

Exploring the Role of Social Media in Cultural Sustainability: A Study on the WeChat Official Account of Museum-type Institutions

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Abstract: In the era of information technology, social media plays a pivotal role in safeguarding, showcasing, and promoting traditional culture concerning sustainable development issues. This study focuses on the WeChat official account of Nanjing Folk Museum in China as the research subject and examines works published on this social media platform as research samples. Employing content analysis methodology, coding design is implemented to quantitatively investigate the impact of these works in communication across five dimensions: media format, thematic focus, readership volume, likes count, and release timing. Conclusive findings are derived from this analysis. To provide optimization strategies for leveraging social media platforms in museum-type WeChat official accounts, aiming to foster the sustainable development of Chinese traditional culture in the era of information.

Keywords: social media; the Chinese traditional culture; sustainable development; WeChat official account; content analysis

1 Introduction

Social media refers to the platform for the production and exchange of content on the Internet based on user relationships. Social media offers a global platform for the safeguarding and preservation of traditional culture^[1], facilitating the dissemination and protection of knowledge, customs, rituals, and artistic expressions associated with traditional cultures. WeChat, as one of the most prevalent and extensively utilized social media platforms in China^[2], boasts hundreds of The WeChat account function has emerged as the primary channel for users to access diverse information^[3], peruse news articles, follow brands and individuals, among other activities. By providing a platform for organizations, enterprises, and individuals to disseminate content and engage with users, WeChat official accounts enable subscribers to access various types of information such as news updates, academic knowledge, life hacks, and business promotions. In recent years, an increasing number of museums in China have established their presence on WeChat official accounts to seize ample opportunities for promoting traditional culture. Through employing diverse digital formats including images, videos, language resources, and virtual reality experiences on these accounts, museums can captivate greater attention and interest from the public. Consequently, the general populace

can gain insights into the history, cultural background, value systems, and skill sets associated with traditional culture through social media platforms. This process contributes significantly towards fostering people's awareness and comprehension of traditional culture while simultaneously facilitating its preservation and development.

Research on the role and influence of social media in culture encompasses a diverse range of disciplines, primarily focusing on the phenomenon of social media culture, cultural variations in social media usage, and the ecosystemic functions of social media. It predominantly investigates the impact of social media on cultural transformation, including its effects on identity construction, cultural expression, and shifts in societal activities.

Among them, Dimitrios Amanatidis Et al. have critically investigated museum social media platforms, and scholars such as Lamberto Zollo have examined how museums can use social media and digital experiences to cultivate the loyalty of tech-savvy visitors^[4]. When studying the role of social media in museums, most scholars focus on the use of information technology by museums and visitors' social experience, while few study the impact of social media on traditional culture from the perspective of cultural sustainable development, especially the lack of relevant quantitative analysis and research.

The present study examines the WeChat official accounts of museums and employs content analysis to investigate the role of social media in safeguarding, showcasing, and promoting Chinese traditional culture. In light of identified issues such as repetitive content, limited media formats, insufficient public engagement, and ineffective communication outcomes, corresponding strategies are proposed.

2 Materials and Methods

2.1 Sample Selection

This study encompasses all articles and VR cloud exhibition hall columns published by the WeChat official account of Nanjing Folk Custom Museum between January 1, 2023, and August 3, 2023. It comprehensively examines the data from five dimensions: artistic form, volume, likes count, and release timing.

2.2 Content Analysis Method

This study primarily employs the content analysis methodology, which systematically collects, organizes, and analyzes media content in various forms such as text, images, audio, or video. By conducting quantitative or qualitative analyses on specific content elements, it uncovers patterns, themes, viewpoints, emotions or other relevant features to derive conclusions and insights. This research method aims to objectively and systematically describe the social reality implied by the information through explicit content analysis^[5]. Compared to traditional literature statistics methods, Content analysis is more conducive for an in-depth examination of problem nature.

2.3 Category construction and coding

The 112 articles on the WeChat official account of Nanjing Folk Custom Museum were categorized into five primary directories: media format, thematic focus, readership volume,

number of likes, and release time. Additionally, they were further classified into twenty secondary directories using a combination of alphanumeric codes. A total of 112 samples were coded accordingly utilizing this coding method. The specific summary is presented in Table 1.

Table 1: Directories and Coding Scheme for the WeChat Official Account of Nanjing Folk Custom Museum

Primary directories	Coding	Secondary directories	Coding
Media form	A	Picture + Text	A1
		Picture + Text + Video	A2
		Picture + Text + Audio	A3
		Picture + Text + Video + Audio	A4
		Picture + Text + Virtual Reality	A5
Theme	B	Digital exhibition	B1
		Traditional culture online class	B2
		Offline program Registration	B3
		Below the line project coverage	B4
		Museum Notice	B5
Number of reads	C	0-100.	C1
		101-500.	C2
		501-1000.	C3
		1000 +	C4
Likes	D	0 to 5	D1
		6-10	D2
		11-20	D3
		21 +	D4
Release time	E	00:00-11:59	E1
		12:00-23:59	E2

2.4 Research reliability analysis

Given the potential disparity between researchers' subjective understanding and the category characteristics of WeChat public articles, it is imperative for researchers to analyze and document samples based on a standardized dimension in content analysis. To enhance the accuracy of statistical results, reliability analysis becomes necessary to assess the consistency of evaluations conducted by two or more researchers. The higher the level of consistency, the greater the uniformity in understanding among analysts regarding analysis units and category thereby enhancing research credibility. Holsti's Coefficient of Reliability, which measures percent agreement was also used to calculate inter-rater reliability^[6]. In this study, two

independent coders were selected to code and classify 112 articles, with Holsti's Coefficient of Reliability employed to evaluate content analysis reliability:

$$R = \frac{nK}{1+(n-1)K} \quad (1)$$

R is reliability, K is the average agreement among researchers, n is the number of researchers, K can be calculated by the following formula:

$$K = \frac{2M}{N_1+N_2} \quad (2)$$

N1 and N2 are the number of coding categories independently analyzed by two coders, and M is the number of categories agreed upon. Reliability test is an important link in scientific research. In this study, R is 0.982, above 0.9, which meets the discipline standard of statistics, as shown in Table 2.

Table 2 Coding reliability test of content analysis method

Sample Size	M	K	R
112	108	0.964	0.982

3 Results

3.1 The media format analysis of the work

The works of WeChat official accounts encompass five distinct forms: pictures, text, video, audio, and virtual reality. These diverse forms collectively exemplify the integrated nature of media formats within social media platforms. Notably, the predominant form employed by WeChat official accounts is a combination of "picture + text," constituting 59% of the total content, as shown in Figure 1:

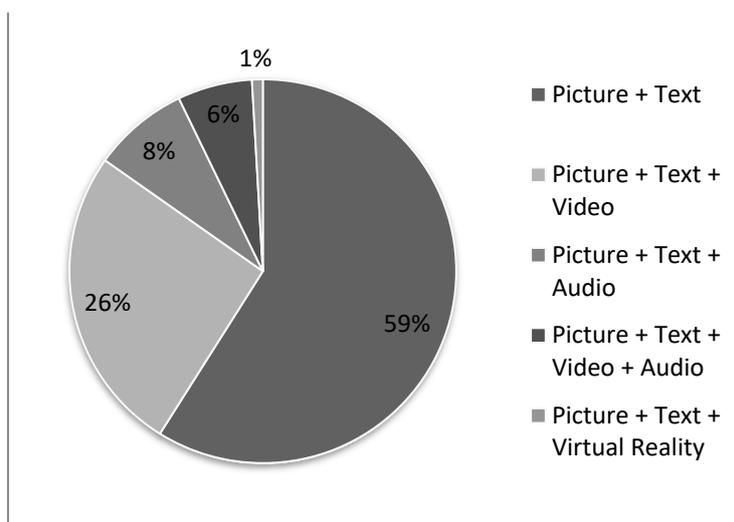


Figure 1. The proportion of media forms of works of Nanjing Folk Museum's WeChat official account

This operational form is characterized by its efficiency and expedience, as it eliminates the need for video and audio collection and editing. Moreover, the integration of virtual reality technology enables the establishment of a multi-dimensional, vivid, and three-dimensional online virtual museum. This allows individuals to remotely explore architectural structures and cultural relics collections through their mobile devices, transcending temporal and geographical limitations. Audiences can freely navigate various scenes within the museum to comprehensively understand and appreciate cultural relics information. Furthermore, this approach damage or theft of cultural artifacts; however, limited production capacity persists due to high complexity and cost.

3.2 The theme analysis of the work

The theme of "online classroom of traditional culture" constitutes a majority among the various themes explored in the WeChat official account of Nanjing Folk Custom Museum, as shown in Figure 2:

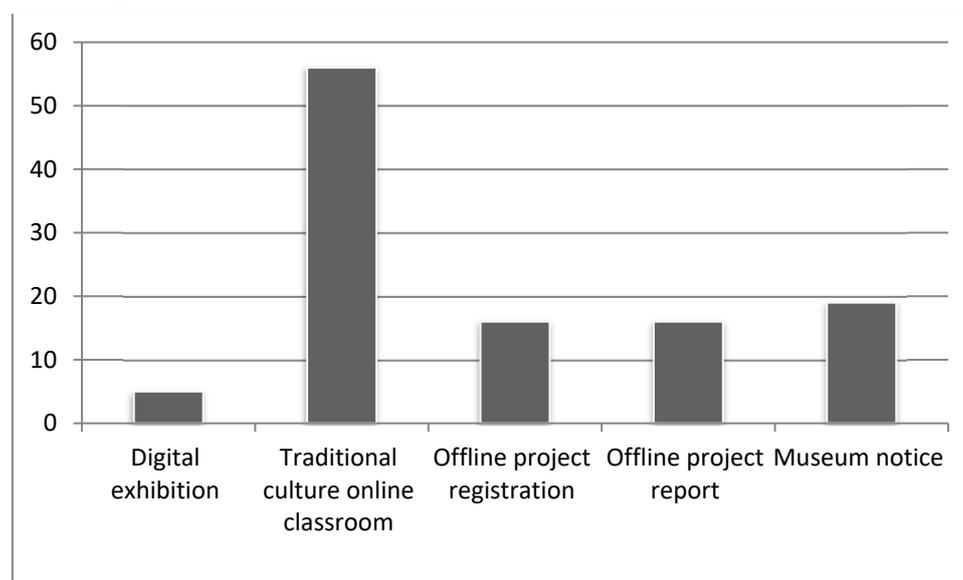


Figure 2. Theme proportion of works on WeChat official account of Nanjing Folk Custom Museum

The teaching mode has transitioned from the traditional face-to-face approach to online classes, encompassing various topics such as Chinese traditional festivals, 24 solar terms, intangible cultural heritage, traditional stories, and the introduction of folk crafts. These aspects of traditional culture are disseminated through albums, effectively showcasing the museum's role in publicizing and educating on cultural heritage. Moreover, the integration of "Offline project registration" and "Offline project report" themes establishes a close connection between online and offline activities. By promoting advance publicity and information dissemination for offline museum events online while allowing public appointments, this approach expands the influence of these activities and fosters cultural interaction and exchange.

3.3 The analysis of communication effect

1) The impact of different media formats on the public's level of acceptance

The correlation between different media formats and the levels of reading engagement and preference is illustrated in Table 3.

Table 3: Data on the influence of media form on the number of reads and likes

Form of Media	Number of works	Number of reads	Average reading	Likes	Average number of likes
A1	66.00	43518.00	659.36	153.00	2.32
A2	29.00	9692.00	334.21	48.00	1.66
A3	9.00	1395.00	155.00	3.00	0.33
A4	7.00	3469.00	495.57	26.00	3.71
A5	1.00	1964.00	1964.00	6.00	6.00

The media format "picture + text + virtual reality" exhibits the highest average reading rate and the greatest number of "likes", indicating its popularity among the general public. Additionally, the average reading volume for "picture + text" is relatively high, suggesting a favorable reception for this format as well. Conversely, the inclusion of video in the "picture + text + video" form results in significantly lower engagement with comments read and liked, implying a diminished acceptance for this particular configuration.

2) The impact of the thematic content on public reception

The correlation between the theme and the extent of reading and preference is illustrated in Table 4.

Table 4: Data on the influence of the theme of the work on the number of reads and likes

Theme of Works	Number of works	Number of reads	Average reading	Likes	Average number of likes
B1	5.00	2990.00	598.00	14.00	2.80
B2	56.00	18733.00	334.52	84.00	1.50
B3	16.00	13272.00	829.50	44.00	2.75
B4	16.00	4948.00	309.25	21.00	1.31
B5	19.00	20095.00	1057.63	73.00	3.84

The work titled "Museum Notice" garnered the highest average number of views and likes, indicating a significant public interest in museum-related matters such as festival opening times and volunteer recruitment. Similarly, the "Offline project registration" received a notably high average number of reads and likes, suggesting elevated expectations and enthusiasm for offline projects. In contrast, despite its large quantity of works, the "Traditional Culture online class" exhibited relatively low average reading volume and likes. Furthermore, the "Offline project reporting" failed to attract substantial attention from the public.

3) The impact of release timing on public acceptance

The correlation between the timing of publication and the level of readership and approval is illustrated in Table 5.

Table 5: Data on the impact of publication time on the number of views and likes

Post time	Number of articles	Number of reads	Average reading	Likes	Average number of likes
E1	60.00	30319.00	505.32	152.00	2.53
E2	52.00	29719.00	571.52	84.00	1.62

The average readership of works released on the WeChat official account of Nanjing Folk Custom Museum before 12:00 is comparatively lower than that of works released after 12:00, while the average number of likes is higher. This suggests that post-noon releases are more likely to attract readership, although they may not evoke a strong sense of identification.

4 Discussion

The research focuses on the WeChat official account of Nanjing Folk Custom Museum, which is categorized into five primary dimensions: media format, thematic content, readership, likes count, and release time. Additionally, it includes twenty secondary categories. Employing content analysis methodology, this study examines the role and impact of social media in promoting the sustainable development of Chinese traditional culture.

The findings demonstrate that the WeChat official account encompasses diverse forms of social media, including text, images, videos, audio, and virtual reality. The predominant mode of content delivery is "picture + text," which facilitates rapid production, efficient dissemination, and easy reception.

The theme of "Online classroom of traditional culture" has garnered the highest number of submissions, which effectively underscores the pivotal role museums play in cultural communication and education. However, upon conducting content research, it was observed that works pertaining to this theme low average reading and liking rates. To address this issue, it is recommended to employ a diverse range of communication methods such as increasing live broadcasts, offering online tutorials on topics related to traditional handicrafts that pique public interest, and incorporating interactive educational elements. These measures are expected to generate greater attention and engagement.

The "Museum Notice" has garnered significant readership, primarily from ordinary visitors. To effectively engage these individuals and cater to their thirst for traditional cultural knowledge and immersive visit experiences through social media platforms, it is imperative to cultivate them into avid supporters of the Nanjing Folk Museum who actively participate in the dissemination of traditional culture. Further comprehensive research is warranted.

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References

- [1] Hammou, I., Aboudou, S., & Makloul, Y. (2020). Social media and intangible cultural heritage for digital marketing communication: Case of Marrakech crafts.
- [2] Mao, H., Zhang, B., Peng, Y., & Xiong, S. (2023). The relationship between negative life events and wechat addiction among chinese college students: the roles of maladaptive cognition toward wechat and rumination. *Current Psychology*, 42(16), 13711-13720.
- [3] Gamage, T. C., Tajeddini, K., & Tajeddini, O. (2022). Why Chinese travelers use WeChat to make hotel choice decisions: A uses and gratifications theory perspective. *Journal of Global Scholars of Marketing Science*, 32(2), 285-312.
- [4] Zollo, L., Rialti, R., Marrucci, A., & Ciappei, C. (2022). How do museums foster loyalty in tech-savvy visitors? The role of social media and digital experience. *Current Issues in Tourism*, 25(18), 2991-3008.
- [5] Kleinheksel, A. J., Rockich-Winston, N., Tawfik, H., & Wyatt, T. R. (2020). Demystifying content analysis. *American journal of pharmaceutical education*, 84(1).
- [6] Shea, P., Hayes, S., Vickers, J., Gozza-Cohen, M., Uzuner, S., Mehta, R., ... & Rangan, P. (2010). A re-examination of the community of inquiry framework: Social network and content analysis. *The Internet and Higher Education*, 13(1-2), 10-21.