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Using "Super Consumers Ideology" to Enhance the Digital Experience of Museums

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Abstract: Breaking through the limitation of time, space and region, digital development has become the common challenge of museum development around the world. Applying "Super Consumer Ideology" to the digital experience design of museums and creating more professional and personalized cultural experience with the help of intelligent technology can provide certain methods and ideas for the new direction, new mode and new scheme of museum development. In this paper, a variety of research methods such as literature research, induction and summary, questionnaire, case analysis, interdisciplinary research and comparative analysis are comprehensively used. Through the analysis and comparison of some excellent cases of museums at home and abroad, as well as the investigation and insight of the audience, methods to improve the digital experience of museums are obtained from three aspects. First of all, "Super Consumers Ideology" should be regarded as an important strategic concept in the branding process of museums. Secondly, "Super Consumers Ideology" is more inclusive and diversified in the branding process of museums. At the same time, in the process of improving museum digital experience, "Super Consumers Ideology" needs to subdivide audience needs through combinative innovation and create value together to achieve the advanced development of user fission.

Keywords: Museum, Super Consumers Ideology, Digital Experience Design

1. Introduction

The term museum is derived from "Repository", which means "storehouse". From ancient Greece and Rome to the Enlightenment period of Europe, the museum has been as the private collection of royalty. With the rise of democratic culture movement in the Age of Enlightenment and the gradual rise of western capitalism, private collections were gradually transformed into public wealth. In the 1960s, the New Museology began to rise under the background of service economy, emphasizing the responsibility of museums as public educational institutions to provide public services and education to the society. The focus of museum development began to change from "collection as the center" to "audience as the center". At the beginning of the 21st century, with the development of the experience economy, museums have changed from "exhibits as the center" to the "audience's own experience and perception" as the focus. International Museum Day 2021 invites museums around the world to jointly explore digitalization and create new modes of cultural experience and communication. The newest theme "The Future of Museums: Recover and Reimagine" focuses on new directions, new modes and new solutions for museum development. Breaking through the digital development of time, space and region has become a common proposition of museum development all around the world.

This paper uses a variety of research methods, including summarizing, case analysis, market survey and interdisciplinary research. In particular, applying the concept of "Super Consumer Ideology" in brand building to construct the digital development model of museums from the perspective of brand communication and design.

2. Digital Development of Museums

2.1. Digital Development of Foreign Museums

In 1992, UNESCO (The United Nations Educational, Scientific and Cultural Organization) launched the "Memory of the World" program, calling for the use of modern

information technology to make permanent digital storage and memory of the world's tangible and intangible cultural heritage, and to share resources through the Internet. Later, the British Museum, the Louvre Museum, the Tigon Papal Museum and others embarked on digital projects [1]. In 1995, the Louvre became the first museum in the world to move its collection online from its galleries. In 2011, Google Art Project was launched, in which Google cooperated with museums around the world to use Google Street View technology to take photos of the internal real scenes of museums, and take photos of historical paintings in museums with ultra-high resolution, so as to realize Art Sharing around the world [2]. In February 2017, the Metropolitan Museum of Art in New York made 375,000 works of publicly copyright works of art available to the public for free download with ultra-sharp details. Because the details are clearer than they are in the museum, it is considered the most accessible and complete museum database available [3].

The challenge of COVID-19 in 2020 has accelerated the construction of digital museums, and the empowerment of science and technology has created more possibilities for museums to disseminate knowledge. According to a professional survey of more than 650 museums in 41 countries and regions in 2021, nearly 400 have increased the use of digital means. At the same time, the National Museum of Korea has launched online panoramic exhibitions and audio tours, the United Arab Emirates has launched six immersive online museums focusing on the country's history and culture, and the Kenyan government has also helped domestic museums improve online visiting experience with digital technology [4]. Museums around the world are actively implementing digital transformation development.

2.2. Digital Development of Museums in China

It was only in 1905 that China established its first self-run museum—Nantong Museum, which was only a hundred years ago. In 1949, there were only 21 museums in China. After the reform and opening up, China's museums have developed significantly. At the beginning of this century, with the support of national policies, China's museums experienced a period of rapid expansion. According to statistics, one new museum has been added every two days in China since the 13th Five-Year Plan period. By the end of 2020, there are 5,788 registered museums in China [5]. With the overall environment of the Internet, the Internet of Things and the Internet of Intelligences, and the demand environment of consumption upgrading, museums in China have rapidly entered the digital development track.

In 1998, the Palace Museum launched its digital museum project "The Digital Palace Museum". Google's Art project came to China in 2012, and Internet giants such as Baidu, Alibaba Group and Tencent have also begun to extend their reach into museum collections and exhibitions. In 2016, Dunhuang Academy launched the "Digital Dunhuang" project, which includes 30 digital images and virtual tour projects of Dunhuang grottoes, creating users an immersive experience. Since January 28, 2020, the number of visitors to the Online Museum Exhibition platform of the National Cultural Heritage Administration has increased rapidly, with an average of 40,000 visitors per day; and the total number of visitors on the platform exceeding 600,000. The topic "Cloud Touring Museum" was read 210 million times and discussed 39,000 times on Weibo. Tik Tok, together with nine major museums, including the National Museum of China, Dunhuang Academy, Nanjing Museum and Hunan Provincial Museum, launched live streaming of exhibitions. Taobao Live teamed up with eight museums, including Gansu Province Museum, Liangzhu Museum and Sanxingdui Museum, to launch a "Cloud Spring Tour" campaign, which attracted nearly 10 million visitors on the day of live broadcast, equivalent to the visitor flow of the Louvre museum in France for nearly a year. On September 6, 2020, the National Museum of China launched the "Global Museum Collection Online Relay", in which curators from 16 national museums on five continents introduced their collection features and treasures online [6]. In May 2021, Tik Tok teamed up with seven museums, including Shanxi Museum, Capital Museum and Gansu Provincial Museum, to launch a live broadcast of "Cloud Museum", inviting museum curators and cultural celebrities to lead netizens to see the exhibition closely. In that month, the number of museum-related videos on Tik Tok exceeded 33.89 million, with more than 72.3 billion views and more than 2.1 billion likes [7]. In general, although the development of museums in China started relatively late, they are developing rapidly, especially in the track of digital development.

3. "Super Consumers Ideology" in Museums

3.1. Super Consumers Ideology

The concept of "Super Consumer" was first proposed by Eddie Yoon, an executive at Nielsen in 2009. In his book "Super Consumers", Eddie Yin pointed out that super consumers have a passion for a particular product and an emotional commitment to it. They are the high-value consumers of the product, as well as the disseminator and seller of the brand. According to the book, super consumers account for only 10 percent of total customers, but can increase sales by 30-70 percent. Eddie Yin emphasized that only by firmly seizing these super consumers can the untapped profits of the brand be achieved, which is the key to sustainable growth in the future [8]. After the concept of "super consumers" was introduced into China, Luo Zhenyu, founder of DeDao APP, and Wu Sheng, founder of Scene Lab, integrated and deepened the concept of "Super Consumers Ideology". They pointed out that in the current situation that the dividend of Internet traffic in China has almost disappeared, brands should not blindly pursue traffic, but build their own super consumers group, serve the existing users well, and work hard to improve the product.

3.2. Super Consumers Ideology of Museums

As a non-profit institution serving the public, the consumers of museums include all audiences. The core of "Super Consumers Ideology" is to understand the internal needs of consumers in different stages of behavior from the perspective of users, so as to provide targeted and efficient services. The "Super Consumers Ideology" of a museum can be defined as an in-depth understanding of the needs of the museum's audience. Museums must move from the existing work focus based on the museum's own ideas and collections to provide corresponding comprehensive experience based on the needs of users, and treat every audience as a super consumer. In-depth insight into users is the entry point for all brands to create new opportunities for development. The primary measure for the branding development of museums is to change the corporate thinking mode which is suitable for the industrial era, and to think in the consumer mode, so as to keep in line with the consumer's requirements in the digital era [9]. One of the core values of cultural and creative brands is the secondary creation with audience participation. The brand value of museums can only be truly realized by co-creation with audiences, which is also the core of the museums' Super Consumers Ideology.

4. The Application of "Super Consumers Ideology" in Museum Digital Experience

4.1. Fine Service

"Refinement" is the combination of channels, conversion processes and user behavior data. Based on the existing user portrait and according to the user's preference, carry out targeted strategies for users with high attrition rates to improve the overall target conversion rate [10].

The simplest refined service for museums is membership system, which establishes and deepens the relationship through payment, continuously gathers high-value users, and selects and retains layers of users through payment behavior. Take the Metropolitan Museum of Art in New York as an example, its membership system is divided into 5 categories and 11 levels, corresponding to different value delivery, to meet the needs of different social strata and different age groups [11]. Even basic members have three options: Member with Early Views, Member with Evening Hours and Member with Opening Nights. In addition to basic benefits, additional benefits increase as the annual fee climbs (Figure 1).
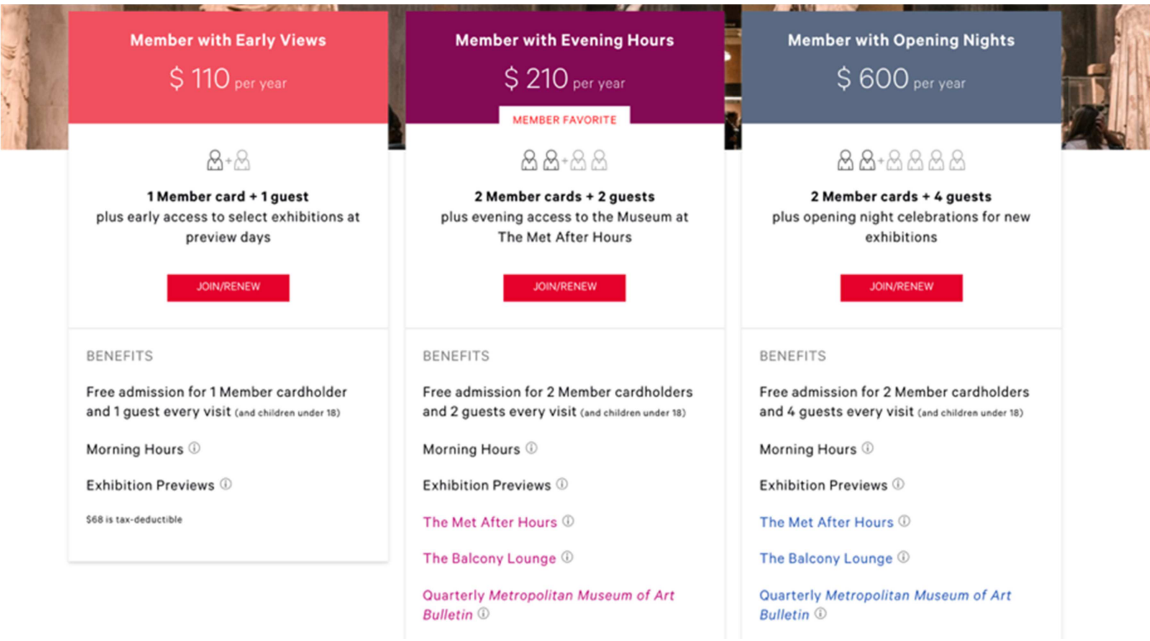

Figure 1. Membership system of The Metropolitan Museum of Art in New York (the Metropolitan Museum of Art).

In the museum membership system, different levels correspond to different delivery of functional sense of value, so as to establish differentiated emotional attributes and identity for super consumers. This emotional acquisition comes not only from the superiority provided by superior value, exclusive and customized products and services, but also from the expression of value in self-definition and social attributes given to users by brand mantra. The more clear identity labels can be given to users, the more users can form a strong sense of belonging and trust in the museum [12].

After the user classification is clarified, the main visitor groups of the museum can be further subdivided according to age, behavioral preference, family and other ways by relying on big data, and the needs of users in different circles can be deeply understood. Through in-depth understanding of the needs of users in different circles, to improve the basic functional modules. In this way, matching contents from different perspectives can be displayed for different user groups, and user experience can be improved through accurate services.

The Metropolitan Museum of Art's online website is visited by 40 million people a year, far more than its offline visitors.

MetKids, which is aimed at children, has received positive reviews since its launch in 2015. The site offers a wide range of programs and experiences aimed at the special group of children in an educational and fun way. The MetKids homepage sets up three modules for parent-child family exploration (Figure 2): Explore the Map, Hop in the Time Machine and Watch Videos.

In the Met Maps section, children can explore the Met's collection through interactive cartoonish maps and view art works and galleries by clicking on colored dots. Explore options included in the "Watch" (learn more about the work from the perspective of a child's narrator), the "Discovery" (read more background information), "Imagine" (imagine the meaning of the work of art in its original context and in today's scene) and "Create" (guide children to create related works of art) to a comprehensive understanding of each items [13]. Interactive exploration provides more freedom, leading

children not only to understand art works and explore the story behind art, but also to fully feel the charm of art through hands-on creation.

In the "Time Machine" section, customized search tools allow children to select areas of interest from the Met's art collection, which spans 5,000 years. By clicking the button of the time machine, children can be taken to the corresponding collection introduction page of a specific period as the page shakes. This interactive way with a sense of participation can make children more immersed in it.

The "Video Tour" section includes not only the museum's animation videos for children, but also videos made by children as research journalists, animators and producers. In making the video, children ask questions to the museum's curators and educators. Experts can also learn more about art and the world from children's perspective.
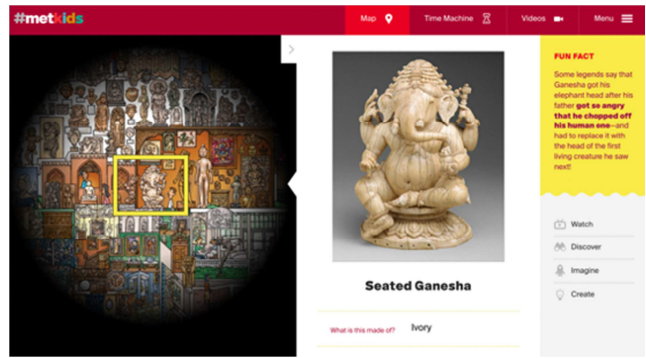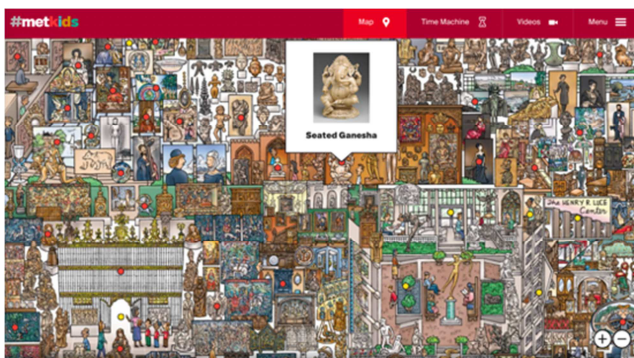

Figure 2. "Metropolitan Map" interface of the Metropolitan Museum of Art's children's website (the Metropolitan Museum of Art).

4.2. Scenario-Based Design

From the perspective of user experience, scenario-based design involves the structure, skeleton and surface of the five elements of user experience (proposed by Jesse James Garrett). In the layer of structure, we should first determine what functions and modules to provide, finalize the theme and build the infrastructure. In the layer of skeleton, we need to plan user paths and information layout [14]. In the layer of surface, immersive atmosphere should be created through visual techniques.

First of all, the online experience provided by the museum should ensure the smooth use of the system, improve the quality of the system and the applicability of different terminals, and reduce the occurrence of flash back, lag and other phenomena. Secondly, it should conform to the user's usage habits. For the search of the museum's key information, the path should not be too deep, so that users can have a certain potential sense of control over the product as a whole. Thirdly, integrate and simplify functionality, add visual information appropriately in order to reduce the cost of reading for users.

For example, in the mini program of "Digital Palace Museum", when users click the page of "Visit the Palace Museum", they can clearly know the opening time of the museum on that day (Figure 3). For more information about

other dates, they can click the details. Major functions such as online ticket purchase, geographic location and tour instructions are clearly displayed in the form of icons and text on the first-level page. Users only need two clicks to get to the final page. Convenient and efficient use experience makes users willing to view and learn more.

Visit Palace Museum   Opening Hours

Figure 3. "Digital Palace Museum" (mini program).

Rijksmuseum's new official APP, launched in 2018, has been called the National Museum in your pocket——make it accessible to the public. This APP also won a gold medal in a European design competition. To improve the user experience, the APP condenses the content into three main sections: Tours, Rijks Studio, and Likes & Tickets. Users can reach the required page within three operations, and 340,000 pieces of art can be vividly presented in front. In the added route function (Figure 4), various needs of users in different usage scenarios before and after the visit are taken into consideration. Users can plan a route around their collection of paintings before visiting. When visiting the museum, the precise location by the full coverage of Wi-Fi provides real-time navigation. Users can also continue to view high-resolution details of the painting after the visit. Taking into full consideration the multiple needs of users, the museum uses an immersive approach to tell the story behind the paintings.
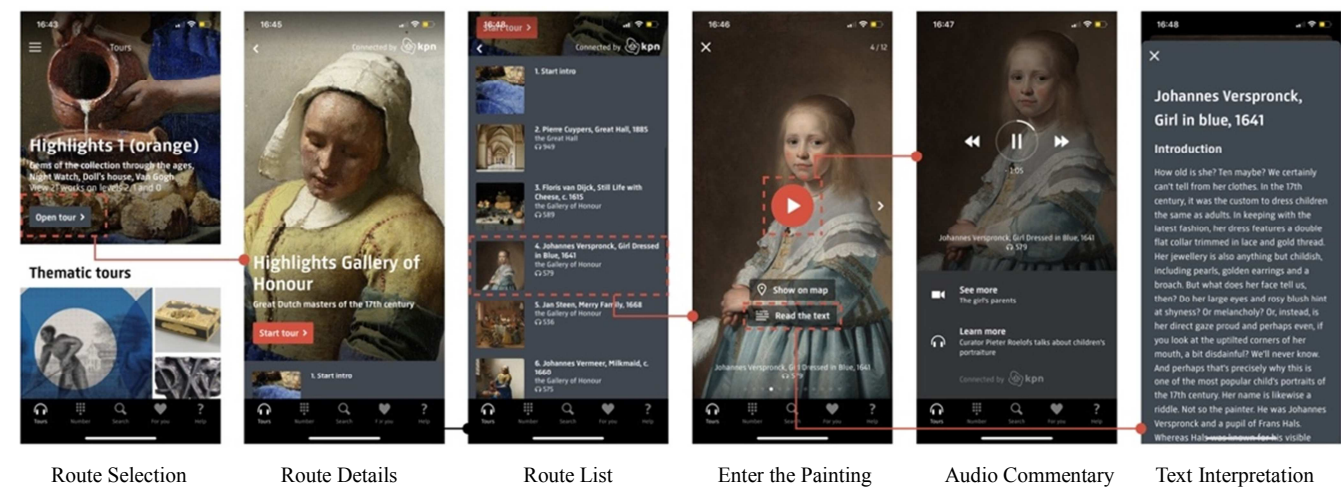

| Route Selection | Route Details | Route List | Enter the Painting | Audio Commentary | Text Interpretation |

Figure 4. Rijksmuseum APP.

At the level of surface, museums need to create an "immersive" state experience for users. It surprises and moves users in details, making people focus on the current target situation and feel wholehearted pleasure and satisfaction.

The Van Gogh Museum in Amsterdam has collected more than 4,000 of Van Gogh's paintings, including works by his contemporary friends and art collected by Van Gogh himself, to give an overview of what Van Gogh admired and what inspired his work. The museum's website displays van Gogh's original letters in tiled format, providing a platform for users to read and discuss. People are encouraged to underline their favorite sentences on the e-letters and label them with different moods: Loving, Happy, Excited, Rebellious, Sad, Hopeful, etc., as well as comments. When reading letters, people can also see the notes left by others, so that audience can express their own opinions or share them, thus forming an interactive platform for free communication (Figure 5).
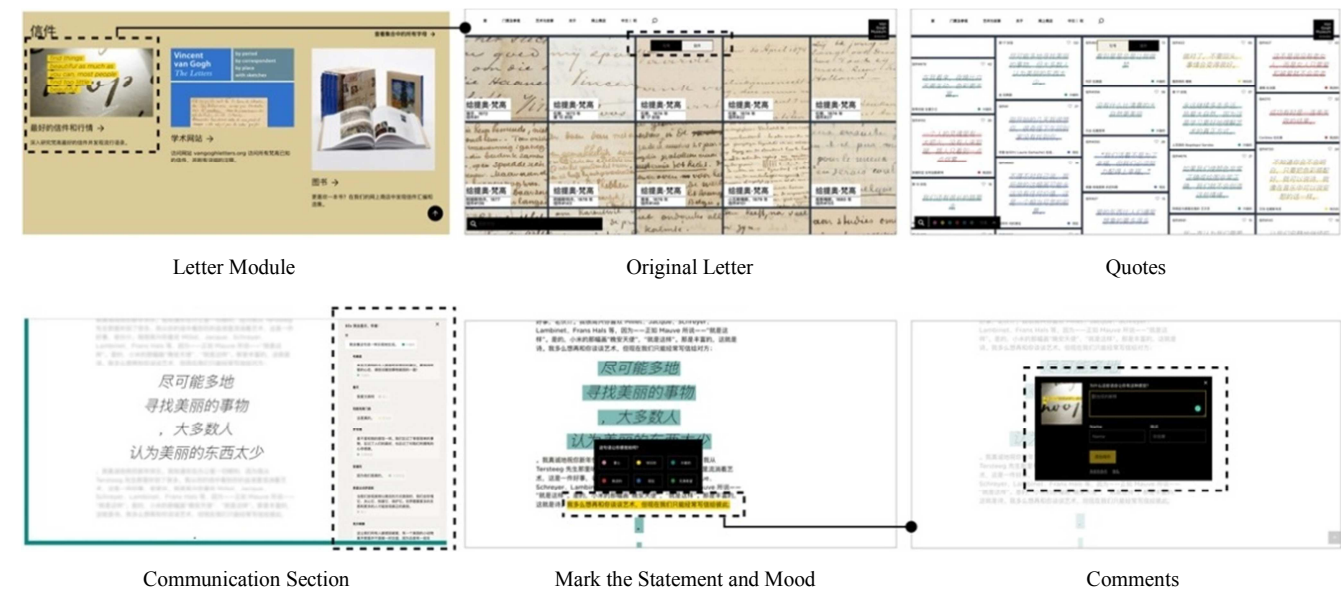

| Letter Module | Original Letter | Quotes |
| Communication Section | Mark the Statement and Mood | Comments |

Figure 5. Van Gogh Museum Website.

Another section on the website "Decoding Van Gogh" offers 56 of van Gogh's most famous paintings and their stories. The whole page is an immersive experience, which takes the audience into van Gogh's world by triggering specified operations. For example, you can compare the colors of Sunflower before and after restoration by sliding the mouse, and show the changes between Van Gogh's manuscript and the finished product by smearing the picture (Figures 6 and 7).

You can also find the mud in the paint by zooming in on the ultra-high definition pixels. In the further exploration page, a multimedia experience is provided to the audience through the blend of text, pictures and audio. When the page is loaded, the waiting process is not boring by displaying famous lines from Van Gogh's letters. The project, which was launched simultaneously on electronic devices inside the museum, has won several international design awards.

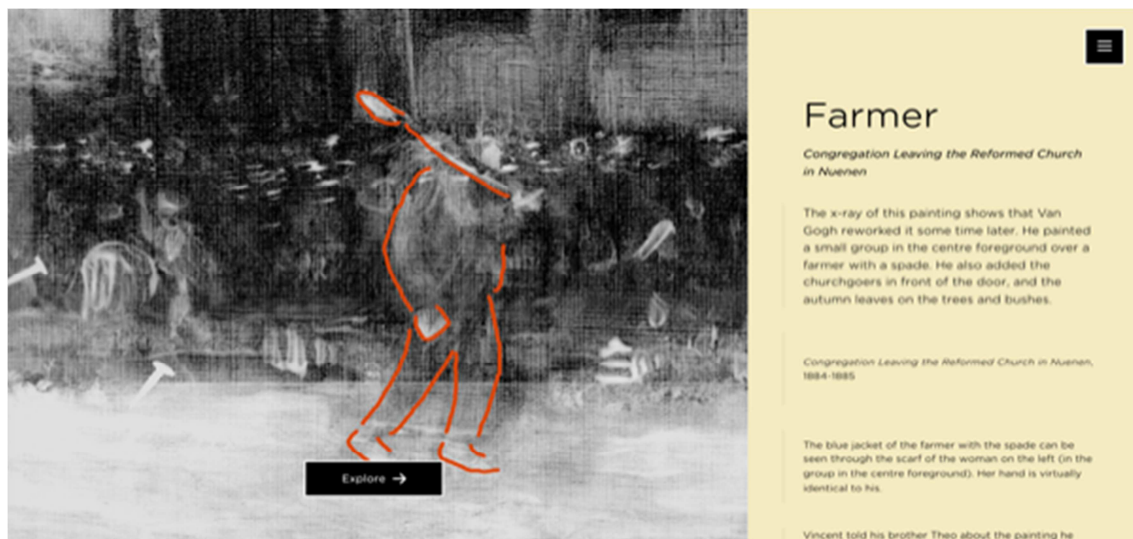*Figure 6. Van Gogh's manuscript can be revealed by smearing it with the mouse (Van Gogh Museum Website).*

Figure 7. The story behind Van Gogh's paintings (Van Gogh Museum Website).

4.3. Social Platform

Establish an engagement mechanism for instant feedback and open interaction for super consumers who agree with brand values. Only by making them have a real sense of participation and responsibility can they form a channel of initiative and become a fission user who can bring exponential growth to the museum. Immersive community environments can also encourage more engagement and empathy in the experience of visiting online exhibitions. Participating users generate emotional resonance in the experience of mutual communication.

The mini program "Palace Museum: Pocket Palace Artisan", an architecture game developed by the Palace Museum and Tencent for nearly a year, attracted more than 1.4 million players within a month of its launch in 2019. "Palace Museum · Pocket Palace Artisan" provides all-round and multi-angle gameplay, so that users can always find a predictable small goal, so as to obtain a sense of accomplishment when completing. More levels can be unlocked as the difficulty escalates, the higher the completion, the faster you finish, the more bonus you'll get for completing

the puzzle faster [15]. The points earned by building a palace are also recorded and displayed in the leaderboard to enhance the experience of interacting with friends. It becomes a way of socializing by motivating players to compete with their friends and to play together (Figure 8).

Unlock Level   Get Rewards

Figure 8. Palace Museum · Pocket Palace Artisan (mini program).

2020 Dunhuang Academy and Tencent jointly launched the first WeChat mini program "Cloud Tour Dunhuang" with rich experience of Dunhuang grottoes art appreciation. User incentives are built into the design, and user credits are called "mineral pigments". Users are encouraged to obtain different rank titles by viewing the content of the mini program to obtain pigments, such as: +1 gram of mineral pigments for the first daily check-in; +1 gram of pigments for watching videos; +3 grams of pigments for watching "Dunhuang Animation". The rank titles from low to high are: painter, college student, professional painter, college painter, painter doctor. When a user accumulates a certain amount of paint, he or she is awarded a status level title. When users make comments and likes in the community, their identity will be highlighted. The whole process is clear, transparent and visualized, which greatly arouses users' activity (Figure 9).
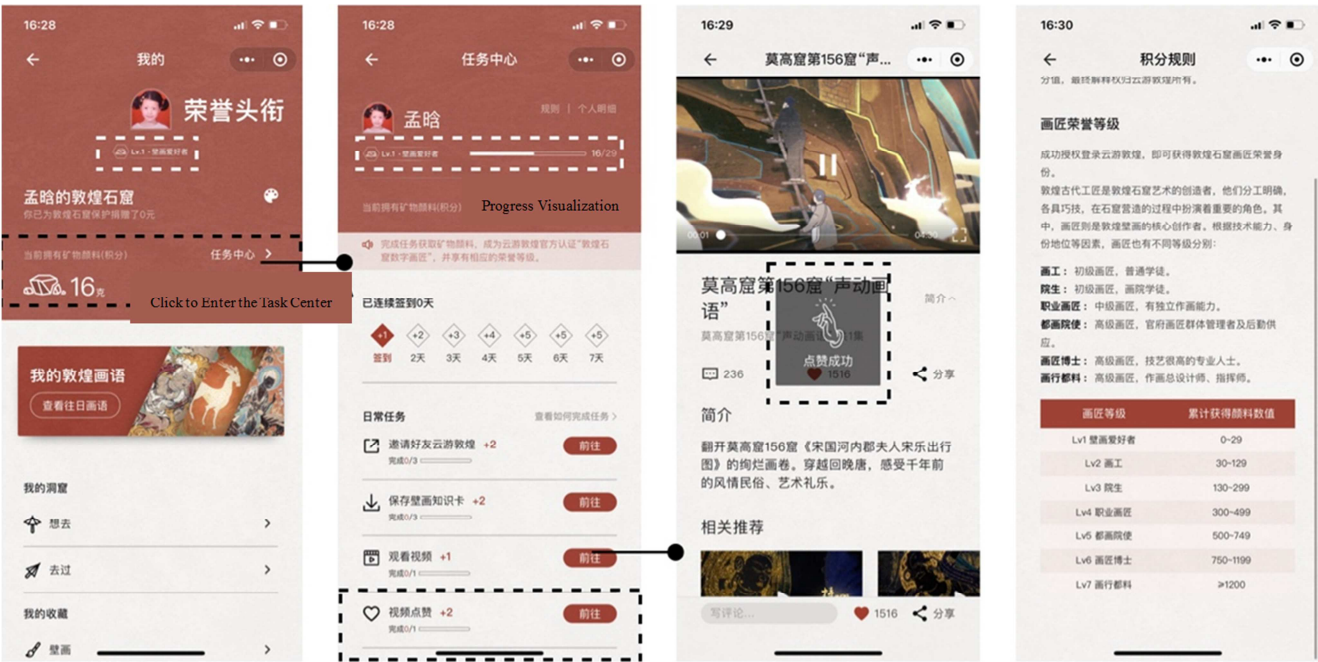

Get Rewards for Completing Tasks   Details of Honorary Titles and Grades

Figure 9. "Cloud Tour Dunhuang" (mini program).

5. Conclusion and Prospect

To sum up, some museums around the world have realized the importance of "user-centered" and actively improved user experience in various ways to enhance their competitive advantages. The Metropolitan Museum of Art in New York offers personalized services for different levels of membership. Both the Palace Museum and Dunhuang Academy have created immersive scene experience for the main audience through gamified interactive mini-programs. The Van Gogh Museum in the Netherlands has created an open discussion platform for audience who loves Van Gogh's art.

5.1. "Super Consumers Ideology" Should Be Regarded as an Important Strategy in the Process of Museum Branding Construction

For a long time, museums' development strategies have focused on an inside-out approach to their collections and capabilities, ignoring the outside-in model of behavior decisions made by large audiences. The audience will make choices based on various relationship experiences in social life. "Super Consumers Ideology" requires the museum to think from the perspective of the audience, and create a better experience that can truly move the audience based on the segmentation of the audience and their deep needs.

5.2. "Super Consumers Ideology" Is More Inclusive and Diversified in the Brand Construction of the Museum

Museums are the common wealth of the whole society and even mankind. People of all ages, backgrounds, cultures and social roles can find self-belonging and cultural identity in museums. The different groups of each subdivision are all the super consumers of museums [16]. Museums need to insight into the diversity of groups, connecting different audiences in a diverse and inclusive manner, provide personalized cultural services for more user groups.

5.3. "Super Consumers Ideology" Improves the Combinative Innovation in the Process of Museum Digital Experience

Combinative innovation breaks complex problems down into small ones that can be easily tackled, then identify the key elements and produce effective solutions. There are three ways to improve the digital experience of museums. 1) Subdivide the audience: provide personalized and exclusive content for different user groups and display the content in line with their cognition. 2) Value co-creation: create immersive functional experience with scene-based design, and provide a platform for audience interaction and participation. 3) User fission: continuously improve the loyalty of existing users and the participation of potential users through interesting gamification experience and social sharing mechanism.

From what has been discussed above, most museums still need to actively explore the contents, functions and interactive ways of digital construction. More detailed insights into the different needs of museum users are also needed. Museums need to leverage smart technology to create more professional and personalized cultural experiences to better fulfill their functions and missions.

Acknowledgements

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