Reflections on the "Circle-breaking" Phenomenon of Dance Education in Colleges and Universities in the New Media Era

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Abstract: Driven by new media, dance education in colleges and universities is undergoing a profound "circle breaking" change. This phenomenon is a result of multiple intertwining of social and cultural contexts, educational technology innovation and transformation of educational concepts, which not only contains opportunities but also brings controversies and challenges. This study combines the characteristics of the new media era, describes the multi-dimensional presentation of "circle breaking" in dance education in colleges and universities in the new media era, analyses dual driving force of this phenomenon and explores the strategies. It aims to provide theoretical references and practical paths for the innovative transformation of dance education in colleges and universities.

Keywords: New Media Era, Colleges and Universities, Dance Education, "Circle Breaking" Phenomenon, Talent Cultivation.

1. Introduction

Digitalization is sweeping across the globe, and new media technology is reshaping the development of various industries, including education, at an astonishing speed. Dance education in colleges and universities is an important part of art education, and under the empowerment of new media technology, it gradually breaks through the traditional teaching system and presents a new trend of "circle breaking" development. The so-called "circle-breaking", that is, dance education from the "niche" of professionals to the "mass" of the public, from a unified skills training to cross-disciplinary integration, from the offline classroom to the online education. It not only reflects the profound impact of technological innovation on the education model, but also reflects the social and cultural demands and changes in art dissemination.

2. Characteristics of the New Media Era

2.1 Technology-driven Communication Revolution

The new media takes digital technology as the underlying logic and realizes the storage, dissemination and interaction of information through binary coding. This technology can break the physical limitations of traditional media and enable information to be disseminated in data among terminals. Multi-modal fusion has become the new norm in information dissemination, with text, images, audio, video and other elements being integrated into "hypertext" to form a three-dimensional communication structure. Intelligent algorithms, on the other hand, analyze user behavioral data to achieve accurate delivery of content, enabling information dissemination to shift from "mass" to "personalized".

2.2 Immediate and Interactive Modes of Communication

New media can reconfigure the spatial and temporal relations of information dissemination, with real-time becoming the core feature. The boundaries between information production and consumption are blurred, and users can instantly publish content and get feedback, forming a closed loop. The communication structure is transformed from the linear mode to the mesh mode, where each node is both a receiver and a disseminator of information. Interactivity can be further enhanced by live broadcasting, and pop-up comments and other functions enable the audience to directly participate in content production, promoting dynamic dialogue as the communication.

2.3 Socio-cultural Massification and Globalisation

New media can lower the threshold of cultural creation and dissemination, and mobile devices and open-source software can make individuals cultural producers, promoting the transformation of culture from "elitist" to "popular". At the same time, the Internet can break through geographic boundaries and create globalised cultural exchanges. Local cultures can quickly reach international audiences and trigger cross-cultural resonance. However, globalisation also brings the risk of cultural homogenisation, and it is necessary to explore the path of multicultural coexistence while maintaining local cultural characteristics.

3. Multi-dimensional Presentation of the "Circle-breaking" of Dance Education in Colleges and Universities in the New Media Era

3.1 From Stage to Screen, Media Innovation

New media technology can achieve a fundamental transformation of communication media beyond the traditional physical space of dance education. Traditional dance education takes the theatre and classroom as the carrier, and the knowledge transfer relies on live performance and demonstration. However, in the era of new media, digital tools and online platforms have become the main communication channels. High-definition video, three-dimensional modelling and other technologies enable dance movements to be accurately recorded and reproduced, and virtual reality (VR) and augmented reality (AR) technologies can simulate the stage environment, enabling learners to experience the performance effects of different scenes in virtual space [3]. At the same time, the rise of streaming media platforms and

social media allows dance education resources to achieve instant sharing on a global scale. This media innovation can not only expand the coverage of education, but also improve the efficiency and accuracy of knowledge transfer through multimodal presentation (e.g., movement breakdown animation, interactive tutorials).

3.2 From Teacher-student to Community, the Expansion of Teaching Subjects

New media can reconstruct the subjects of dance education and form a decentralised community-based learning network. In the traditional teaching mode, the teacher is the only authority, and students are in passive acceptance, while in the new media era, students can build learning communities through online forums, social media groups and other platforms to achieve knowledge co-creation and sharing. Community members can upload original works, share learning experiences, and even initiate cross-regional collaboration. At the same time, professional dancers, scholars and enthusiasts can participate in teaching by live broadcasting, online Q&A, etc., forming a pluralistic interactive structure of "teacher-student-experts". This kind of subject expansion will weaken the closed nature of the traditional education system and make dance education an open and shared cultural practice.

3.3 Reconstructing the Knowledge System from Skills to Artistic Literacy

In the new media era, dance education needs to shift from skills training to comprehensive artistic literacy training. While traditional education focuses on physical skills and performance ability, the digital environment requires learners to master interdisciplinary knowledge, such as digital media technology and cultural communication theory. Virtual choreography and data visualisation are gradually being integrated into university dance courses, and students are being cultivated to use AI algorithms to analyse movement data and plan artistic activities through social media. At the same time, new media has strengthened the cultural interpretation of dance, and educators need to instruct students to reflect on issues such as technological ethics and cultural identity, and to cultivate their critical thinking and sense of social responsibility. This reconstruction of the knowledge system upgrades dance education from "skill inheritance" to "cultural innovation", and delivers composite talents with media knowledge and humanistic care to the industry.

4. The Dual Drive of "Circle-breaking" in College Dance Education in the New Media Era

4.1 Technology Empowerment

New media technology has deeply reshaped the communication path and teaching form of dance education through digital tools and intelligent algorithms. Firstly, it breaks through physical time and space. New media technology to cloud computing as infrastructure, through the streaming media protocol to achieve real-time transmission of teaching resources and off-site sharing, such as catechism (MOOC), virtual classrooms, etc. can make quality courses spread across geographical barriers. Second, quantitative teaching accuracy. Through the technical closed loop of "data collection - algorithmic modelling - dynamic feedback", dance teaching is shifted from "experience-driven" to "data-driven".

Wearable devices and motion capture systems can collect real-time biomechanical data such as dancers' bone trajectories, muscle force patterns, energy metabolism, etc. The AI algorithm generates dynamic ability assessment reports and training optimisation programmes by comparing the standard movement database with individual differences. Thirdly, to enhance the immersive experience, VR/AR technology can build an immersive dance theatre, so that the learners are in a dynamic virtual scene, interacting with the digital environment in real time through body movements, and feeling the deep integration of dance with space, music and narrative; haptic feedback devices and somatosensory peripherals can simulate the ground resistance of different materials, weight of clothing and other physical parameters, to strengthen the physical memory of the embodied perceptions.

4.2 Cultural Requirements

Firstly, public participation. In the era of new media, cultural consumption has undergone a fundamental transformation. With the improvement of material living standards, the public's demand for spiritual culture has shifted from passive acceptance to active participation, and dance art has become an important carrier for individual expression and social interaction. Short video platforms lower the threshold of creation, so that everyone can become a producer and disseminator, and this "de-professionalization" trend has given rise to a huge amount of UGC (user-generated content), forming a craze for dance creation among the public. Dance education in colleges and universities needs to meet this requirement by expanding the goal of the curriculum from pure skill training to cultivating the public's artistic expression ability, popularizing the basic knowledge of dance and improving the public's aesthetic literacy through public classes and online workshops. Secondly, cross-cultural communication. Globalization and digitalization are intertwined to form a new context of cross-cultural communication. Dance, as a non-verbal symbol, has become an important medium for displaying national culture and constructing national image. Dance education in colleges and universities needs to take the responsibility of cultural export and cultivate talents who are both proficient in traditional skills and have the ability of international communication. This requires the curriculum system to integrate the theory of cross-cultural communication, strengthen the comparative cultural research, and at the same time make use of the new media platform to promote dance works.

5. "Circle Breaking" Strategy of Dance Education in Colleges and Universities in the New Media Era

5.1 Technology Empowerment and In-depth Integration of Digital Tools

New media technology promotes the transformation of the

Volume 7 Issue 5 2025 http://www.bryanhousepub.com teaching paradigm to intelligence by reconfiguring the ecological pattern of dance education. Teachers can use cloud computing and streaming media technology to build a low-latency, high-concurrency resource sharing network, so that quality dance courses achieve synchronous transmission across borders and time zones. At the same time, teachers can use motion capture systems and computer vision algorithms to transform human movement into structured data, accurately record joint angles, muscle force and other parameters inertial measurement units (IMUs) through and three-dimensional modelling technology, and generate a dynamic movement trajectory stream. In addition, teachers can also use AI algorithms combined with biomechanical models to automatically identify technical deviations and build error correction models to achieve objectivity and parameterisation of teaching feedback. Technology integration can not only extend the teaching scene, but also promote dance education from experience-driven to data-driven, creating an innovative of model "technology-teaching" deep coupling. Taking the teaching of "classical dance" as an example, teachers can recover the original dance of "Melody of White Feathers Garment" through digital twin technology, analyze the mechanical characteristics of "leaning posture" in Tang Dynasty with motion capture data, and then use AI algorithms to compare the students' physical data with the historical model to generate quantitative indicators such as "deviation of gravity perpendicularity" and "error of wrists rhythmic timing". This technology not only enables abstract concepts such as "figure charm" and "rhythm" to be transformed into observable data, but also builds an immersive training environment through virtual reality technology, allowing students to explore the cultural connotations of "S-shaped" body curves in the digitally reproduced Dunhuang mural scenes, realizing the deep integration of technical rationality and artistic sensibility.

5.2 Quantitative Analyses, Scientific Iterations of Precision Teaching and Learning

In the field of dance education, the traditional teaching mode relies on the teacher's experience and subjective feelings, and this "vague perception" teaching method has obvious limitations in teaching accuracy and efficiency. With the rapid development of new media technology, big data, sensor technology, computer vision and learning analytics technology can bring new opportunities for change in dance education. In the process of dance teaching, teachers can use sensors and computer vision technology to collect students' movement data in real time, track online learning behaviors learning analytics technology, and build with three-dimensional assessment model of "technical mastery cultural understanding - creativity". The model can generate quantitative indicators such as "movement quality index" and synchronization rate" to predict learning "rhythm effectiveness and dynamically adjust teaching strategies. At the same time, teachers can automatically generate personalized error correction plans by comparing standard movement databases, transforming traditional "oral teaching" experience into replicable teaching parameters. This kind of data-driven teaching iteration can make dance education "vague perception" transform from to "scientific decision-making", forming a precise and optimized teaching closed loop. Taking "folk dance" teaching as an example, teachers can capture students knee flexion and extension amplitude, ankle joint trembling frequency and other parameters through the multimodal sensor array, and combine them with the folk-dance mechanics database to automatically generate the "Uyghur Dance 'Neck Motion' Completion Evaluation Report". "At the same time, teachers can use natural language processing technology to analyse the dance culture research logs submitted by students, construct "ethnic imagery perception mapping", and transform cultural understanding into visual indicators. When the system monitors that a student's score in the "hand rhythm cultural symbols recognition" section is below the threshold, it can trigger the push of targeted teaching resources, such as retrieving the three-dimensional analytical model of the "rebound pipa" hand posture in Dunhuang mural paintings, or launching the VR scene to simulate the folklore situation of Xinjiang Meshrep, to achieve cognitive bias correction. This data-driven teaching iteration enables dance education to shift from "vague perception" to "scientific decision-making", forming a process of "data collection - model analysis strategic intervention - effect verification".

5.3 Cross-border Integration and Diversified Expansion of Artistic Expression

Under globalisation and digitalisation, dance education is undergoing a paradigm shift from skill transmission to cultural creation. The elimination of disciplinary barriers and the expansion of knowledge boundaries have become the core driving force of this process, pushing dance education beyond the traditional framework of physical discipline. The deep integration of art with science and technology, humanities, and society builds a multi-dimensional interdisciplinary knowledge network. This cross-border integration can not only reshape the expression of dance art, but also cultivate art creators with critical and innovative thinking, and promote the goal of education from skill training to cultural creation. On the one hand, the art form is reconstructed. Teachers can use three-dimensional motion capture technology to transform dance movements into visual data, revealing the muscle force behind "vivid rhythm" through biomechanical analyses; or guide students to use AI choreography systems to explore the integration of traditional dance and digital aesthetics. At the same time, teachers need to master the scene construction ability of XR technology, and create an immersive dance laboratory through virtual reality (VR) and augmented reality (AR) technology, so that students can reconstruct the relationship between the body and space in the digital twin scene. On the other hand, implant the theories of humanities and social sciences. Teachers can make use of the online course platform to introduce theories of culture and sociology to guide students to explore the connection between dance and topics such as identity and globalisation, so that students will understand that dance is not an isolated art form, but an important part of the human cultural ecology, which carries the collective memory and identity of a specific group, and reflects the human cognition and expression of the world. Taking "ballet" teaching as an example, teachers can introduce 3D motion capture system and biomechanical analysis software (such as VICON and Motion Builder) to decompose the 32 fouette turn in Swan Lake into sagittal plane, frontal plane and horizontal plane mechanical

parameters. The dynamic relationship between toe support point transfer and trunk axis stability is presented through data visualisation. Teachers can then build a virtual ballet classroom in conjunction with the Unity engine to allow students to understand the effect of different floor materials on jump height in a digital twin environment, or experiment with style migration between classical ballet and modern dance gravity aesthetics through AI Generative Adversarial Networks (GANs), exploring the possibilities of pointe technique in a cyberpunk scenario. In addition, faculty could join forces with the Department of Bioengineering to develop smart wearable devices that translate pressure data captured by built-in sensors in pointe shoes into soundscape art, enabling the near-death tremors of Death of a Swan to be materialised as spectral fluctuations in ambient soundscapes. Or collaborate with the School of Computer Science to train neural network models, allowing AI to learn Nureyev's classical variations and then improvise a "post-human ballet", renewing the cognitive limits of traditional programmed choreography.

5.4 Resource Integration, Cross-border Synergy and Coexistence

In the era of new media, dance education in colleges and universities is facing unprecedented opportunities and challenges. The limitations of the traditional teaching mode are gradually highlighted. How to realise the "circle breaking" development by means of new media has become an urgent problem for college dance education. Resource integration, cross-border collaboration and coexistence can provide new ideas for the innovative development of dance education in colleges and universities.

Firstly, integrating diversified resources to consolidate the foundation of development. Dance education in colleges and universities should break the internal resource barriers, and optimise the allocation of resources such as teachers, courses and venues. On the one hand, colleges and universities can integrate the professional advantages of teachers of different disciplines on campus, such as music, art, theatre, etc., to carry out interdisciplinary dance teaching and creation, and broaden students' artistic vision. On the other hand, colleges and universities should fully explore off-campus resources, establish partnerships with professional dance groups and art organisations, and introduce high-quality teachers and performance resources to provide students with more practice and learning opportunities. At the same time, colleges and universities can make use of the new media platform to integrate dance teaching resources on the network, such as teaching videos, academic lectures, etc., to enrich the teaching content and form.

Secondly, cross-border synergy and cooperation, and open symbiotic development. Dance education in colleges and universities can be combined with science and technology, with the help of virtual reality, augmented reality and other technologies to create an immersive dance teaching experience, so that students can more intuitively feel the charm of dance. At the same time, college dance education can integrate with the cultural tourism industry, integrate dance elements into tourism projects, develop dance cultural products with local characteristics, and enhance the social influence of dance education. In addition, colleges and universities should also strengthen exchanges and cooperation, share teaching experience and results, and jointly promote the development of dance education. Through cross-border collaboration and coexistence, dance education in colleges and universities can break through the traditional boundaries, integrate into a broader social and cultural ecology, and achieve innovative development. Take the teaching of "modern dance" as an example, teachers can first integrate the school resources, invite music teachers to explore the characteristics and rhythm of modern dance, so that students can understand the rhythmic beauty of modern dance from the level of music theory, and at the same time join hands with theatre teachers to analyse the expression of emotions and dramatic tension in modern dance performances, so as to help students improve their dance expression.

At the same time, teachers can not only establish contact with local famous professional modern dance groups and invite their excellent dancers as guest teachers to teach students professional dance skills and stage performance experience, but also cooperate with art theatres to strive for more opportunities for students to participate in modern dance performances, so as to allow them to practice in a real stage. In addition, teachers can co-operate with technology enterprises to use virtual reality technology to create a virtual teaching scene of modern dance. Let students put on the equipment as if they were in the modern dance competition scene, dance with virtual dance partners, and enhance the immersion and fun of learning. Colleges and universities can also carry out modern dance teaching exchange activities, share teaching courseware, teaching methods and other achievements, discuss the key points in modern dance teaching, work together to promote the development of modern dance education to make college dance education in the new media era realize the "circle-breaking".

6. Conclusion

The phenomenon of "circle-breaking" in college dance education in the era of new media is essentially the result of the joint action of technological innovation and cultural demand. It not only brings opportunities for dance education such as expansion of communication channels and innovation of teaching mode, but also challenges such as dilution of artistic value and technological dependence. In the future, dance education in colleges and universities needs a dynamic balance between "circle breaking" and "boundary holding" on the basis of adhering to the essence of art. Through the construction of the "technology-art-society" trinity of education ecology, it cultivates composite talents with both professional skills and interdisciplinary perspectives, and truly realises the inheritance and innovation of dance art in the era of new media.

References

[1] Li Yandie, Lu Mei. Research on the innovation of teaching mode of dance education in colleges and universities in the new era[J]. Hubei Adult Education College Journal, 2025, 31(02):61-65.

- [2] Ren Lu. Exploration of teaching methods of dance education in colleges and universities[J]. Art Education, 2025(01): 177-180.
- [3] Zhou Li, Yang Yifan. Optimisation Countermeasures of Dance Education in Colleges and Universities in the New Media Era[J]. Art Education, 2025(01):185-188.
- [4] Liu Han. Research on the Role Positioning and Practical Strategies of College Dance Education in the "Four Chains" Integration and Generation of New Quality Productivity of Cultural Industry[J]. Modern Vocational Education,2025(01): 9-12.
- [5] Liu Tao, Gong Zehui. Exploration of Dance Education and Talent Cultivation Mode in Colleges and Universities in the New Era--Review of Research on Dance Education and Talent Cultivation in Colleges and Universities[J]. Chinese Journal of Education, 2024(09): 135.
- [6] Jiang Yanjun. Analysis on the Path of Integration of Non-legacy Folk Dance into Dance Education of Local Colleges and Universities--Taking Heze College as an Example[J]. Education and Teaching Forum, 2024(12): 45-48.
- [7] Piao Huilin. The construction and practice of "deep learning" mode of dance education in colleges and universities[J]. Journal of Beijing Dance Academy, 2023(02): 136-141.
- [8] Huang Yongtian. The construction of innovative mode of dance education in colleges and universities[J]. Journal of Shanxi University of Finance and Economics, 2023, 45(21): 232-234.