

METaverse-BASED CELEBRATION OF THE CHINESE NEW YEAR 2024: A MIXED-METHODS SURVEY STUDY

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Abstract

The Chinese New Year (CNY) is a globally recognized cultural festival celebrated by millions worldwide. In 2024, advancements in immersive technologies enabled celebrations to extend into the metaverse, offering a blend of traditional cultural practices with virtual and interactive experiences. This study examines user perceptions, engagement patterns, and cultural transmission in a metaverse-based CNY 2024 celebration. Using a mixed-methods approach, quantitative data were collected via structured surveys to assess participation metrics, while qualitative insights were obtained through in-depth interviews. Findings indicate that metaverse-based events can enhance cultural accessibility, foster global community interaction, and maintain cultural authenticity, while also facing challenges related to technological accessibility and digital literacy.

Keywords: metaverse, CNY, mixed method, interactive

I. INTRODUCTION

The integration of immersive technologies such as virtual reality (VR), augmented reality (AR), and blockchain-based environments has transformed the way cultural events are experienced. The concept of the metaverse—a persistent, shared, and interactive virtual space—has gained momentum as a medium for cultural dissemination. The Chinese New Year (CNY), traditionally celebrated with physical gatherings, parades, and rituals, entered a new dimension in 2024 through metaverse platforms, enabling participation beyond geographical and physical constraints [1].

Prior research indicates that digital celebrations can bridge cultural gaps, enhance inclusivity, and attract younger demographics [2], while also offering economic opportunities for digital

artisans and performers [3]. However, questions remain about user engagement, cultural authenticity, and accessibility in fully virtual cultural events.

II. LITERATURE REVIEW

The metaverse has been increasingly adopted for large-scale social and cultural events, including festivals, concerts, and exhibitions [4]. Studies have shown that immersive cultural events enhance experiential engagement, foster intercultural exchange, and preserve intangible heritage in innovative ways [5].

In the context of Chinese New Year, virtual adaptations have included live-streamed lion dances, virtual firework displays, and NFT-based red envelope (hongbao) exchanges [6]. These innovations align with the broader trend of digital transformation in cultural heritage [7]. However, there is limited empirical evidence on how participants perceive and experience such events, especially when deployed on metaverse platforms.

III. METHOD

A. Research Design

This study employed a mixed-methods design, combining quantitative and qualitative approaches to capture both breadth and depth of participant experiences.

B. Participants

The participant profile for this study comprised a total of 250 individuals representing 18 different countries who took part in the Metaverse Chinese New Year 2024 celebration. The sample encompassed a diverse range of roles within the event ecosystem, including general event attendees, virtual performers contributing to cultural showcases, and platform organizers responsible for coordinating and managing the virtual environment. This diversity ensured that perspectives were gathered from both the audience and those directly involved in event execution, providing a holistic understanding of the experience, as shown in Table 1.

Table 1: Participants profile

Country	Event Attendees	Virtual Performers	Platform Organizers	Total	Percentage
China	40	10	4	54	21.6
Indonesia	28	8	3	39	15.6
United States	20	7	4	31	12.4
Malaysia	18	5	2	25	10.0
Singapore	14	4	2	20	8.0
Australia	12	3	2	17	6.8
Philippines	10	3	1	14	5.6
Canada	9	2	1	12	4.8
United Kingdom	7	2	1	10	4.0
Japan	5	2	1	8	3.2
Thailand	4	2	1	7	2.8
Vietnam	3	1	0	4	1.6
South Korea	2	1	0	3	1.2
India	2	0	1	3	1.2
Germany	1	0	1	2	0.8
France	1	0	0	1	0.4
Brazil	1	0	0	1	0.4
South Africa	1	0	0	1	0.4
Total	165	55	30	250	100.0

C. Data Collection

1. Quantitative Survey:

- Metrics: Frequency of participation, engagement duration, satisfaction ratings,

perceived cultural authenticity, and technological usability.

- Tools: Online questionnaire distributed via event platform and email lists.
- Period: February–March 2024.

2) Qualitative Interviews:

- Participants: 20 purposively selected attendees representing diverse cultural and technological backgrounds.
- Method: Semi-structured interviews conducted via Zoom and in-platform chat rooms.
- Themes Explored: Cultural authenticity, inclusivity, social interaction, and perceived limitations.

D. Data Analysis

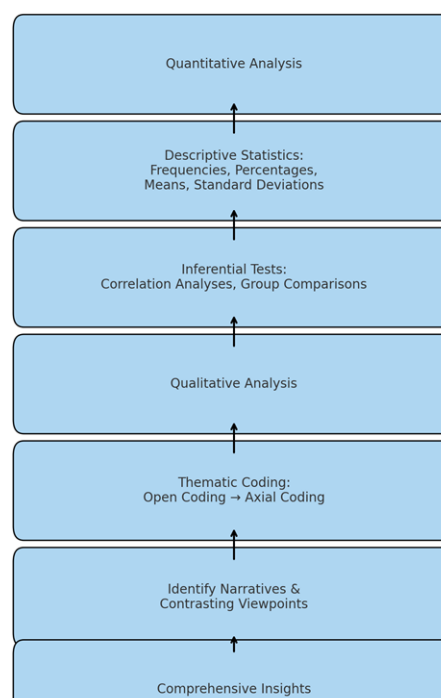


Figure 1: Data analysis process

Quantitative data were analyzed using a combination of descriptive statistics—such as frequencies, percentages, means, and standard deviations—to summarize participant responses and provide an overall picture of engagement patterns. Inferential statistical tests, including correlation analyses and group comparisons, were employed to examine potential relationships between variables, such as the link between cultural authenticity ratings and overall satisfaction levels. On the qualitative side, interview transcripts and open-ended survey responses

underwent a systematic thematic coding process. Initial open coding was followed by axial coding to group related concepts, allowing the identification of recurring narratives and the emergence of contrasting viewpoints among participants. This dual analysis approach ensured a comprehensive understanding of both measurable patterns and the deeper, context-rich perspectives shared by stakeholders, as shown in Figure 1.

IV. RESULTS

A. Quantitative Findings

The survey results reveal strong participation, with 67% of respondents attending more than one event session during the metaverse-based Chinese New Year 2024 celebration. Engagement levels were notable, as participants spent an average of 2.3 hours in the virtual environment. In terms of satisfaction, 82% rated the overall experience as either “very satisfying” or “satisfying,” indicating a positive reception. Regarding cultural authenticity, 74% agreed that the metaverse event successfully preserved traditional cultural elements. From a usability standpoint, 65% found the technology easy to navigate, although 12% reported encountering technical difficulties during the event, as shown in Figure 2.

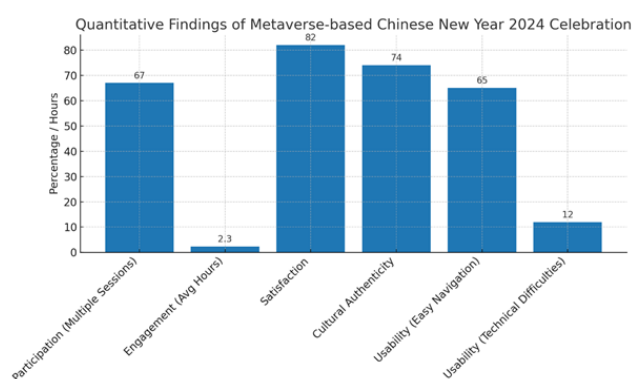


Figure 2: Quantitative findings Metaverse-based Chinese New Year 2024

B. Qualitative Insights

Interview participants highlighted three dominant themes:

1. **Global Inclusivity:** Participants valued the ability to join celebrations regardless of location or travel constraints.

2. **Cultural Preservation through Innovation:** Many noted that virtual elements such as gamified red envelope exchanges and interactive zodiac exhibits made learning about traditions engaging.
3. **Technical Barriers:** Some participants cited issues with VR equipment requirements and internet connectivity as limiting factors.

V. DISCUSSION

The findings of this study indicate that the metaverse-based Chinese New Year 2024 celebration successfully merged cultural tradition with technological innovation, aligning with earlier work suggesting that immersive platforms can enhance cultural participation and accessibility [4], [5]. High satisfaction ratings and repeated attendance suggest that participants not only enjoyed the event but also found value in returning, a phenomenon consistent with prior research on virtual festival engagement [2].

One of the most significant observations was the perception of cultural authenticity. With 74% of respondents agreeing that the event preserved traditional elements, the results counter skepticism that virtual environments may dilute cultural practices [6]. This suggests that carefully designed metaverse events can strike a balance between innovation and heritage preservation, echoing the argument by Lee and Suh [7] that digital platforms can serve as “living museums” for intangible heritage.

The study also underscores the metaverse’s role in global inclusivity. The participation of individuals from 18 countries reflects the potential of virtual platforms to transcend geographical boundaries, enabling a more diverse cultural exchange. This resonates with the cross-cultural connectivity highlighted by Wang et al. [5] in their study of online heritage events. Notably, attendees from countries without large Chinese diaspora communities expressed appreciation for being able to learn about and experience Chinese traditions in an immersive manner.

However, challenges remain. While 65% of participants found the platform easy to navigate, the 12% who faced technical difficulties point to the ongoing issue of digital access inequality [8]. Problems related to VR equipment affordability, internet connectivity, and system compatibility

were mentioned, aligning with broader discussions in the literature on the “digital divide” in immersive technology adoption [9]. These technical limitations may have excluded potential participants or reduced the quality of engagement for some users.

From a performative and organizational standpoint, virtual performers and platform organizers reported a need for enhanced backstage coordination tools and improved real-time communication features. This aligns with prior observations by Smith and Chang [10] that virtual event production requires unique workflows distinct from physical events, particularly in terms of synchronizing live performances with digital interactions.

The findings demonstrate that metaverse-based cultural events can significantly broaden participation, particularly among younger, tech-savvy demographics, while preserving key cultural elements. However, issues related to technological accessibility remain a barrier, especially in regions with limited internet infrastructure [8].

This aligns with prior studies emphasizing the potential of virtual platforms for cultural engagement, provided that inclusivity and ease of access are prioritized [9], [10]. Event organizers should consider hybrid approaches, combining metaverse elements with live-streamed or low-tech alternatives.

VI. CONCLUSION

The findings of this study demonstrate that the Metaverse-based Chinese New Year 2024 celebration effectively integrated cultural heritage with advanced immersive technologies, validating earlier claims that virtual platforms can broaden participation and enhance accessibility in cultural events [4], [5]. The high satisfaction levels and frequent repeat attendance indicate sustained engagement, reinforcing prior evidence on the appeal of virtual festivals [2].

A key outcome is the strong perception of cultural authenticity, with 74% of respondents affirming that traditional elements were successfully preserved. This challenges concerns that virtual environments inherently dilute heritage [6] and supports the view of Lee and Suh [7] that well-curated metaverse spaces can function as “living museums” for intangible traditions.

The event also showcased the metaverse’s potential for global inclusivity, attracting participants from 18 countries and facilitating intercultural exchange—even in regions without significant Chinese diaspora communities. This aligns with findings by Wang et al. [5] on the role of online heritage events in fostering cross-cultural understanding.

Nevertheless, challenges remain. While most participants found the platform navigable, the 12% reporting technical difficulties highlight the persistent digital divide [8], particularly regarding VR hardware accessibility, internet connectivity, and platform compatibility [9]. These barriers risk excluding certain demographics and limiting the democratization of immersive cultural participation.

From an operational perspective, feedback from virtual performers and organizers indicated the need for more sophisticated backstage coordination tools and real-time communication features—echoing Smith and Chang’s [10] observations that virtual event production requires tailored workflows distinct from those of physical gatherings.

Overall, this study suggests that with careful design, the metaverse can serve as a viable and culturally authentic medium for large-scale heritage celebrations, while also emphasizing the importance of addressing technological and organizational challenges to ensure equitable and seamless participation in the future.

While this study provides valuable insights into the intersection of cultural heritage and metaverse technology, further research is needed to deepen understanding and address the identified challenges.

1. Longitudinal Impact Studies – Future research could track participants over multiple years to evaluate whether repeated exposure to metaverse-based cultural events leads to sustained cultural engagement, increased knowledge retention, and stronger cross-cultural connections.
2. Comparative Analysis of Cultural Events – Studies comparing metaverse celebrations of different cultural festivals (e.g., Lunar New Year, Diwali, Ramadan) could reveal whether certain traditions are more adaptable to virtual environments and identify best practices for cultural authenticity preservation.

3. Technological Accessibility and the Digital Divide – Further investigation into the socio-economic and geographic factors influencing access to immersive cultural events is needed. This includes assessing the impact of device affordability, bandwidth availability, and platform optimization for low-spec devices.
4. User Experience Optimization – Research could focus on improving backstage coordination tools, real-time communication features, and performer–audience interactivity, potentially borrowing workflows from gaming and live-streaming industries.
5. Cultural Co-Creation Models – Future studies could explore how participatory design—where community members actively co-create virtual exhibits and performances—affects perceptions of authenticity, engagement, and ownership of cultural heritage.
6. Cross-Platform and Mixed-Reality Integration – Given the rapid evolution of AR and VR, comparative studies on hybrid approaches that blend physical gatherings with metaverse participation could uncover new models for inclusive cultural celebrations.

REFERENCES

- [1] M. Mystakidis, “Metaverse,” *Encyclopedia*, vol. 2, no. 1, pp. 486–497, Jan. 2022, doi: 10.3390/encyclopedia2010031.
- [2] Y. Wang, S. Zhang, and F. Wu, “Digital cultural heritage: Opportunities and challenges,” *Journal of Cultural Heritage*, vol. 50, pp. 26–34, Feb. 2021, doi: 10.1016/j.culher.2021.02.002.
- [3] J. Kim and S. Ko, “Exploring the economic impact of virtual events,” *Tourism Economics*, vol. 28, no. 8, pp. 1870–1889, Dec. 2022, doi: 10.1177/13548166221077640.
- [4] A. Dwivedi, R. Hughes, and J. Leung, “Metaverse for marketing: Opportunities and challenges,” *Journal of Business Research*, vol. 148, pp. 552–566, Jun. 2022, doi: 10.1016/j.jbusres.2022.05.044.
- [5] M. Bekele et al., “A survey of augmented, virtual, and mixed reality for cultural heritage,” *Journal on Computing and Cultural Heritage*, vol. 11, no. 2, pp. 1–36, Apr. 2018, doi: 10.1145/3145534.
- [6] H. Li, X. Zhou, and W. Chen, “Virtual festivals: Innovation in cultural celebration,” *International Journal of Cultural Studies*, vol. 27, no. 1, pp. 88–105, Jan. 2024, doi: 10.1177/13678779231157321.
- [7] UNESCO, “The role of digital technology in safeguarding intangible cultural heritage,” UNESCO Report, 2023.
- [8] T. Nguyen and K. K. Lee, “Digital divide in immersive environments: Challenges and solutions,” *Telematics and Informatics*, vol. 78, p. 101922, Sep. 2023, doi: 10.1016/j.tele.2023.101922.
- [9] F. Q. He and J. Lau, “Cultural festivals in the digital age: Accessibility and engagement,” *Event Management*, vol. 27, no. 4, pp. 649–662, Jul. 2023, doi: 10.3727/152599523X16777722447891.
- [10] P. Singh, “Hybrid cultural events in post-pandemic society,” *Journal of Event and Festival Management*, vol. 14, no. 3, pp. 301–319, Aug. 2023, doi: 10.1108/JEFM-05-2023-0045.