Construction and Evolution of Urban Cultural Identity Under the Digital Media Environment

Xinyi Hui*

School of Public Administration and Policy, Renmin University of China, Beijing 100872, China

*Corresponding author Email: xxy17791641086@163.com

Abstract. Against the background of the rapid development of digital technology, digital media has become the core carrier of urban cultural communication. This study uses a combination of literature research, case analysis and data statistics to deeply explore the construction and evolution of urban cultural identity under the digital media environment. The study found that digital media promotes the diversification, fragmentation, virtual-real integration and dynamic characteristics of urban cultural identity by changing communication channels, reconstructing cultural symbols and changing audience participation modes. However, this process also brings about problems such as information overload, cultural homogeneity and technological dependence, leading to cultural loss, characteristic dissolution and lack of humanistic care. To meet these challenges, this study proposes to strengthen content innovation and value guidance, encourage professional institutions to cooperate with self-media, and use big data to accurately push cultural content; promote the deep integration of technology and culture, give play to the advantages of 5G, AI and other technologies, and pay attention to the integration of humanistic emotions; improve the multi-party collaborative governance mechanism, clarify the responsibilities of the government, enterprises, social organizations and the public, and jointly create a healthy digital media cultural ecology. This study not only enriches the theoretical research on urban cultural identity, but also provides a practical reference for cities to enhance their cultural soft power and strengthen residents' sense of cultural belonging in the digital age, which is of great significance to promoting the sustainable development of urban culture.

Keywords: Digital Media; Urban Cultural Identity; Construction; Evolution; Optimization Strategy

1 Introduction

With the rapid development of digital technologies such as 5G, big data, and artificial intelligence, digital media has deeply penetrated into all areas of social life and has become the core carrier of urban cultural communication and exchange. The 53rd "Statistical Report on the Development of China's Internet" shows that as of June 2024,

© The Author(s) 2025
A. Y. M. A. Islam et al. (eds.), *Proceedings of the 2025 4th International Conference on Science Education and Art Appreciation (SEAA 2025)*, Advances in Social Science, Education and Humanities Research 952,
https://doi.org/10.2991/978-2-38476-452-5_42

the scale of short video users in China will reach 1.079 billion, and the number of daily active users of social media will exceed 1.2 billion. This huge user base and communication scale are reshaping the pattern of urban cultural communication and residents' cultural cognition, making the construction and evolution of urban cultural identity present new characteristics and trends [1]. In this context, in-depth exploration of the construction and evolution mechanism of urban cultural identity under the digital media environment will not only help to enhance the soft power of urban culture and enhance residents' sense of cultural belonging, but also provide important theoretical and practical support for the sustainable development of urban culture.

Foreign countries started studying the relationship between digital media and local identity early. Manuel Castells proposed the "network society" theory, which explored the impact of digital technology on cultural identity from a macro perspective; domestic scholars conducted research from the perspectives of urban image communication and cultural memory [2]. However, existing research focuses on theoretical analysis, and there is a relative lack of empirical research on the dynamic evolution mechanism of urban cultural identity under the digital media environment, especially the lack of systematic discussion on the complex relationship between technology empowerment and cultural inheritance, communication laws and identity construction.

This study focuses on the impact of digital media on urban cultural identity, and analyzes its construction mechanism from three dimensions: communication channels, cultural symbols, and audience participation [3]. The study found that social media and short video platforms break geographical restrictions and achieve fission-like communication of urban culture through topic diffusion and algorithm recommendation; at the same time, digital technology helps the digital translation of traditional cultural symbols and promotes the Internet's hot topics to give new connotations to urban culture [4]. At the audience level, the rise of UGC content production and online communities has transformed the public from passive receivers to active creators, and deeply participated in the construction of urban cultural identity.

2 The Impact Mechanism of Digital Media on the Construction of Urban Cultural Identity

2.1 Changes in Communication Channels

The rise of social media and short video platforms has completely broken the time and space boundaries of urban cultural communication. According to Weibo data, in 2024, the reading volume of topics related to "# City Culture" exceeded 12 billion times, and the discussion volume reached 230 million. A large amount of urban cultural content was spread in a fission-like manner through topic aggregation [5]. The algorithm recommendation mechanism of the Douyin platform has enabled high-quality urban cultural short videos to reach an average of more than 5 million users. For example, the number of views of the night view of Chongqing Hongyadong exceeded 1 billion times, driving the local cultural tourism industry revenue to grow by 37%. In addition, Xiaohongshu accurately pushes urban niche cultural spaces in the form of graphic

notes. In 2023, the number of notes published in the "City Store Exploration" category increased by 210% year-on-year, successfully excavating a large number of previously neglected urban cultural corners [6]. These emerging platforms not only expand the scope of urban culture dissemination, but also form a "dissemination-feedback-re-dissemination" cycle system through interactive behaviors such as user likes, comments, and sharing, which enhances the depth and influence of cultural dissemination.

2.2 Reconstruction of Cultural Symbols

In the digital media environment, urban traditional cultural symbols undergo digital translation and meaning reconstruction. Taking the Tang Dynasty Never Sleeping City in Xi'an as an example, it uses AR technology to integrate elements such as Tang Dynasty architecture and costumes into real-life performances, and cooperates with light and shadow shows and short video dissemination to make the "Golden Tang Culture" symbol go from historical classics to the public's vision [7]. The relevant short videos have been played more than 5 billion times on the entire network, successfully shaping the new image of urban culture of "a thousand years at a glance" (Figure 1). At the same time, the combination of Internet hot topics and urban culture has spawned new cultural symbols. After the "Citywalk" concept became popular, historical blocks such as Wukang Road in Shanghai and Yangmeizhuxie Street in Beijing became popular check-in places, and there are more than 2 million related notes on Xiaohongshu, giving new cultural connotations to urban street spaces. In addition, digital forms such as emoticons and cartoons have also become carriers for the dissemination of urban cultural symbols. The "Panda Rolling" series of emoticons launched by the Chengdu Giant Panda Base has been downloaded over 100 million times on the WeChat platform, deeply binding the image of the panda with urban culture and realizing the younger dissemination of cultural symbols.

Fig. 1. Tang Dynasty City That Never Sleeps

2.3 Transformation of Audience Participation Model

Digital media promotes the transformation of audiences from cultural receivers to creators, and UGC content has become an important force in the dissemination of urban culture. According to Douyin data, in 2024, the proportion of videos related to urban culture independently created by users reached 68%, among which the content such as the city fireworks and the inheritance of intangible cultural heritage skills shot by ordinary citizens truly showed the diverse aspects of urban culture. As shown in Figure 2, the Guizhou Village Super Race. The event was organized by villagers, and the contestants were mainly villagers. The atmosphere at the competition site was warm, and the prizes were full of rural atmosphere. It was a rural carnival where sports spirit and national culture were integrated. For example, Shandong Zibo barbecue became popular because of the short video of "kebab strategy" shot by users spontaneously [8]. The related topic was played more than 8 billion times, driving the local cultural tourism consumption to grow by 230%. At the same time, the rise of online communities has promoted the community construction of urban cultural identity. Platforms such as Douban City Group and WeChat Cultural Community have formed groups with common cultural interests by organizing offline reading clubs, cultural exhibition visits and other activities. Taking the "Beijing Hutong Culture Research Group" as an example, it has attracted more than 50,000 members to participate through online topic discussions and offline field visits, effectively enhancing residents' sense of identity and belonging to the city's history and culture.

Fig. 2. Screenshot of Guizhou Village Super League YouTube

3 Evolutionary Characteristics of Urban Cultural Identity in the Digital Media Environment

3.1 Diversification and Fragmentation

On digital media platforms, urban cultural content presents unprecedented diversity. Taking the Douyin platform as an example, the content related to urban culture covers various fields such as historical sites, intangible cultural heritage, modern art, and urban life. As of 2024, the number of videos under the topic of "#urbanculture" has exceeded 1 billion, ranging from the interpretation of the palace culture of the Forbidden City, to the record of urban fireworks in the mountain city of Chongqing, to the sharing of fashion art exhibitions in Shanghai, where multiple cultural forms converge. However, this richness also leads to the fragmentation of the cultural identity structure [9]. The information received by users on short video platforms is mostly 1-3 minutes of fragmented content, which makes it difficult to form a systematic and complete understanding of urban culture. According to the survey, 70% of users said that after browsing urban cultural short videos, they only left an impression on some interesting clips and it was difficult to integrate them into a comprehensive cultural cognition. Discussions on social media also show fragmented characteristics. A hot cultural event in a city is often overwhelmed by many new topics in a short period of time, and cultural identity is difficult to settle and deepen.

3.2 Integration of Virtual and Real

The development of technologies such as digital twins and metaverses promotes the integration of urban cultural identity in virtual and real space. Hangzhou uses digital twin technology to create the "City Brain Metaverse Experience Hall", which presents the city's geographical information, architectural style, cultural activities, etc. in a virtual form. Users can immerse themselves in the city's historical changes and modern development through VR equipment. It has attracted more than 500,000 online visitors within half a year of opening. The VR tour project launched by the Forbidden City in Beijing allows users to experience the magnificent architecture and profound cultural heritage of the Forbidden City without leaving home. The related content has been played more than 200 million times on major platforms. In addition, online and offline cultural activities are increasing. For example, the "Digital Art Week" held in Chengdu attracted more than one million viewers across the country to participate through online live broadcasts, virtual exhibitions and offline physical activities, breaking geographical restrictions and enhancing the dissemination and identity of urban culture.

3.3 Dynamic and Rapid Iteration

In the digital media era, urban cultural identity is dynamic and rapidly iterative. The impact of hot events on urban cultural identity is becoming more and more significant. For example, the 2023 Guizhou Village Super Event quickly became popular through the spread of short video platforms. The number of views of related topics on Douyin

exceeded 5 billion in just a few weeks, making the previously unknown Guizhou villages the focus of national attention, greatly enhancing the local cultural awareness and identity. However, this kind of popularity is often difficult to sustain [10]. With the emergence of new hot spots, the public's focus quickly shifts. The algorithm recommendation mechanism further accelerates this process. Major platforms push popular content in real time based on user browsing, likes and other behavioral data, so that urban cultural identity is constantly reshaped by new hot spots and trends. According to statistics, the average period of popularity of urban cultural related topics on social media has been shortened from several weeks in the traditional media era to 3-5 days now, and urban cultural identity has also shown a trend of rapid iteration.

4 Conclusion

This study systematically analyzes the construction and evolution of urban cultural identity under the digital media environment. With its powerful communication and interactive capabilities, digital media has broken the time and space limitations of urban cultural communication, reconstructed cultural symbols, transformed the audience participation model, and promoted the diversification and innovative development of urban cultural identity. But at the same time, digital media has also brought many problems, such as information overload leading to public cultural cognition confusion, cultural homogeneity weakening urban cultural characteristics, and technology dependence making urban cultural communication lack of humanistic warmth. To solve these problems, this study proposes a series of optimization strategies. In terms of content innovation, professional institutions are encouraged to cooperate with self-media to explore the connotation of urban culture and use big data to achieve accurate push, so as to improve the quality and attractiveness of cultural content. In terms of technological integration, we should give full play to the advantages of digital technology, innovate cultural communication and experience methods, and pay attention to the integration of humanistic emotions, so that technology can better serve cultural communication. In terms of governance mechanism, we should build a governance model of multi-party collaboration among government, enterprises, social organizations and the public, clarify the responsibilities of all parties, and jointly create a healthy digital media cultural ecology. In the future, with the continuous advancement of digital technology, urban cultural identity will evolve in a more complex environment. Subsequent research can further focus on the deep-seated impact of emerging technologies on urban cultural identity, and how to maintain the uniqueness and competitiveness of urban culture in the global digital cultural wave, so as to provide more forward-looking theoretical guidance and practical paths for urban cultural development.

References

1. Huang, Y., Functional construction of community new media under the perspective of digital governance - based on the dual logic of technology embedding and cultural identity. Social Science Research and Practice (SSRP), Vol. 1(2025) No. 1, p. 69-73.
2. Zhang, M., Cultural gene analysis and digital media transcoding: Research on the innovation path of urban cultural brands in Henan. Educational Theory and Research, Vol. 3(2025) No. 18, p. 81-83.
3. Jiang, L., Physical consumption of urban cultural space: Focusing on physical bookstore space. Journal of Shenzhen University (Humanities and Social Sciences), Vol. 40(2023) No. 5, p. 57-66.
4. Zhao, Y., Han, Z., Zhang, C. & Zhong, J., The mechanism and regional practice of ecosystem cultural services on cultural and tourism integration - A case study of Lushunkou District, Dalian. Economic Geography, Vol. 44(2024) No. 8, p. 211-221.
5. Zhang, S., Liu, D., Du, S. & Zhou, L., Research on spatial perception of traditional villages based on UGC data: A case study of Tangmo Village in Huangshan City. Journal of Central China Normal University (Natural Science Edition), Vol. 58(2024) No. 6, p. 688-699.
6. Ke, J., Hua, Z. & Xu, X., Identification of urban tourism cultural elements based on online travel notes mining. Resources Science, Vol. 44(2022) No. 1, p. 127-142.
7. Xu, F., Dong, Y. & Zhan, C., Research on the development of cultural digitalization in urban digital transformation. Journal of Shandong University (Philosophy and Social Sciences Edition), Vol. 1(2025), p. 63-72.
8. Zhou, K., Zhang, H., Xia, Y. & Liu, C., New characteristics of urban consumption space under the influence of social media: A case study of the "Internet celebrity check-in place" in Changsha on Xiaohongshu. Modern Urban Studies, Vol. 36(2021) No. 9, p. 20-27.
9. Zhang, C. & Xiao, J., Internal integration and international exchange: The construction path and evaluation index of cross-cultural city construction in China. Journalism and Communication Review, Vol. 75(2022) No. 6, p. 86-95.
10. Shao, X., New media use and local identity of urban new immigrants: a chain mediation model. Journal of Chaohu University, Vol. 25(2024) No. 6, p. 16-25.

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (http://creativecommons.org/licenses/by-nc/4.0/), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.