

Impact of New Media Technologies on Narrative and Audience Perception in Contemporary Drama

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Abstract

This study investigates new media technologies' transformative effects on contemporary theater, examining motion capture, VR, and interactive storytelling through mixed-methods analysis (interviews, case studies, questionnaires). Findings reveal these innovations expand performative possibilities while reshaping audience engagement and narrative dynamics. The research identifies dual impacts: enhanced immersive experiences versus technical integration challenges, proposing frameworks for balancing technological experimentation with dramatic authenticity.

Keywords: New media technology, Contemporaneity theater, Narrative structure, Audience perception

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1.0 Introduction

As an art form, drama is influenced mainly by narrative creation and audience participation, and new media technologies play a pivotal role in contemporary drama, especially in the rapid development of Chinese drama (Zakopoulos et al., 2023). The application of technologies such as motion capture and VR not only promotes the development of innovative narratives, but also redefines the interactive relationship between creators, performers and audiences (Takala, 2023). However, the integration of new media technologies also brings challenges such as technical barriers and ethical issues, which are common in Western and Chinese drama (Xiaoyu, 2024). This research aims to explore the impact of new media technologies on narrative and audience perception of theatre, and to examine the unique approaches and challenges in their integration.

This research first needs to examine the many ways in which new media technologies are used in contemporary theatre. Although motion capture technology, VR, and interactive narratives have been explored in multiple studies (Tallon, 2017; Broadhurst, 2018), there is still much that needs to be further studied in the diverse tools and methods used by creators and performers. Secondly, the impact of these technologies on audiences' experience and interpretation of theatre is another important research question. As audiences become more deeply involved in narratives through interactive narratives and branching plots (Aylett et al., 2018), the traditional audience-performance relationship is redefined. Finally, the challenges and opportunities brought about by integrating new media technologies into contemporary theatre also deserve further investigation. Technical challenges, such as managing complex hardware and software systems, ensuring the reliability of technology during performances, and the financial costs associated with implementing new media tools, must be considered (Pérez-Seijo & Silva-Rodríguez, 2024). In addition, ethical and legal issues, such as potential intellectual property infringement, the privacy of audience members, and the impact of new media technologies on actors craft, also need to be

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addressed (Hepp et al., 2024). In addition, the integration of new media technologies in contemporary drama provides creators and performers with novel ways to experiment with narrative structures, engage with audiences, and expand the boundaries of theatrical performance (Quintana Alvarez et al., 2025).

The objectives of this research are to identify the current scope of applications of new media technologies in the creation and performance of selected plays, to analyze the ways in which technology affect audience perception and interpretation in theatrical production, and to examine the challenges and opportunities arising from integrating new media technologies into contemporary drama creation. By examining these issues, this research will contribute to the body of knowledge on the intersection of new media technologies and contemporary drama, providing valuable insights for creators, performers, and audiences.

2.0 Literature Review

The literature review focuses on outlining existing research findings on the application of new media technologies in contemporary drama. Its integration in contemporary drama has brought about novel creative possibilities and influenced the way audiences experience and interpret drama works (Broadhurst, 2018).

2.1 Motion Capture

Artificial Intelligence (AI) - IBSEN's AI-driven platform facilitates collaborative script generation, enabling directors and actors to create different dramatic scripts while maintaining character integrity (McNeal et al., 2024). Digital projection technology combined with AI allows for dynamic self-configuration of scenes and enhanced storytelling techniques (Jiaming et al., 2025).

2.2 Virtual Reality and Augmented Reality

Recent advances in virtual and augmented reality (AR) technologies enable productions to integrate virtual characters controlled through motion capture systems, blending physical and virtual elements for a truly immersive experience (Tallon, 2017). AR overlays digital content onto the real world, transforming the performance space and providing an additional layer of context for the audience (Triberti & Riva, 2016).

2.3 Interactive Narrative

Contemporary theatre uses design principles and mechanics from video games, such as branching narratives, multiple-choice dialogue, and real-time decision-making, which allows the audience to actively shape the direction and outcome of the performance (Rouse III, 2019). This approach has been used in a variety of interactive theatre productions, such as immersive murder mysteries, escape rooms, and live-action role-playing games, in which audiences can explore the performance space, interact with performers and digital content, and make choices that affect the narrative (Murray & Keefe, 2016).

2.4 Audience interaction and explanation

Audiences actively engage with the narrative, performers, and digital content, and can shape the direction and outcome of the performance (Fanouraki & Zakopoulos, 2023). Interactive theatre productions often employ social media platforms, mobile applications, and web-based interfaces to facilitate audience participation, such as voting on narrative choices, contributing ideas or content, or communicating with performers in real time (Broadhurst, 2018). Examples of interactive theatre productions include "Sleep No More" (2011), an immersive adaptation of Macbeth, where audiences freely explore the performance space and interact with performers and digital content, and "Remote" (2015), a participatory theatre experience where audiences use mobile applications to make choices and engage with the narrative (Çankaya, 2023).

2.5 Challenges and opportunities

The integration of new media technologies into contemporary theatre does not preclude concerns about digital distraction or disconnection from the live performance experience (Silver, 2023). As actors become increasingly reliant on digital tools and technologies, they must maintain a strong focus on the human aspects of their craft to ensure that the live, visceral theatre experience is not lost.

3.0 Methodology

The creative and technical aspects of new media technologies in contemporary theatre, as well as the subjective experiences and interpretations of actors, directors and audiences, were explored. The main components were the research framework, sample selection, qualitative and quantitative data collection, data analysis, and finally the integration of the results of these analyses. Each component worked to answer the research questions and proposed the impact and challenges of new media technologies on the creation and narrative of theatre.

3.1 Research Framework

Figure 1 presents a research framework examining the impact of new media technologies: such as motion capture and VR on contemporary drama and audience engagement. Using a mixed-methods approach (Oranga, 2025), the study combines qualitative exploration (structured interviews with practitioners and case studies) with quantitative validation (audience surveys) to analyze

technological integration, narrative innovation, and participatory dynamics. The framework also identifies key challenges, including technical resource limitations and interdisciplinary collaboration barriers, offering insights into how these technologies transform theatrical experiences while highlighting practical hurdles in their adoption.

3.2 Sample selection

From the perspective of creative experience, the target population for this research includes theatre practitioners, including actors, directors, playwrights, and production staff. From the perspective of interactive narrative, the audience also includes audiences who have participated in performances that incorporate new media technologies. They all have direct experience with the integration of new media technologies in contemporary theatre and can provide valuable insights into its impact on the creative process and audience participation. The sample for this research will be drawn from the target population using a combination of purpose and convenience sampling techniques. This will ensure that the sample is representative of the population and that the data collected is relevant to the research questions and objectives (Palinkas et al., 2015).

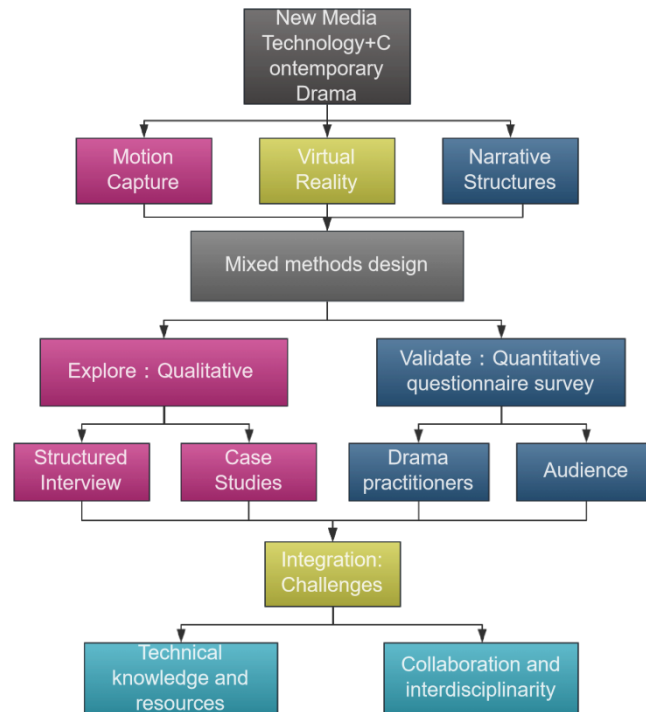


Fig. 1: The research framework
(Source: Self-created.)

During the qualitative research phase, approximately 15-20 theatre practitioners will be selected for semi-structured interviews to ensure a variety of roles and experiences within the theatre community. The case study will focus on 3-5 contemporary theatre productions that incorporate new media technologies, representing a variety of genres, styles and production sizes. In the quantitative research phase, a questionnaire survey was conducted using a convenience sampling method on a larger sample of theatre practitioners and audiences. The sample size for the quantitative phase will be determined based on the level of precision required and the resources available for data collection and analysis (Dörnyei, 2007). A minimum sample size of 100 respondents is recommended to ensure adequate statistical power and generalizability.

3.3 Qualitative and quantitative data collection

During the qualitative research phase, semi-structured interviews with Professors Xie Bo and Zhang Tianxin were conducted. Detailed case studies of 3-5 contemporary plays that incorporate new media technologies were conducted to identify, analyze, and report on patterns and themes within the data.

In the quantitative research phase, a questionnaire survey was used to design questions related to the use and acceptance of new media technologies in drama. Two sets of questionnaires were distributed: one to drama practitioners and the other to the audience.

3.4 Data analysis

Through multi-angle analysis of different data sources and methods, the qualitative analysis part uses thematic analysis to analyze the data collected from semi-structured interviews and case studies. The statistical results of the transcribed interviews and case studies will use a combination of inductive and coding techniques to guide the research questions and objectives, as well as the patterns and insights that emerge in the data. The coded data will be organized into broader themes and sub-themes and reviewed, refined and

interpreted based on the research questions and existing literature. Quantitative analysis uses descriptive and inferential statistics. This research aims to improve the validity and reliability of the research results and provide a more complete and comprehensive explanation of the phenomenon investigated.

4.0 Findings

The qualitative data provided rich, contextual insights into the experiences and perspectives of those directly involved in using new media technologies in theatre. The quantitative data provided broader trends and patterns regarding the prevalence and impact of these technologies. Figure 2 is a relationship diagram of relevant research results, describing how new media technologies can enhance drama performance skills, create immersive environments, promote interactive and participatory drama, and how these factors increase the appeal of drama. The entire flowchart emphasizes the opportunities and development of these technologies in the field of drama, while also pointing out the challenges that need to be overcome.

4.1 The scope of these technologies in drama

Professor Xie Bo, Dean of the School of Film and Television at Yunnan Arts Institute, emphasized that motion capture technology allows actors to explore a wider range of roles and movements, resulting in more dynamic and engaging performances. Professor Zhang Tianxin of Zhejiang Media College pointed out that VR allows us to completely break the fourth wall, providing audiences with unprecedented immersion and interaction with the story. Interactive and participatory theater, such as selecting the plot direction through a mobile phone application, allows the audience to become active participants in the performance, which can greatly increase their emotional investment in the story.

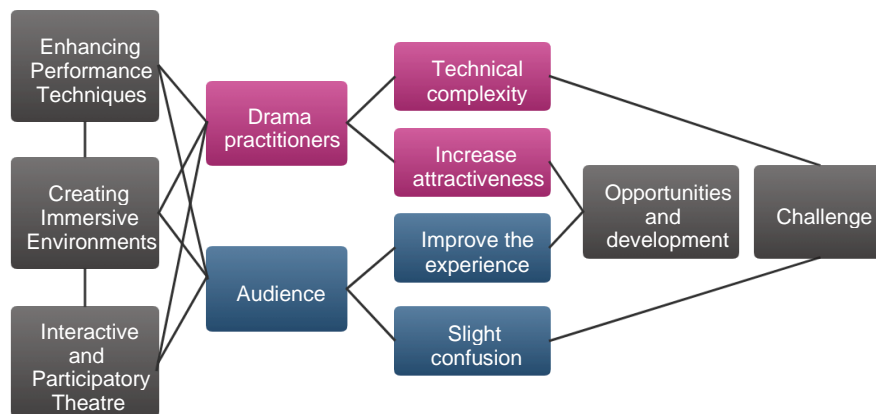


Fig. 2: Relationship diagram of research findings.
(Source: Self-created.)

The specific results are shown in Table 1. Among them, digital projection and social media platforms are in the lead in adoption, reflecting their key role in enhancing performances and audience engagement. The use of motion capture and interactive media is also high, highlighting their importance in creating immersive and dynamic performances. Although less commonly used, VR and AR are receiving increasing attention as important tools for innovative, audience-centric experiences.

Tab. 1: Digital technology adoption survey results statistics

Technology	Adoption Rate
Digital Projection	22.6%
Social Media Platforms	20.9%
Motion Capture	17.6%
Interactive Media	16.2%
VR	12.8%
AR	9.8%

4.2 Practitioner perspective

In the field of contemporary drama, the use of new media technologies is becoming increasingly widespread. The survey shows that 45% of drama practitioners "often" use these technologies, while 28% use them "sometimes". It is worth noting that 17% of practitioners "always" incorporate new media technologies into their works, showing their high reliance on these tools. Despite this, 10% of practitioners still "rarely" use new media technologies, indicating that although new media technologies are widely adopted, not all works rely deeply on these innovations. Digital projection and social media platforms are the most common applications, with usage rates of 67.0% and 62.0% respectively, while motion capture and interactive media are also widely used, at 52.0% and 48.0% respectively.

Most practitioners believe that new media technologies have a positive impact on drama, with 80.0% of respondents agreeing that these technologies have improved performance quality and 78.0% believing that they have increased audience engagement. However, these technologies also bring challenges, with 78.0% of practitioners pointing to increased complexity and 88.0% mentioning the need for technical skills. Despite the overall positive perception, technical demands and complexities are also evident, indicating the need to find a balance between the advantages and challenges of technology.

4.3 Audience influence

Case summary of qualitative analysis: The use of new media technologies in contemporary drama is illustrated in three case studies. In case study 1, the Royal Shakespeare Company's production of "The Tempest" used VR and digital projection technology to create a 360-degree immersive environment. Through motion capture technology, the production brought digital characters to life, greatly enhancing the visual and emotional impact. Audience feedback showed that this immersive experience was a highlight, making the audience feel as if they were part of the story. Case study 2 involved the interactive drama "Sleep No More", where the audience could freely explore the performance space and interact with the actors. The production used a mobile application to allow the audience to influence the narrative direction, creating a unique viewing experience for each audience member. Case study 3 focused on "Dear Angelica", which used VR technology to create a visually and emotionally engaging narrative. The use of hand-drawn animation in a virtual space provided the audience with a unique story experience, enhancing emotional resonance and deepening the audience's emotional connection with the characters.

Summary of Quantitative Analysis: Quantitative data from the audience questionnaire revealed widespread recognition of the appeal of new media technologies in theatrical performances. The majority of respondents (85.5% in total) found these technologies "appealing" or "very appealing", indicating that audiences were positive about the performance experience enhanced by new media technologies. Although 9% of the audience had a neutral attitude toward new media technologies, only a very small number (5.5%) felt that these technologies alienated them. In addition, the bar chart data showed that new media technologies were widely viewed as tools to enhance comprehension and improve performance memorability, although about three-quarters of the audience (37.0%) believed that these technologies could cause confusion or stress. These quantitative results indicate that new media technologies can generally enhance audience engagement and comprehension, but also suggest that caution is needed during implementation to avoid confusing the audience.

4.4 Challenges and opportunities

Summary of qualitative analysis: The research revealed that the integration of new media technologies in drama brings significant technical challenges and learning curves. Although new media technologies offer multiple possibilities for enhancing performance and audience interaction, they also require drama practitioners to master extensive technical knowledge and resources, which may be an entry barrier for small drama companies. In addition, in order to effectively use new media technologies, drama creators need to work closely with technology experts across disciplines, which emphasizes the importance of teamwork and continuous communication. Case study and interview results consistently show that while new media technologies enhance the appeal of drama, they also require drama practitioners to find a balance between technology and artistic expression.

Summary of Quantitative Analysis: The quantitative analysis further confirmed the findings of the qualitative research. By comparing traditional drama and new media enhanced drama experience, the data showed that new media technology significantly improved audience engagement, comprehension and memory. However, the introduction of new media technology also slightly increased audience confusion, which may be due to the complexity of the technology or the audience's unfamiliarity with new media technology. The statistics highlight the potential of new media technology to enhance the drama experience, but also suggest that caution should be taken in its implementation to ensure that the audience is not overwhelmed. Correlation and regression analysis showed that the use of new media technology was positively correlated with audience engagement, comprehension and memory, but negatively correlated with confusion. This suggests that while new media technologies can enhance the drama experience, careful consideration should be given to how these technologies are integrated to maximize their benefits and minimize challenges.

5.0 Discussion

Research on the application of new media technologies in drama, especially surveys and analyses of practitioners and audiences, reveals the broader implications of how new media technologies affect the creation, performance and audience reception of contemporary drama, and provides a comprehensive understanding of the opportunities and challenges associated with integrating these technologies into drama productions.

5.1 How these technologies are used in contemporary drama

A variety of new media technologies are used in contemporary theatre, including motion capture, VR, AR, and interactive media. These technologies not only enhance performance skills, but also expand the creative possibilities of theatre practitioners. Motion capture technology is frequently mentioned for its ability to animate digital characters and enhance live performances, allowing actors to play non-human or fantasy characters. In addition, VR and AR technologies have been shown to be able to create immersive environments and bring audiences into the narrative, which is consistent with previous research highlighting their ability to deepen audience engagement. Digital projection and interactive media have also received attention for their ability to dynamically change set design and

enable real-time audience interaction. These findings emphasize the role of technology as an integral part of contemporary theatre, rather than just a supplementary tool.

5.2 Impact on the audience

New media technologies have significantly enhanced audience engagement and comprehension. For example, immersive technologies such as VR and AR allow audiences to experience narratives from the inside, developing a deeper emotional with the story. Interactive media, such as apps that allow audiences to participate in narrative decision-making, redefine the role of the audience from passive observer to active participant. Audience feedback highlights the ability of these technologies to create a sense of presence and engagement. This finding is consistent with immersive and participatory theatre theories, which argue that technological integration changes traditional boundaries between audience and performance. However, research has also noted differences in audience response based on demographic factors, with younger audiences more likely to enthusiastically embrace these technologies, while older audiences are less likely to do so.

5.3 Challenges and opportunities for practitioners

Despite the many benefits offered by new media technologies, the findings highlight notable challenges in integrating them into contemporary theatre. The most common problems include the high cost of implementation, a steep learning curve for practitioners, and potential technical glitches during live performances. These issues are identical with those described in the literature, which has consistently pointed to resource constraints and technical expertise as key factors limiting the adoption of new media technologies. Despite these challenges, the findings highlight opportunities for innovation, interdisciplinary collaboration, and expanded creative horizons. For example, collaborations between theatre practitioners and technology experts have facilitated new approaches to storytelling and performance. Furthermore, the research reveals the potential of these technologies to engage new audiences and redefine traditional theatrical conventions, presenting exciting opportunities for the future of theatre.

6.0 Conclusion

This study explores the application of new media technologies in contemporary drama and reveals its profound impact on narrative style and audience perception. Through the analysis of cases such as *The Tempest*, *Sleepless Night*, and *Dear Angelica*, it is found that motion capture, VR, and AR technologies not only enrich the performance style of drama, but also bring immersive experience to the audience. These technologies significantly enhance audience engagement and emotional resonance by providing interactive and participatory theater experience. Although the integration of new media technologies is accompanied by technical challenges and cost issues, they have opened up new avenues for innovation and interdisciplinary collaboration in theatrical arts. The results emphasize that to fully utilize the potential of new media technologies, drama creation needs to find an appropriate balance between technological innovation and artistic expression. However, this study has several limitations. First, the sample size of practitioners and audiences is relatively small, which may affect the generalizability of the research results. Second, the research focuses on technologically advanced works, which may ignore smaller or traditional performances that also incorporate new media in different ways. Third, this study does not extensively study long-term effects, such as how continued exposure to new media technologies affects audience engagement. Future research can address these gaps by expanding the sample size, including a wider range of drama works, and conducting longitudinal studies on audience acceptance.

Paper Contribution to Related Field of Study

This research provides new insights into the research field of the integration of drama and new media technologies, especially in analyzing how new media technologies shape theatrical narratives and audience experiences. The research not only provides guidance for drama practitioners on how to effectively integrate new media technologies, but also points out the importance of supporting drama innovation for educators and policymakers. In addition, This research emphasizes the potential of new media technologies in attracting a new generation of audiences and broadening the boundaries of drama art, providing new directions for the future development of drama art. Through an in-depth analysis of the application of new media technologies in drama, This research provides valuable insights and inspiration for the evolution and innovation of drama art in the digital age.

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