

Research on the Application of Interactive Video Technology in the Inheritance of Dayu Culture

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Abstract: *With the development of the Internet, people's cultural life needs begin to show a diversified development trend. How to make Dayu culture more attractive in the Internet era and better adapt to the current communication needs has become the key point of research. This article explores the application of interactive video technology in the inheritance of Dayu culture by delving into the story content and character images of Dayu culture, and explores the diversified transformation of Dayu culture dissemination methods.*

Keywords: *Interactive video; Dayu culture; Content creation; User experience*

1. Introduction

The culture of Dayu is the source of Chinese national culture. The culture of Dayu not only has cultural relics such as the Yuwang Palace in Bengbu and the Yuwang Mausoleum in Shaoxing, but also rich legends and stories such as crossing the house three times without entering, Dayu controlling floods, and Yi Di making wine. The culture of Dayu is the crystallization of the historical wisdom of the Chinese people, which can highly summarize the cultural spirit of the Chinese nation. Dayu culture reflects the spiritual connotation of the Chinese national community consciousness, and uses new media technology to cultivate the soul and explore new paths for the development of Dayu culture in contemporary film and television technology. Therefore, taking the story of Yu the Great's flood control and its relics, ruins, and sites as the object of expression, using film and television expression as the means of dissemination, and interactive communication as the technical guidance, creating Yu the Great's film and television works not only conforms to the value orientation of the Chinese nation, but also meets the needs of cultural construction in the new era.

2. The Development Status of Interactive Video and Dayu Culture

2.1. Interactive video

Interactive video is the product of the development of the Internet. It is a new work made by integrating interactive experience with nonlinear content through a variety of science and technology. Compared with traditional videos, film and television works under interactive video technology are no longer exclusive to individuals, but a joint work of the audience and video creators, and the audience can directly participate in the narrative. [1]

Interactive video technology has a certain historical accumulation, first appearing at the Montreal, World's Fair in the 1960s, when a movie "Self Service Movie: A Man and His House" was screened with a plot chosen by the audience. The initial interactive video technology relied entirely on manual control by on-site staff. The movie set different nodes, and the staff would pause the movie at each node, allowing the audience to vote among known options and play the plot with the highest number of votes to achieve interactive effects. Although this approach has not truly achieved the state of everyone's participation, it still provides reference experience for the development of interactive video technology in the later stage.

After the 21st century, streaming media platforms have continued to develop and grow, and interactive video technology has also shown new trends in development. Self made interactive videos such as "The Man Chasing the Woman on the Tram" are gradually being played on streaming platforms, and audiences can choose from video nodes to influence the subsequent plot direction. In 2018, streaming platform Netflix launched the interactive drama "Black Mirror: Pandanaski". The audience's

different choices will affect the plot direction, change the fate of the characters, and also lead to different endings. The emergence of this interactive drama has attracted widespread attention to interactive videos. [2]

With the increasing popularity of interactive video works, China has also begun to pay attention to interactive videos. At the beginning of 2019, domestic mainstream video platforms such as Tencent Video, iQiyi Video, and Youku Video competed to develop interactive video businesses. So far, more than 20 interactive video works have been released in the domestic market, including "The Origin of Buddha Head in the Antique Bureau", "His Smile", "When I Wake Up", etc. Interactive videos have shown a trend of industrialization development. In December 2021, Tencent Video launched the interactive short drama "The Prince Gong's Mansion", showcasing the history, traditional architecture, cuisine, etiquette, and other cultural aspects of the mansion from a unique perspective, showcasing the essence of Chinese traditional culture and spreading it to a wide audience.

2.2. Dayu Culture

Yu, surnamed Si and given name Wenming, also known as Dayu. More than 4000 years ago, the climate in China was abnormal, floods were raging, and the people were trapped in dire straits. Da Yu inherited his father's aspirations and traveled for thirteen years, crossing his home three times without entering. His method of controlling floods changed from blocking to dredging, and finally achieved success. In the Neolithic Age, the spirit demonstrated by Dayu leading the Chinese ancestors in conquering nature and managing floods not only represents the spirit of advanced examples among the water control ancestors, but also represents the collective spirit of the Chinese ancestors. Therefore, Dayu's flood control is the historical starting point of the emergence of the Dayu spirit and the spiritual source of the Chinese nation. Dayu culture is a part of traditional Chinese culture. According to statistics, since 1936, many domestic scholars have conducted in-depth research on the culture of Dayu. For example, in 1959, Chen Congzhou summarized the historical records of the restoration of Dayu Mausoleum and Temple in Shaoxing, Zhejiang in his "Investigation Record of Dayu Mausoleum and Lanting in Shaoxing". In 1974, Tan Qixiang re examined the four theories of Tu Shan's geographical location in the "Atlas of Chinese Historical Geography" (Ba Yu theory, Zhejiang Kuaiji theory, Xuanzhou Dangtu theory, Huaiyuan theory), and determined that Huaiyuan in Bengbu was the territory of the ancient Tu Shan clan, and the "Yu Xu" in Yuhui Village in the southwestern suburbs was the land of the Yuhui feudal lords in the "Zuo Zhuan". In 2000, Shen Yeming argued in his book "The Long standing Tushan Dayu Culture" that Tushan in Bengbu City was once an important activity area for the ancient Chinese ancestor Dayu. Li Shaoming (2006) argued the theory of "Yu Xingxi Qiang" and "Dayu Culture Promotes from the West to the East". In 2014, Tan Jihe explored from six aspects that Dayu was the pioneer of water control and agriculture, and the first person in the comprehensive management of mountains and rivers in Kyushu. In 2020, Yan Hao discussed the viewpoint of promoting the spirit of Dayu and protecting Dayu culture by using the remains of Yuyu in Anhui province as a starting point in his book "Anhui Yuyu and Dayu Culture". The 4th Cross Strait Dayu Cultural Exchange Event with the theme of "Tracing the Roots of Dayu's Hometown and Inheriting Chinese Civilization" will be held in Beichuan, Sichuan in 2022. The organizers will use this cultural exchange event to commemorate Dayu's great achievements in flood control, promote the Dayu spirit of "forgetting personal gain, hard work, scientific innovation, and putting the people first", and enable compatriots on both sides of the Taiwan Strait to enhance cultural and bloodline identity, strengthen national cohesion, and cultural confidence through seeking roots and ancestors. [3]

There are over 20 film and television works related to the culture of Dayu, with animation and documentaries being the main forms of expression. The widely circulated film and television works include the twelve episode animated series "Yu the Great's Flood Control", the CCTV documentary "Yu the Great's Flood Control", and the TV drama "Da Shun".

2.3. The current situation of the integration of interactive videos and Dayu culture

Interactive video technology was attempted in the mid to late 1960s, but due to limitations in technology, market, and other factors, it once fell into a development bottleneck. With the development of digital technology, interactive videos re entered the public eye at the end of 2018. In 2019, mainstream media platforms in China grasped the development trend of interactive videos and jointly formulated relevant technical standards under the organization of the Science and Technology Department of the State Radio and Television Administration. According to the CNKI database, a search was conducted under the category of "interactive videos" in the literature classification directory

of drama, film, and television art, and a total of 21 related literature were obtained, of which 16 were published after 2019. A search under the title of "interactive film and television" yielded a total of 12 related literature, of which 10 were published after 2019; A search was conducted on the theme of "interactive dramas", resulting in a total of 39 relevant articles, of which 32 were published after 2019; From the search results, it can be seen that interactive videos have received widespread attention from academia and industry after 2019, but the overall amount of research related to interactive videos is still relatively small. It can be seen that there is relatively little application of interactive video technology in film and television works in China, especially in terms of integration with traditional culture, which still has certain gaps. [4]

3. Analysis of Problems in the Dissemination of Dayu Culture

Today, traditional cultural stories have become an indispensable force in the consumption context of film and television works. However, compared to other cultural film and television works of the same type, the film and television creation of the Dayu series stories has exposed a series of problems, two of which are worth paying attention to.

3.1. Works of varying quality and fragmented forms

With the development of the Internet, the space, content, audience attention and other aspects of cultural communication are characterized by fragmentation. The rapid development of media has made communication more convenient, and people can access information anytime and anywhere. However, due to the low threshold for information dissemination, there is a phenomenon of "generalization" in the dissemination of cultural knowledge content. Users receive information unilaterally, resulting in the fragmentation of the overall and systematic knowledge of culture, and reducing the effective acceptance of users.

In the environment of rapid development of new media, users of various media platforms obtain information in a short time by using microblog, WeChat, Tiktok video and other methods, which makes it difficult for the audience to focus on a topic or content continuously, and lack of thinking about content. The rich connotation of Dayu culture requires rigorous, accurate, and comprehensive dissemination methods. However, the quality level of the video content that is currently disseminated is uneven. For example, the Tiktok blogger Pearl City Past released the video about Dayu's story. Its content is distorted, and the story of Dayu is lack of scrutiny, which is easy to fall into communication errors and mislead the audience.

3.2. The communication medium is single and lacks interactivity

At present, the dissemination of Dayu culture mainly includes three methods: paper book dissemination, on-site dissemination at scenic spots, and media dissemination. When the audience first comes into contact with Dayu culture, they are full of interest due to novelty, but this interest often only stays on the surface and gradually diminishes over time, which has become a shortcoming in the dissemination of Dayu culture.

Firstly, although paper books can comprehensively showcase knowledge of Dayu culture to the public, some of them are obscure and difficult to understand for teenagers, making it difficult to truly popularize the spirit of Dayu culture. Secondly, although on-site dissemination of scenic spots can achieve a firsthand experience of Dayu culture, the long distance of the visit and inadequate service of scenic spot sites greatly reduce the audience's sense of experience, which is not conducive to cultural dissemination. Finally, with the development of the Internet, mass media communication has gradually become the mainstream form. Among them, there are a wide range of film and television works with diverse themes, but there are fewer film and television works related to Dayu culture, with less communication influence and lack of interaction with the audience. [5]

4. The application strategy of interactive video technology in the dissemination of Dayu culture

4.1. Focus on exploring stories and shaping unique spaces

Media is a medium for disseminating information. With the development of network technology, new forms of media have emerged. New media based on Internet information dissemination, such as

microblog, Tiktok, Kwai and other platforms. Media is the carrier that conveys information content to the audience. Therefore, regardless of the form in which a work appears, people always focus on the content of the work. For example, the interactive video work "I'm Waiting for You to Repair in the Forbidden City" launched by Bilibili, with a total duration of 10 minutes, showcases the work of cultural relic restorers from a first person perspective, allowing the audience to complete cultural relic restoration work through interactive selection. The video has exquisite visuals, captivating sound, and mature technology, but its narrative content lacks storytelling and coherence, making it easy for the audience to detach from the plot. This work has only 8166 views on the platform and has low attention. From this, it can be seen that the focus of creating interactive videos should be on content, truly achieving the principle of "content is king".

When creating interactive videos, not only can real-life themes be used, but also familiar stories can be excavated as materials to showcase vivid character images and gripping storylines, thereby arousing emotional resonance among the audience. Even if Dayu culture videos are equipped with interactive video technology, the awareness of "telling the story of Dayu culture well" should be integrated throughout the creation of the works. Creators first need to understand the story of Dayu, and secondly, with an exploratory spirit, explore the essence of Dayu's story, experience the emotions of the characters, and discover content and plot that can be transformed into interactive elements. For example, by delving into the story of "Crossing the Door Three Times Without Entering", interactive design allows users to personally experience the choices and emotions of Dayu, and to appreciate his selfless spirit through the experience. In addition, the design of interactive video content can artistically process the story plot, increase interest, shape unique spaces, and extend the depth of the work while ensuring the authenticity of the content.

4.2. Innovative communication methods to enhance interactive experience

To attach importance to the dissemination of Dayu culture, it is necessary to enrich its interactive feedback forms from two aspects: technology selection and receiving terminals. In terms of technology selection, research and development will use visual presentation methods with immersive experience effects, using interactive videos as a channel for the dissemination of Dayu culture. With the iteration and update of digital technology, the connection between new media platforms and the real world is gradually strengthening, and interactive video technology has also entered the field of film and television communication. Viewers can experience the right to choose the story plot of film and television communication, and choose the story plot they want to see the most from various narrative structures. The specific settings can be divided into the following two aspects.

Firstly, the narrative style. Traditional videos often use linear narrative, and the audience passively receives the story content. However, under interactive video technology, linear narrative is no longer dominant, and various narrative methods can be used to reflect the audience's psychology. Firstly, design a narrative space that combines linear and non-linear elements. The narrative space of interactive video works is often a combination of linear and nonlinear, which is determined by their interactive technology. In the early stage of producing interactive videos on Dayu culture, several video materials were shot and edited, with varying lengths of time. By combining them together, a complete story chain can be formed, and the internal time and space in these segments are narrated in a linear logic. If these clips are uploaded and made into interactive videos, the original connections will be broken, and users' personalized choices will connect them together. The narrative logic will no longer correspond one-to-one, often presenting diverse story chains. For example, designing an interactive video called "Yu the Great's Flood Control" to tell the story of Yu the Great's flood control, users need to choose the method of flood control in the interactive segment. The video clip before the interactive segment tells the story of Dayu's character experience and why he was chosen to control the water. The two video clips after the interactive segment respectively describe the scenarios that arise when choosing different methods to control the water.

Secondly, design a personalized narrative process. In traditional videos, the narrative logic is in the hands of the director, and the audience passively accepts the plot without any choice. Interactive videos, on the other hand, only when the audience truly participates can the entire interactive chain be considered complete. Interactive videos do not have a complete story structure. Only when users make personalized choices can video fragments be pieced together to create more distinctive video works. For example, in designing the interactive video "Yu the Great's Water Control", in the interactive segment where Yu the Great chooses how to control the water, two options of "blocking" or "dredging" are set for users to choose from. Users trigger the next plot based on their own choices and continue to explore according to the selected plot. In this way, the narrative process of the interactive video is

determined by users' personalized choices.

Secondly, audio-visual language. In film and television works, elements such as visuals, sound, and music are crucial, influencing the development of the story plot and the audience's viewing experience. In the production process of interactive videos, the use of audio-visual language also needs to be changed, and the interactive experience should be grasped well. Firstly, the visual content is gamified. The interesting and exquisite visuals of film and television works make them more attractive and commercially valuable. Compared with traditional videos, in order to attract audiences and provide them with a good interactive experience, the visual content of interactive video works should tend to be "gamified", giving people a sense of immersion. For example, in the design of the interactive video "Yu the Great's Water Control", when users choose different methods to carry out water control work, if the water control fails, the font "Keep up the good work" will appear on the screen. This gamified design enriches the visual content and immerses the audience further. Secondly, sound has a communicative quality. In traditional videos, characters are designed and performed according to a predetermined plan, and their dialogue has already been set and cannot be changed. In the design phase of interactive videos, it is possible to increase the interactivity of sound at interactive nodes, actively invite users to participate in the plot, have conversations with users, and break the identity of users as bystanders. It is also possible to conduct explanatory analysis after the user's selection, allowing the user to analyze whether their choice is correct through dialogue, promote the development of the plot, and increase the fun experience.

5. Conclusion

The culture of Dayu is represented by the ancestor of China, Dayu, and embodies the first stage of the Central Plains culture of the Chinese national community. From ancient times to the present, the pace of innovation has never stopped, and the forms of dissemination have also been constantly evolving, gradually integrating with modernization. Interactive video technology has once again vividly presented the story of Dayu, not only solving the problem of protecting Dayu culture, but also allowing the audience to immerse themselves in it and have a deeper understanding of the connotation of Dayu culture. By adopting a visual form of effective dissemination, Dayu culture has been revitalized and revitalized. However, it should be noted that how interactive video technology can achieve efficient integration and deep penetration with Dayu culture is still a question worthy of further in-depth research.

With the standardization of the industry and the maturity of technology, interactive videos will usher in new opportunities. In the future, interactive videos dominated by high-quality content and mature technology will be applied to more scenarios, unleashing new vitality and helping cultural inheritance and development.

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