology has changed the way human beings learn, and digital technology has given birth to a digital education platform. With the rapid development of science and technology, the protection, inheritance and development of traditional culture must adapt to the development of the digital age.

3 Research on demand for digital communication platform

3.1 Communication positioning and demand analysis

To build a service platform that can meet diverse learning needs, logically speaking, it should cover functions as much as possible. However, this logic is flawed and unrealistic. When the service functions are arbitrarily expanded, it may cover more audiences. But at the same time it will increase the cognitive burden of users, so being able to meet the needs of major core customers without harming the needs of secondary users is a priority strategy for digital platforms. According to statistics from mobile data analysis organizations, the growth rate of mobile APP downloads worldwide has grown at an alarming rate. At present, mobile applications are the most convenient way for people to understand information. We should also seize the opportunity to integrate traditional culture into modern communication methods and deliver it to a broad audience. To achieve this, we need to do the following.

3.1.1 Build a platform from user needs

To build a service platform can satisfy the diverse learning needs, logically, should as far as possible cover function, however, this logic is flawed, and impractical, when any extension service function, may cover more audiences, but at the same time can increase the user's cognitive burden, and so can satisfy the main core customers, and will not damage the secondary user's requirements is the preferred strategy of digital platform. According to mobile data Analytics, the growth rate of mobile APP downloads worldwide is staggering. At present, mobile applications are the most convenient way for people to understand information. We should also seize the opportunity to integrate traditional culture into modern communication methods and deliver it to the masses.


3.1.2 Realize the protection of traditional culture

With the rapid development of the society, cultural exchanges between different regions are increasingly close, and our surroundings are also filled with a variety of foreign cultures. Therefore, it is more urgent to protect and inherit the traditional culture. Based on this, "The most important way for traditional culture to be integrated into the modernization process is to be integrated into the modern cultural circulation system, among which mass media cannot be neglected." The development of various emerging industries has provided new ideas for cultural communication. The application of communication theory to combine traditional culture with new media helps traditional culture to expand the scope of communication, improve the intensity of communication, and promote the inheritance and development of traditional culture, especially food culture.

Based on the actual research on the existing platforms of cultural communication, the information resource interaction platform takes the existing problems of the actual cases as the starting point for the preset solutions. For the development of information products of cultural communication, the practical problems of function positioning, development value and existence significance should be taken into consideration. Through the existing information resources integration, information products for culture dissemination class APP culture dissemination efficiency provide methods, provide theoretical support for its development, provide reference for the development direction of this field after and the suggestion, in the era of new media to make reasonable choice in the mode of transmission, to better promote the public education work, further promote the benign development of the communication, to realize the protection of traditional culture.

3.1.2 Promote the spread of traditional culture.

Information transmission based on the existing traditional culture studies of literature, we found that there have been many scholars began to look to the fusion of traditional culture and modern communication system, but is good for information interaction design research less actual case set, is generally in the theory stage, has not been an effective system of research, the lack of a practice reference value to application research. For the research of traditional culture and the confidence of interaction design research has formed a systematic theory system, and combine the two studies is not enough mature, mainly reflected in most of the traditional culture spread of digital products for the purpose of presenting the effect not beautiful, severe homogeneity, the main reason is for the interpretation of traditional culture is not deep, stay on the surface, and name of the phenomenon of not caught cultural essence.

The transmission of traditional culture is a complex process. We need to deconstruct the time-old culture and reconstruct the cultural elements in a form that can be perceived by modern people, which includes the knowledge of ergonomics, semiotics, communication, art and other fields, so as to deliver the most essential wisdom in culture to users. And traditional culture and today's society is getting too serious, the fast pace of work and life pressure makes the public for serious culture more or less will be some resistance, so we need to pay attention to in the modernization of traditional culture spread to avoid static is too rigid, add appropriate interest can attract users to its long-term use, expand transmission efficiency.

3.2 Dissemination of cultural characteristics and style

Looking back to the Paleolithic era in today’s society, eating utensils have always existed as an important part of food culture, ranging from branches and stone tools to pottery utensils that pioneered a new era, to bronze, gold, silver, jade and other utensils that were later developed. Eating utensils have been developed and enriched continuously through repeated practice and innovation of our ancestors. Using the interactive platform as a bridge, from the perspective of today’s people, what ancient food utensils present to us is not only the change of shape or material, but also reflects the humanistic thoughts and social features of the society at that time, and carries the social values and Historical value, aesthetic value, and for eating utensils, we are actually exploring the reflection of social life in different periods on eating utensils, looking for the reasons for the evolution and development of eating utensils, and understanding the progress and changes of ancient social life.

3.3 Carry out quantification and cultural translation of equipment

Food culture occupies an important position in the long history of the survival and development of the Chinese nation and is the source of the development of human culture. The creation culture embodied by the food utensils is also of great significance in today's society. Back to the essence of ancient Chinese food culture with context. The reflection of the aesthetic taste of life and the charm of the times on the appliances, and the reverse research based on data thinking reveals the details of the development and evolution of the artifacts. This article uses the interactive platform of eating utensils as a bridge to convey the wisdom and connotation of ancient creations to people, and bring new inspiration for the recreation of traditional craft design. Since the report of the 19th National Congress of the Communist Party of China proposed to dig deep into the excellent traditional culture of China, to show the permanent charm of the culture and the style of the times, cultural and creative products have emerged one after another. Through the interactive platform, designers can draw nutrients from excellent ancient eating utensils and design excellent cultural and creative works that not only have traditional cultural connotations, but also conform to modern aesthetics.

The spread of all content of the food utensils culture actually ultimately leads to the guidance of the core of traditional literature, that is, the formation of a spiritual cognition and identity. The core of this Chinese spirit is the excellent traditional Chinese cultural spirit. Therefore,
the traditional cultural spirit should be used as a cultural embodiment of media organizations, and more importantly, it should become an important content of media information, infiltrating different communication information in an intuitive or obscure form. Among them, the content of the wisdom of life and the wisdom of creation expressed in the culture of food utensils is inherited and carried forward in accordance with the conditions of the times, and given new meanings. It should be noted that the communication requirements mentioned above are not independent and different, and the relationship between them should be complementary. The dissemination of the culture of food utensils ultimately ends up with the use of "devices" to carry "dao". The traditional cultural content of eating utensils, as a dissemination of information, should also be based on the Chinese nation, reflecting the evolution and inheritance process of eating utensils themselves, reflecting the progress of social life in various periods and the reflection of changes in concepts on eating utensils. The spirit as a link constructs the user's identification space.

4 Build semantic perception and cultural resonance

The intervention of digital technology provides another expression tool and communication medium for traditional cultural heritage. Data technology's research methods for the inheritance and innovation of ancient creation culture not only help audiences enhance their understanding of culture, but also help enhance the evolution and creativity of context.

4.1 Constructing cultural intergenerational connection

The expression and dissemination of ancient creation culture must first be coded and translated according to the discourse system of digital communication. "Culture disappears as we explore how to understand and explain it, and then it will reappear in a way we have never imagined." The transfer of traditional culture is the production process of digital information. Both tangible artifacts and intangible background connotations can extract information through numbers to express cultural connotations.

4.2 Update cultural awareness audience

UNESCO mentioned in the education report that the pressure of the 21st century not only comes from the need to cultivate a series of new skills, but also requires people to have some new literacy, the most obvious of which is information literacy. As information becomes more and more rich and competitive in daily life, a variety of information stimulates people's senses through various channels. In this case, the ability to discover and filter information is particularly important. The interactive information platform also requires information literacy and ability for users: on the one hand, the process of platform information processing allows users to have a more comprehensive understanding of new learning and research methods, and then understand the behavior and psychology of modern learners, while updating and improving themselves. The new learning mode can provide better support for learning. On the other hand, users need to have the ability to accurately obtain valuable information resources from a large amount of information to ensure that they will not get lost in the ocean of information during the learning process of the public platform.

5 The construction of digital platform

5.1 Design goals and orientation

The needs of target users and the purpose of platform design should be before the construction of the digital platform. The purpose of the digital platform determines the basic requirements and optimization goals in the platform design. Therefore, it is necessary to clarify the role played by the platform and the ultimate orientation of various designs. This clarifies the design principles and design methods that need to be followed when designing the digital platform.

5.2 Information dissemination and integration

The content layer of the information resource interaction platform is mainly reflected in the platform's function combination and information architecture method. The function combination is to determine which functions are integrated into the information platform according to the product goals, and clarify the value proposition and functional responsibilities of the information product. Information architecture refers to the way information is organized. Information is screened and sorted according to the functional requirements of the platform, combined with user experience, an information navigation system is established, and content information is reasonably partitioned so that users can quickly obtain information. In the content design of traditional cultural information products, we need to select appropriate traditional cultural content, unify them on a main line, and organize the content information in a sequence that conforms to the reading habits and can express the content. Generally speaking, product functions are generated according to user needs. Specifically, the demand is to find problems, and the function is to solve the problems. Focusing on the design of cultural and blog apps, users are usually divided into two categories: "tour users" and "professional users". Different users have different needs for products. Tourist users have more basic requirements for apps. Basic information, interactive games, and professional users will put forward higher requirements on all aspects of the product from content to form. Detailed information such as cultural relics background culture, historical status, page layout, color scheme, etc. all affect the user experience. When designing the interactive platform, we should proceed from a higher perspective to meet the needs of more people, and at the same time guide the
5.2.1 Design feature hierarchy analysis model.

Figure 2: Design feature hierarchy analysis model

The extraction of elements that represent cultural characteristics must start from the macro and gradually refine. The existence of traditional cultural design factors is often abstract and visually ambiguous. It is difficult to start in actual operation, so introduce levels here. Analytical method, which provides an effective way to analyze such vague and macro issues. Through the decomposition of analytic hierarchy process, the ambiguous macroscopic research objects can be decomposed into specific design feature elements, and through the mutual comparison between the feature elements, the importance of each element relative to the overall research object can be obtained as Figure.

5.2.2 User-perceived traditional cultural design factor extraction model.

Figure 3: Traditional culture design factor extraction model

The core function of the design factor is to assist in the realization of the identifiability of the design object, and the design factor must have certain knowledge carrying and knowledge transfer capabilities. In order to ensure the smooth transmission of element information, it is first necessary to ensure that the audience has a correct understanding of the design factors. In the past, design factor extraction was often done by designers based on their own professional knowledge. Limited by the difference between the designer’s design experience and user knowledge background, identification obstacles often occurred. Therefore, the user perception and the design factor extraction process were integrated. Enabling users to participate in the extraction process of design factors can improve the identification of design factors. In the actual operation, in order to improve efficiency and save costs, the user role model is mainly constructed through the data of the data user research in the early stage of the design, and then the typical users led by the user role model are used to replace the user group to complete the perception and evaluation of the design object. The specific extraction model is shown in Figure.

5.2.3 Behavior debugging and interaction.

Figure 4: Operating comfort zone

The digital platform is the main medium for users to interact with mobile devices. It plays a vital role in realizing user needs, creating a harmonious human-machine dialogue, and ultimately achieving a good user experience. The interface is a gathering place for information, and the organization and feedback of information should be based on the user's cognitive law. In order to ensure effective communication of persuasive intentions and form smooth interactive behavior and experience, the user should be influenced through reasonable interactive icons or situational design. The behavior and attitude of the persuader guide him to spontaneously complete the process of the expected goal set by the persuader. Based on the design of the interactive platform, it uses persuasive theories and methods to change user behaviors, helping users build simple and natural interactive behaviors, a structured information structure, and a reasonable and efficient functional layout.
6 Conclusion

Based on the background of informationization, the information resource interaction platform of mobile devices provides many conveniences for the inheritance and development of traditional culture. It uses modern communication methods to expand communication efficiency and enrich communication content. Starting from user needs, continue to introduce new ideas and realize traditional culture. Of modernization. Firstly, based on the basic mode of information architecture in information products, construct the information architecture used in this article. Based on the research of semiotics, it is proposed that the symbols used in the interaction design are interactive media with both expressive and content characteristics, aiming at the graphic processing, color application, and text expression of the presentation layer in the information resource interaction platform. Conduct horizontal research on a large number of similar products in the market, compare their advantages and disadvantages, analyze the design principles of different attributes of symbols, and further build the symbol style of the information resource interaction platform. Lay a foundation for the application and practice of the information resource interaction platform. Then, starting from the principles of designing the interface, symbols, as an important part of interface design, should have multiple functions such as strong versatility, clear symbolism, and concise text. From the perspective of user research, combined with the user’s operating characteristics and visual habits, Optimize the layout of the interface, make the information resource interaction platform have a clear level and clear structure in the overall framework, and information can be more efficiently and accurately delivered to users, and the user experience of the interaction platform is improved. Finally, combining the above theoretical research, construct a practical model of information resource interaction platform that meets the needs of users, and determine the final design plan. Finally, compared with traditional museums, the resource interaction platform can bring more new display images and more interesting interactive experiences, realize cultural heritage inheritance, and help traditional culture better integrate into modern life.

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