



Multimodal Digital Narrative Approaches and Impact of Performing Art Heritage: A Case Study of Cantonese Opera

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Abstract. Cantonese Opera, a significant intangible cultural heritage of the Guangdong-Hong Kong-Macau Greater Bay Area (GBA), faces challenges in cultural transmission due to shifting audience demographics and evolving entertainment preferences. This study explores the application of multimodal narrative approaches in preserving and promoting Cantonese Opera, including visualized spatial narrative, scenographic integrated narrative, digital interactive narrative, and gamified transcoding narrative. Through the use of questionnaires, the objective is to assess the impact of performing art heritage on the experience and perception of people, the engagement and accessibility of the audience, as well as the preservation and evolution of the performing art heritage. The study finds the multimodal digital narratives can effectively help Cantonese Opera evolve while ensuring its cultural significance for future generations.

Keywords: Cantonese Opera, digital narrative, performing art heritage, cultural dissemination

1 Introduction

Cantonese opera, (or Yueju opera) which originated in China's Guangdong province, has been performed in the Cantonese language for over 300 years and remains popular throughout Guangdong, including neighboring regions such as Guangxi, Macao, Hong Kong, and Chinese communities across Southeast Asia. It is a representative symbol of the Lingnan culture, portraying the historical transformations and secular customs of Guangdong province ²(Chung, 2024) as well as an important intangible cultural heritage (ICH) in the Guangdong-Hongkong-Macau Greater Bay Area (GBA). This art form blends traditional Cantonese music, singing, martial arts, acrobatics, and theatrical performance. Cantonese opera was included in the Representative List of the ICH of Humanity by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) in 2009 and the first National List of ICH in China in 2006 ⁸(Leung, 2015).

This paper explores the multimodal digital narrative approaches and its impacts of performing art heritage, mainly focusing on Cantonese Opera through empirical study. It consists of introduction, current research status, methodology, application, questionnaire, data collection and discussions and conclusions. Each section systematically addresses different aspect of multimodal digital narrative approaches and impact of Cantonese through quantitative and qualitative analysis.

2 Current Research Status

In recent years, some scholar's studies have explored heritage tourism predominantly concerned with exploring both material (tangible) and immaterial (intangible) remnants of the past¹³ (Park, 2011), intangible cultural heritage (ICH) interacts with tourism in natural protected areas (NPAs)⁵ (Esfehani & Albrecht, 2018), the public space construction processes of Cantonese opera as leisure¹⁰ (Lin & Dong, 2018), the sustainable tourism resource and the balance between cultural authenticity and tourism-driven commodification from the perspectives of ICH practitioners⁷ (Kim et al., 2019), the spatial changes affect the tourist experience¹⁴ (Zandieh & Seifpour, 2020), traditions preservation of ICH recognition and the commercialization of cultural practices for tourism⁴ (Dippon & Moskaliuk, 2020), museum education transformed through ICH⁶ (Ferrer-Yulfo, 2022), the key factors driving consumer interest in purchasing intangible cultural heritage products (ICHP) by integrating the Theory of Planned Behavior (TPB) and the Theory of Consumption Values (TCV)¹² (Paulino, et al., 2023), and tourists' visual attention and preference of intangible cultural heritage⁹ (Li et al., 2024), the eight dimensions of tourist attitude towards Cantonese Opera¹¹ (Luo, et al., 2025). However, there is relatively little empirical research on multimodal digital narrative of performing art heritage and its impacts in China. To address this research gap, this study attempts to explore multimodal digital narrative approaches in the preservation and dissemination of performing arts heritage through a case study of Cantonese opera. The results will contribute to the preservation and cultural dissemination of Cantonese Opera.

3 Methodology of the Research

3.1 Research Model

This study focuses on the application of four multimodal digital narrative approaches on Cantonese Opera, including visualized spatial narrative, scenographic integrated narrative, gamified narrative, and digital transcoding narratives. We employed questionnaire and in-depth interviews to examine the impact of the multimodal digital narrative approaches on Cantonese Opera.

3.2 Research Questions

(1) What are the multimodal digital narrative approaches applied to Cantonese Opera in the study?

(2) How can the multimodal digital narrative approaches be systematically applied to Cantonese Opera?

(3) What are the resultant impacts of the multimodal digital narrative approaches on Cantonese Opera?

4 Application of Mutimodal Digital Narrative Approaches in Cantonese Opera

Multimodal digital narrative approaches include visualized spatial narrative, scenographic integrated narrative, digital interactive narrative and gamified transcoding narrative, which are applied to Cantonese Opera through integration into various different scenes of Cantonese opera performances/exhibitions.

4.1 Visualized Spatial Narrative

The spatial storytelling is a visualized storytelling that involves the use of visual, spatial, and narrative elements to create immersive and interactive experiences beyond the conventional storytelling. This is best illustrated by the Guangdong Intangible Cultural Heritage Museum which is a wonderful tourist attraction and is located in Bai Er Tan Art Center at Liwan District, Guangzhou, China. Guangdong Intangible Cultural Heritage Museum is a digital museum. The dynamic motion and audios are added to the stationary displays by the moving forms and the memorable narration, which enriches the experience. Once visitors come closer to the end of the exhibition, they are presented with a new installation by the Guangdong Baha Association.

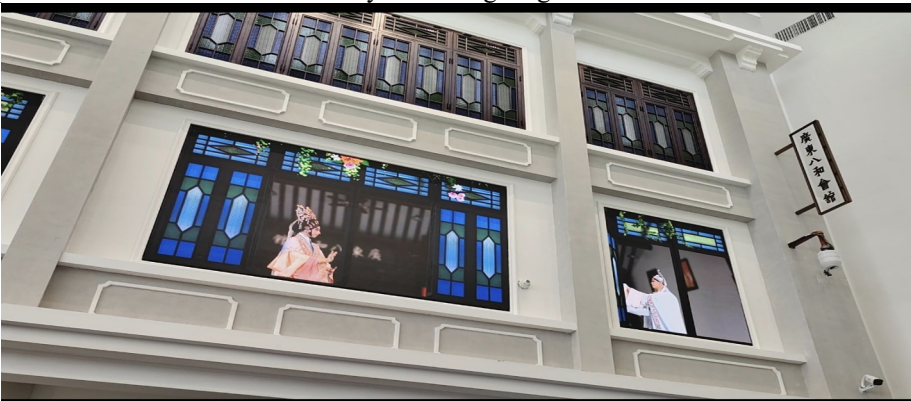


Fig. 1. The Cantonese Opera “*The Golden Seal*”(Jin Yin Ji) is displayed on the window screen.

It is not immediately evident, but a more detailed examination will tell that it is a live opera performance, but a more detailed look will show that it is an advanced digital representation of *The Gold Seal (Hong Yin Ji)* on the window screens (see Fig. 1). The combination of this high definition presentation and the surround sound may be viewed as a truth to life simulation of a live performance. Auditory symbols are better than either text or images in creating a sense, and arousing feelings and emotions. They make the experience more emotional and engaging and allow viewers to have the experience of walking obscure paths toward more profound emotional interactions and even experience themselves as part of the scene ³(Chen and Peng, 2020).

As depicted above, strategic visualization of the usage of spatial narratives in the museum would smoothly foresee a combination of a cultural tradition and an innovative technology which enables the interconnection between the past and present accounts within the framework of cultural practices. This is not only a way of preserving the intangible cultural heritage but it also enhances it making it more significant in its long-term cultural importance to both native and global viewers.

4.2 Scenographic Integrated Narrative

The scenographic integrated narrative is inspired by theater design, exhibition design, and multimedia art, applying the newest technologies such as projection mapping, interactive installation, augmented or virtual reality (AR or VR) to allow the audience to experience an enhanced interaction with dynamic and interactive displays.

A clear example of a tourist site in which scenographic narrative design is developed is Cantonese Opera Art Museum in Guangzhou Xiguan Yongqingfang Tourist Area. The museum is renowned because of its historical value and maintenance of intangible cultural heritage, and the arcade-style structures of the museum are known to be the typical preservation of the buildings of republic of China that was characterized by the fusion of Chinese and Western architecture. This mix of architectural features and Xiguan traditions and folk arts form a cultural environment rich in images and aesthetics.

Visitors are given an AR headset to experience spatial audio when they enter through the arcade corridor, accompanied by opera rehearsals which fade out. Empty rehearsal mirrors are used to project colourful images of members of the Xin Pei Troupe. *The Female Prince (Nv Fu Ma)* depicts the characters of the actress and actor of Xin Pei Cantonese Opera Troupe on the stage of Cantonese Opera Museum in Yong Qing Fang, Guangzhou, China (See Figure 2).

The projection mapping allows the stage scene to be static, yet the scenery is changed to become different narrative environments (palace, battlefield, moonlit garden) on the preserved Xiguan-style stage. The branches of the story are selected by the visitors through interactive zones on the floor. Therefore, the auditory and visual experience of the Cantonese Opera is enveloped into visitors in the form of projection mapping and interactive exhibits of the world of Cantonese Opera with musics and songs and the narrative artistry.



Fig. 2. Cantonese Opera “*The Female Prince (Nv Fu Ma)*” is performed by the actor and actress from Xin Pei Cantonese Opera Troupe on the stage of Cantonese Opera Museum in Yong Qing Fang, Guanghzou.

4.3 Digital Interactive Narrative

Multimodal digital narratives are also employed to form the world of the audience in digital narrative platforms, including interactive fiction, holographic projection (HP) and virtual reality (VR) experiences. The term transmedia storytelling was coined by Jenkins (2006) to explain the act of storytelling in various forms of media and involving active participation of audiences. The internet narratives on the digital platform can involve the use of both domestic platforms like WeChat, Tiktok and Weibo and foreign ones like Instagram, Facebook, and YouTube. It is possible through these platforms to share multilingual texts, images, thematic documentaries, and short series of videos about intangible cultural heritage with the audience worldwide. Besides, it is also possible to draw the attention to short videos on platforms like Tik Tok, Kuaishou, Bilibili, and YouTube, where short video records can be created that present the Cantonese Opera in the best possible way. As an illustration, films displaying the performances of Cantonese Opera can be posted in online media with subtitles on various languages to expand the exposure of these ancient expressions of art to foreign art lovers. The short video narrative approach is typically a linear format of storytelling: the beginning (building a certain interest in a particular intangible cultural heritage) — development (making a decision to learn more about it and visit those inheriting the intangible culture) — climax (meeting and overcoming the obstacles) — ending (coming back home with the intangible cultural heritage)¹⁵ (Zhou and Wang, 2024). These interactive designs are coherent and fluent in offering a unified and smooth sense perception to the viewers across visual, auditory, and tactile dimensions, which appeals to the multi-cultural and multi-artistic demands of the modern audience.

4.4 Gamified Transcoding Narrative

Digital transcoding refers to extracting the essential cultural elements in ICH, such as technical processes, symbolic structures, aesthetic systems and spiritual connotations, from their specific material supports and traditional environments. These are decoded, reconstructed and re-expressed via digital technology. In short, it refers to the change in cultural meaning from a physical or experience-based form (such as crafts, rituals, performances) to a digital one (e.g., 3D models, interactive applications, AI avatars, VR environments), but the fundamental essence or “cultural genes” of the original are retained.

The new Cantonese opera *The Blazing Battlefield* (Juezhan zhi Liaoyuan 2025) has selected the popular online game Jianwang 3 (Sword Net 3) and its “An Lushan Rebellion” faction story as the basis for this work. The innovation is not a new subject matter, but rather a new arrangement of the usual dramatic arc for gamers. The opening is based on the “loading bar” effect of a game and has the theme of “logging in” to a theatrical world. Thus, the traditional Cantonese opera ritual of kai xi (opening of the performance) has been converted into a “scene entry” function in a game. At the core of this transcoding is a rearrangement of the interface through which the audience experiences the story; no longer does one need prior knowledge of operatic conventions, but rather can derive the rhythm and structure from their daily gaming life to reduce the cultural distance for younger people considerably. Together, digital transduction practices indicate the focus of “gene activation”. It does not mean that intangible cultural heritage content is to be preserved digitally. Instead, digital transduction is employed to extract the essential cultural genes within; these are then re-encoded in the language of technology today and gain a new, interactive, evolving, and spreadable life in the digital space.

5 Questionnaire

To investigate the impacts of the multimodal digital narrative approaches on Cantonese Opera, we conduct a quantitative study by means of the questionnaire via Questionnaire Star (Wenjuanxing). Qualitative research offers rich and compelling insights into the real worlds, experiences, and perspectives of patients and health care professionals in ways that are completely different to, but also sometimes complimentary to, the knowledge we can obtain through quantitative methods ¹(Braun & Clarke, 2014).Our study engaged 100 participants across diverse backgrounds, with significant representation from both traditional (40% native Cantonese) and new audiences (35% first-time exposure). The questionnaire survey was taken from January 2026 to April 2026. This diversity allows us to assess multimodal approaches across different starting points of familiarity.

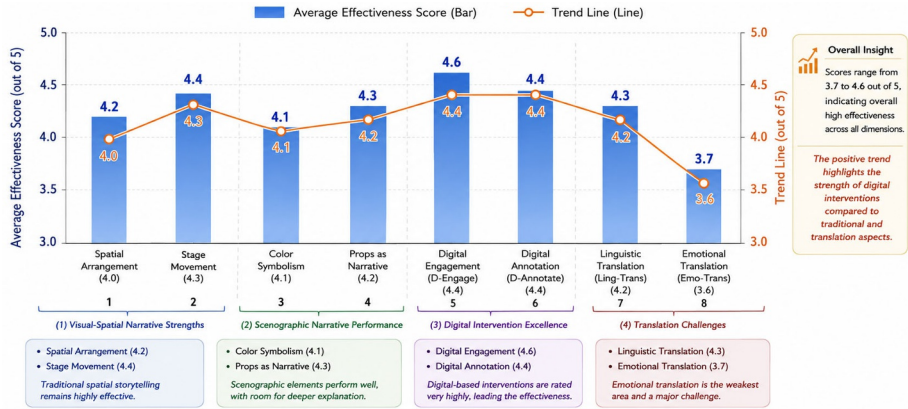


Fig. 3. Average Effectives of Eight Key Dimensions of Multimodal Digital Narrative Approaches

Figure 3 includes a two-in-one view (bar chart and line graph on it) of the average effectiveness scores on eight dimensions of multimodal digital narrative approaches in the Chinese Cantonese Opera . The data indicates the overall high degree of effectiveness in all the dimensions measured, the measurements are between 3.7 to 4.6 out of 5 points. Considerable positive trend of the line graph suggests that, digital-based interventions are rated very highly, whereas, traditional features of narrative translation are comparatively weak.

5.1 Data Collection and Analysis

Based on the application of multimodal digital narrative approaches to Cantonese Opera and the data from questionnaire, the impact of the approaches are analysed in this part.

(1) Visual-Spatial Narrative Strengths (Scores: 4.2-4.4)

Spatial Arrangement (4.2): Positioning of actors on the stage and spacing are good devices of telling stories that the audience deciphers. This is an indication that even the traditional drama vocal arrangements of the Cantonese Opera are still intuitively understandable by modern and foreign viewers.

Stage Movement (4.4): The most traditional elements are ranked as the highest score indicating the fact that choreography and physical storytelling are almost ideal to cross the cultural boundaries. Movement is a universal language of narration in this art movement.

(2) Scenographic Narrative Performance (Scores: 4.1-4.3)

Color Symbolism (4.1): This is still rather high, but it is less conspicuous when compared to spatial elements which means that particular associations of colors and meanings in Cantonese Opera might be less obvious without a more detailed explanation.

Props as Narrative (4.3): The props act as a storytelling tool, which is, probably, efficient due to the fact that they have more universal symbolic conventions of their narrative aspects (a fan as a symbol of flirtation, a sword as a symbol of conflict).

(3) Digital Intervention Excellence (Scores: 4.4-4.6)

Digital Engagement (D-Engage, 4.6): It is the best score of the whole data to show that interactive digital content contributes towards the audience engagement and focus greatly.

Digital Annotation (D-Annotate, 4.4): Explaining everything in a pop-up and context is very desirable, though a little less important than the engagement, indicating that an overall interaction experience can be as significant as the information in it.

(4) Translation Challenges (Scores: 3.7-4.3)

Linguistic Translation (Ling-Trans, 4.3): Literal translation of words and discussions are taken care of, and they are as effective as the scores of good old stuff.

Emotional Translation (Emo-Trans, 3.7): It is the lowest score of the dataset, showing a big difference in sharing the emotional nuances, voice, and cultural emotional manifestations the focus of which the Cantonese Opera has its effect.

Obviously, from the data in Figure 3, it can be seen that the multimodal digital narrative approaches have great impacts on the Cantonese Opera. Firstly, they can help to increase the involvement and concentration of their viewers. The highest score (4.6) was for digital interventions, including Digital Engagement (D-Engage), which suggests that audiences' interaction with and attention to the performance is most enhanced by interactive digital content. Secondly, they enable real-time context understanding. Digital Annotation (D-Annotate) (4.4) allows explanations to appear in pop-ups, helping audiences, especially modern or foreign viewers, understand traditional elements of Cantonese Opera without disrupting the experience. Third, they add the further advantage of being an extension of already effective storytelling devices – the visual-spatial elements (stage movement at 4.4, spatial arrangement at 4.2) and scenographic elements (props at 4.3) are all strong storytelling elements which are reinforced by the use of Digital tools. Meanwhile, the survey points to a definite path for innovation. From the data, it can be seen that digital tools are now very good in engaging and delivering information, but the next step should be developing affective narrative systems to better emotional translation, which is the main problem with full cross-cultural and multimodal accessibility.

6 Conclusion

By means of multimodal digital narrative approaches that include visualized spatial narrative, scenographic integrated narrative, digital interactive narrative, and gamified transcoding narrative, Cantonese Opera gets reactivated effectively and the artistic value of the opera is preserved. Speaking of the overall findings of the questionnaire, we could deduce that there was a multimodal digital narrative model, which has three most important characteristics, namely, the high level of engagability of the digital tools, the durability of the traditional spatial and scenographic elements, and the distinct lack of emotional subtlety transformation. Through multimodal digital narra-

tion approaches, the Cantonese Opera could preserve its cultural role and at the same time meet the requirements of the modern world. Such a moderate model to the matter will enable this ancient art form to flourish and appeal to the current as well as the generations in the future.

Acknowledgements

This study is funded by The Planning Office for Philosophy and Social Sciences of Guangdong Province [Grant Number GD23WZXC01-11], the Provincial Center for Multilingual Translation and Dissemination Studies of Chinese Culture (Grant Number 2021WZJD008).

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