Virtual Reality Journalism Education: American Experience and Its Implications Postprint

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Abstract

As technology continues to transform, an increasing array of technologies are being integrated into the journalism industry. The advancement of virtual reality technology has catalyzed the development of "immersive journalism," necessitating corresponding evolution in journalism education to keep pace with industry developments. In response to the novel characteristics exhibited by "immersive journalism," Stanford University and the University of Southern California in the United States have pioneered relevant academic programs, establishing specialized requirements related to "immersive communication" across training objectives, assessment methodologies, and mentor selection. Through an examination of these two institutions, combined with China's distinctive context and the developmental trajectory of future news communication, the advancement of China's "immersive journalism" education may pursue a collaborative approach, thereby cultivating talent that aligns with industry development for the journalism sector.

Full Text

Virtual Reality Journalism Education: American Experience and Its Implications

Abstract: As technology continues to evolve, an increasing array of technologies are being applied to journalism. The development of virtual reality (VR) technology has driven the rise of "immersive journalism," necessitating corresponding transformations in journalism education to align with industry changes. In response to the novel characteristics of immersive journalism, Stanford University and the University of Southern California have pioneered specialized programs with unique requirements for immersive communication in areas such as training objectives, assessment methods, and mentor selection. Through an investigation of these two universities and in consideration of China's distinctive environment and future trends in journalism communication, China's im-

mersive journalism education can pursue a collaborative path to cultivate talent that matches the evolving needs of the journalism industry.

Keywords: immersive journalism; virtual reality technology; journalism education; educational philosophy

1. Characteristics of "Immersive Communication"

As science and technology continue to advance, "virtual reality" has transitioned from a bold scientific vision to reality. VR laboratories and experience stores have popularized VR technology, while the gradual integration of internet technology into news production has fundamentally transformed traditional communication methods, characteristics, and effects. Concurrently, major media outlets have launched VR products, signaling that virtual reality technology is increasingly entering the field of news production.

"Immersive communication" emerges from the concept of virtual reality. This technology represents the fusion of computer and network technologies, where communicators transmit images and data through VR production software to external devices, which then display them to audiences [1]. This technology breaks the constraints of traditional flat media by presenting news events in three-dimensional form. Meanwhile, augmented reality (AR) technology serves as a supplement, overlaying dynamic images onto real-world scenes. Users can access these virtual or augmented reality scenarios by scanning QR codes or using mobile applications [2].

1.1 The Amplifying Role of Human Agency

Media serve as extensions of humanity, with humans continuously creating new media forms to satisfy their information needs. In this relationship, humans occupy the central position, and media evolve according to human demands. In VR journalism, the role of humans is emphasized in two key aspects.

First, in news production, "audiences" have become "users." The evolution from the web 1.0 era focused on "interconnection" to the web 2.0 era centered on "social interaction," and now toward the web 3.0 era based on "artificial intelligence," has transformed the audience's role from passive information recipients to active information recorders. The concept of "dialogic journalism," focused on "I-Thou relationships," has gained traction, with increasing amounts of news being produced through "crowdsourcing" mechanisms [3]. Simultaneously, the rise of numerous social platforms has enhanced models of secondary and multiple dissemination, turning users themselves into media channels for information propagation [4].

Second, in terms of organizational structure, humans have become the center of VR journalism. Whether in text, images, or video, traditional news narrative approaches positioned people as "recipients." Virtual reality technology places

individuals within news scenes, allowing them to experience events firsthand and fostering "empathetic effects" with journalists, editors, and protagonists. This narrative approach requires journalists to reconstruct news event sites and transmit them to audiences, demanding that they continuously excavate and capture every detail of a story to present a complete scene. Furthermore, as a supplementary technology, AR requires various news clues to form an integrated news framework, where one detail can lead to other threads and information.

1.2 Content Production Demands for In-Depth Reporting

Virtual reality journalism imposes specific requirements on news event categories. VR news themes tend to be more concentrated, making the technology particularly suitable for reporting on "disasters," "wars," "nature," and "science and technology" [6]. Within these relatively focused thematic areas, journalists must recreate news event scenes and deliver them to audiences. This narrative method requires journalists to continuously mine and capture every detail in news stories, presenting complete scenes to audiences. Moreover, AR technology as a supplement demands that various news clues can be integrated into a cohesive news framework, where a single detail can lead to other threads and information.

1.3 Ethical Considerations in Selective News Presentation

The primary characteristic of VR technology in user experience is "being there." While engaging multiple senses and adopting a first-person perspective to mobilize user experience, this technology also blurs the boundary between reality and virtuality. The hyper-realistic simulation makes users increasingly dependent on virtual reality, gradually tending to believe that scenes in VR are authentic. Meanwhile, even VR journalism maintains strong gatekeeping, agenda-setting, and priming functions. On one hand, the professional nature of VR technology means that professional journalists and editors remain the primary producers in VR news creation. On the other hand, based on journalists' own limitations, external environmental factors such as economics and politics, and media positioning, the news presented in VR journalism is not absolutely objective or comprehensive.

2. American Experience: Stanford University and University of Southern California

2.1 Training Philosophy

Mastery of virtual reality technology constitutes a basic course requirement. In both universities' curricula, the initial weeks focus on understanding VR development overview and learning VR news production software. However, beyond technical skills, the programs emphasize cultivating qualities applicable to news practice, ultimately enabling students to produce storytelling works that meet professional standards.

First, the programs foster teamwork spirit. In future VR journalism, journalists may interact not only with editors within media organizations but also with professionals from various fields and industries. Consequently, the University of Southern California's course objectives explicitly mention developing students' collaborative abilities.

Second, the programs cultivate critical thinking and creativity needed for new media production. Students are required to understand global news trends across various fields to align themselves with media industry developments and world situations.

2.2 Assessment Methods

With online media becoming increasingly influential, practical journalism skills are constantly emphasized in journalism education. The University of Southern California's grading system comprises four components: in-class and online participation, regular exercises, presentations and reports, and final project publication. Replacing traditional written examinations, most assessment requirements focus on regular practice and the final publication of immersive news works. The programs emphasize the publication of complete news works, requiring students to form groups and independently produce complete VR news products using techniques learned during the course. These works are then posted on social platforms and reviewed by instructors for revision, ultimately producing qualified VR news products. Final grades are determined by the quality of the produced news works, with A-level works required to be professional, publishable, accurate, concise, comprehensive, and utilizing multiple online media platforms.

2.3 Mentor Selection

For media organizations, VR journalism represents a novel domain. Consequently, both universities primarily select mentors from professional new media practitioners, with specific course instructors including media professionals with VR news production experience. At Stanford, the immersive journalism mentor Geri Migielicz served in the photography department of the *San Jose Mercury News* from 1993 to 2009. Her team won the Pulitzer Prize for General News Reporting in 1990. Actively engaged in the transformation of the media industry, her team has won Emmy Awards for multimedia productions. She now runs an independent multimedia production company and employs lecturers with VR news production experience. In the seventh week of instruction, the lecturer is Nonny de la Peña, who first proposed immersive journalism in 2010 and pioneered the application of virtual reality news in journalism, earning her the title "Godmother of Virtual Reality." Her VR documentary *Hunger in Los Angeles* premiered at the Sundance Film Festival in 2012. Thus, the faculty selection demonstrates that instructors must not only have media experience but also possess deep understanding of new media operations and hands-on VR news production experience.

3. Implications for Chinese Journalism Education

For China's media industry, immersive journalism remains a novel concept. Moreover, whether immersive journalism can be applied on a large scale in the news industry remains uncertain. This uncertainty means that investment may entail certain risks. Therefore, journalism schools can seek collaboration with other organizations to mitigate risks and achieve mutual benefits.

3.1 Infrastructure: Collaboration with Technology Companies

VR First has committed to investing in and establishing 50 VR laboratories in universities worldwide, launching multiple projects in gaming, psychology, education, and other fields. Domestically, in June 2016, NetEase announced a partnership with Tsinghua University to establish a VR laboratory, providing technology and financial support. Tsinghua University, in turn, uses these technological resources to explore possibilities for future news reporting, creating a win-win outcome. With Immerex's support, VR funds have been established to build VR/AR projects.

3.2 Assessment: Producing Complete News Works

Methods for co-publishing student works with professional media fall into two main categories. First, students independently publish completed works on social platforms, with evaluation based on audience engagement metrics and instructors' professional perspectives. Second, through partnerships between universities or VR companies and professional media, works are promoted to official websites, WeChat public accounts, Weibo, and other platforms. Journalism schools can select appropriate methods based on student characteristics and institutional conditions. As a highly practical discipline, the ultimate goal is for students to produce complete, high-quality news works.

3.3 Faculty Development: Cultivating Teaching Capacity

For the journalism field, VR technology has not yet been widely applied. In comparison, VR technology has gained earlier traction in gaming, medical, and other fields. More importantly, VR journalism education requires not only journalism expertise but also mastery of VR technology application to provide comprehensive guidance to students. However, domestic VR journalism education has not yet fully developed, and waiting for VR journalism professionals to complete long-term systematic training before becoming instructors would take too long. Under these circumstances, journalism schools can collaborate with information science departments to provide VR technology training for existing journalism faculty, thereby shortening the cultivation cycle while maintaining high quality, training VR journalism talent on a large scale, and putting VR journalism education on the right track.

Changes in the journalism field inevitably drive transformations in journalism education, affecting not only curriculum design but also teaching philoso-

phies and educational concepts. The development of immersive journalism has prompted changes in American journalism education, but few Chinese journalism schools have made similar adjustments. As immersive journalism continues to develop and more Chinese institutions begin to adapt, more specific pathways for journalism education development suited to China's current media environment can be identified.

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Note: Figure translations are in progress. See original paper for figures.