

# Virtual Idol & Interactive Application of "Pop Street Dance" in Educational Environment

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**Abstract:** This article aims to explore the interactive application of virtual idols and popular street dance in the educational environment, with a view to providing new ideas and methods for educational innovation. The introduction first expounds the challenges faced by the current educational environment, such as uneven distribution of resources and single teaching methods, and then puts forward the integration of virtual idols and popular street dance to solve these problems. Then, this article puts forward an innovative mode of constructing virtual idol-assisted street dance teaching, and tries innovative teaching modes such as virtual idol performing on the same stage with physical dancers and using AR/VR technology to enhance learning experience. Through these discussions, this article deeply studies the specific application effects of virtual idols and popular street dance in the educational environment. The research results show that the interactive application of virtual idol and popular street dance can accurately demonstrate dance movements, improve teaching efficiency, meet students' personalized learning needs, and enhance students' learning immersion and interest. This application has made concrete contributions to the innovation of educational environment, broken the shackles of traditional teaching mode, realized the optimal allocation and sharing of teaching resources, promoted educational equity, and improved students' learning interest and effectiveness.

## 1. Introduction

Today, with the digital wave sweeping the world, emerging technologies are reshaping our way of life, study and work at an unprecedented speed [1]. As a model of the combination of digital technology and art, virtual idols not only show the innovative power of science and technology, but also profoundly affect the aesthetic orientation and cultural consumption pattern of contemporary youth [2]. At the same time, as a dynamic and creative dance form, popular hip-hop is closely linked with contemporary music culture, which has become an important way for young people to express themselves and pursue freedom [3]. Under this background, this study aims to explore the interactive application of virtual idols and popular street dance in the educational environment, with a view to providing new ideas and methods for educational innovation.

Facing the rapidly changing educational environment, how to effectively use emerging technologies to improve teaching quality and stimulate students' interest in learning has become an important topic in current educational research [4]. The integration of virtual idols and popular street dance is a deep collision between digital technology and artistic culture. From a technical point of view, this integration can provide a brand-new display platform and interactive way for the teaching, performance and creation of popular street dance with the help of the interactive and customizable characteristics of virtual idols [5]. From a cultural perspective, it helps to break the boundaries between tradition and modernity, promote the exchange and integration between different cultures, and provide more diverse and open learning experiences for teenagers [6-7]. However, this integration also faces multiple challenges such as technical difficulties, cultural differences and the renewal of educational ideas. It requires the joint efforts of educators,

technology developers and cultural workers to explore a development path that conforms to the educational laws and meets the needs of students.

## 2. Theoretical basis and technical overview of virtual idol and popular hip-hop dance

### 2.1. The technical construction and artistic expression of virtual idols

The birth of virtual idols is the result of collaborative innovation in computer graphics, animation, artificial intelligence and other fields [8]. Through high-precision 3D modeling technology, a vivid and changeable virtual image can be created. The advanced animation technology gives these vivid expressions and smooth movements. With the application of artificial intelligence technology, virtual idols can interact in real time according to the audience's reaction, and even learn and create independently, thus showing high artistic expression. This technical construction not only broadens the boundaries of artistic creation, but also provides unlimited possibilities for the innovation of educational content.

### 2.2. Cultural characteristics and educational value of popular street dance

As a dance form that originated from the street and swept the world, popular street dance has attracted the love of countless young people with its unique sense of rhythm, free movement arrangement and strong personal style [9]. Hip-hop is not only an expression of body language, but also an expression of cultural attitude. It encourages the release of personality and advocates free innovation, which plays a positive role in cultivating teenagers' creativity, teamwork ability and social adaptability. In the field of education, popular hip-hop dance is widely used in sports, art education and mental health education because of its entertaining features.

## 3. Interactive application of virtual idol and popular street dance in educational environment

### 3.1. Virtual idol-assisted street dance teaching

In street dance teaching, virtual idols have become a new tool to assist teaching with their unique advantages. They can accurately demonstrate every dance movement, whether it is complex skills or delicate expression changes, and can be shown to students in a high-definition, slow-motion or repetitive way to help students better understand and master the essence of dance. Virtual idols are not limited by time and space, and can provide dance demonstrations for students at any time, which greatly improves the teaching efficiency. However, virtual idols also have certain limitations, as shown in Figure 1.

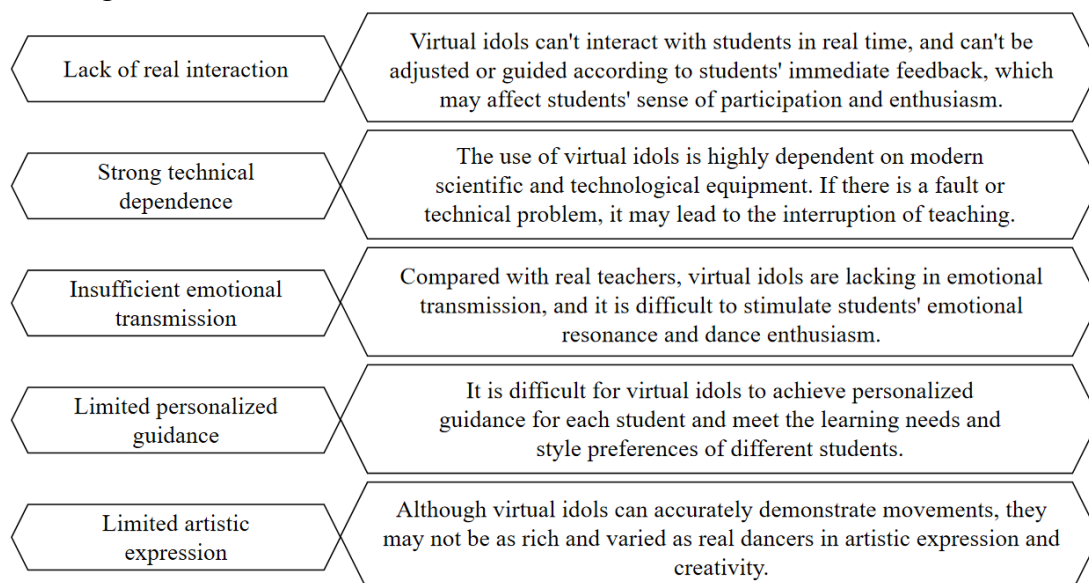


Figure 1 Limitations of virtual idols in street dance teaching.

In order to overcome these limitations, this article thinks that an interactive teaching platform can be designed. The platform needs to integrate the dance demonstration function of virtual idols and add real-time interactive modules to allow students to practice and compare their dance movements synchronously with virtual idols and get feedback in time. At the same time, the platform should also provide rich dance teaching resources and learning communities to facilitate students' independent learning and communication. Through the implementation of this platform, students will show great interest in this novel teaching method, and the learning effect can also be significantly improved.

### 3.2. Exploration of innovative teaching mode

In the process of exploring innovative teaching mode, this article tries the teaching mode that virtual idols and physical dancers perform on the same stage. This method combines the accurate demonstration of virtual idols with the emotional expression of physical dancers, providing students with a more comprehensive and three-dimensional learning experience. At the same time, this article also uses AR/VR technology to enhance the immersion and interest of street dance learning. By wearing AR/VR equipment, students can feel as if they are in a virtual dance world, dance with virtual idols, and feel the happiness and sense of accomplishment brought by dancing.

This article holds that project-based learning activities can also be carried out to encourage students to create their own virtual idol street dance works. Students can design the image of virtual idols and arrange dance movements according to their own interests and creativity, and share and communicate with other students through the platform. This learning method not only exercises students' creativity and teamwork ability, but also improves their information technology literacy and artistic aesthetic ability.

### 3.3. Adaptability analysis of educational environment

When promoting the integrated teaching mode of virtual idol and popular street dance, this article fully considers the acceptance and preference of students of different ages (as shown in Table 1).

Table 1 Age Groups' Preferences for Fusion Teaching of Virtual Idols and Street Dance

Age Group	Acceptance	Preferences
Under 10	Moderate	Tend to prefer interactive and visually colorful virtual experiences
11-15	High	Enthusiastic about the combination of virtual idols and street dance, willing to actively participate
16-20	Very High	Extremely fond of new technologies, enjoy showcasing themselves on virtual platforms
21-25	High	Open to the fused teaching mode, prefer a balance of practicality and innovation
26 and Above (Students/Teachers)	Low to Moderate	Require more time and training to adapt, prefer a blend of traditional and virtual methods

#### Description:

Relationship between age and acceptance: Young students (especially 11-25 years old) have a higher acceptance of the teaching mode of virtual idol and popular street dance. Students in this age group are usually more open and curious about new technologies and are willing to try and explore new ways of learning. In contrast, students or teachers under the age of 10 and over the age of 26 have relatively low acceptance. This may be because young students have limited understanding of complex technologies, while older students or teachers may be more accustomed to the traditional teaching mode and need more time to adapt to new technologies.

Preference difference: Students of different ages have different preferences for teaching mode. Young students (especially 16-25 years old) prefer the virtual experience with strong interaction, rich colors and the ability to show their talents. With the growth of age, students' preference for teaching mode gradually changes from pure entertainment to both practicality and innovation.

Students or teachers over the age of 26 may prefer the combination of traditional and virtual methods to ensure the learning effect and gradually adapt to new technologies.

Promotion strategy suggestion: For young students, we can emphasize the interest and interaction of the teaching mode of virtual idol and popular street dance, so as to attract their attention and stimulate their interest in learning. For older students or teachers, it is necessary to provide more training and support to help them gradually adapt to the new technology and understand how this teaching mode can improve the teaching effect and learning experience.

The integrated teaching mode of virtual idol and popular street dance needs advanced hardware and software support, and professional technicians to maintain and update it. Therefore, in the allocation of educational resources, we need to ensure that there are enough funds and technical support to promote the sustainable development of this teaching model. We also need to strengthen the training and technical guidance for teachers to help them better master new technologies and apply them to practical teaching.

#### **4. Practical significance and social value**

In the traditional education model, the uneven distribution of resources and the single teaching method often restrict the all-round development of students. The introduction of virtual idols has broken the geographical and time constraints, making high-quality educational resources widely spread, especially in remote areas, students can also get in touch with high-quality street dance teaching through virtual idols, thus narrowing the regional differences of educational resources. With the help of big data and artificial intelligence technology, the platform can provide customized learning content and feedback according to students' learning progress, interest preferences, etc., to meet students' personalized learning needs, and help each student to shine in the fields he is good at and interested in.

Teenagers are the future of the country, and their creativity and cultural identity are crucial to the development of society. The combination of virtual idols and popular street dance not only provides a stage for teenagers to show themselves and release their creativity, but also deepens their understanding and respect for multiculturalism through street dance as a cultural carrier. In the process of creating their own virtual idol street dance works, teenagers need to use innovative thinking, combined with personal experience and cultural background, to create unique dance works. This process not only exercised their artistic creation ability, but also enhanced their cultural self-confidence and national pride.

The integration practice of virtual idol and popular street dance provides a successful digital transformation case for the education industry. It shows how to use advanced technology to combine traditional culture with modern science and technology to create a teaching model that conforms to the educational law and has the characteristics of the times. This practice not only provides ideas and reference for the digital transformation of other disciplines, but also provides valuable reference for the education department to formulate relevant policies and plan future development.

#### **5. Conclusions**

After in-depth research and practice, this article has made remarkable achievements in the interactive application of virtual idols and popular street dance. This article not only successfully constructs an innovative model of virtual idol-assisted street dance teaching, but also greatly improves students' learning experience and effectiveness through the design and implementation of interactive teaching platform. This article also actively explores innovative teaching modes such as virtual idols performing on the same stage with physical dancers and enhancing learning experience by using AR/VR technology, which provides strong support for the innovation of educational environment.

In the interactive application of virtual idols and popular street dance, this article finds that this integration method can not only accurately demonstrate dance movements and improve teaching

efficiency, but also meet students' personalized learning needs through personalized customization and real-time interaction of virtual idols. The combination of virtual idols and physical dancers, as well as the application of AR/VR technology, have greatly enhanced the immersion and interest of learning and stimulated students' interest and creativity in learning. These findings provide a strong basis for us to further optimize the teaching mode and improve the teaching quality. In the future, we will continue to deepen the research on the interactive application of virtual idols and popular street dance in the educational environment.

## References

- [1] Yuan Fang, Meng Qingyuan. The abstract rule of digital consumerism on rice circle youth and its overcoming path [J]. *Ideological Education Research*, 2023(6):77-82.
- [2] Lv You, Chen Nan. Research on Virtual Idol Design under the Personalization Construction Logic [J]. *Packaging Engineering*, 2024, 45(4):262-270.
- [3] Zhu Ying. The application of virtual reality technology in the production of variety shows under the background of metauniverse [J]. *Television Technology*, 2023, 47(6):94-96.
- [4] Han Wenlong, Li Yanchun. Capital logic of virtual idol industry in the digital economy era and its transcendence [J]. *Teaching and Research*, 2023(4):41-54.
- [5] Bai Yu. The innovative path of ideal and belief education in colleges and universities from the perspective of new media [J]. *Educational Theory and Practice*, 2021, 41(24):32-35.
- [6] Wu Jinhua. Anomie and remodeling of virtual idol communication ethics [J]. *Young reporter*, 2023(12):110-112.
- [7] Chen Xiaoyun, Wang Zhiruo. Virtual Idol: Star Production and Cultural Practice in the Digital Age [J]. *Contemporary Film*, 2021(9):20-25.
- [8] Zhang Xuemei, Zhang Yifan. The contradiction of spiritual needs of young people in the new era under the virtual idol mapping and its resolution [J]. *China Youth Social Sciences*, 2024, 43(2):32-43.
- [9] Luo Linxiao, Chen Lihong. The influence of virtual idol personification on virtual clothing purchase intention [J]. *Modern Textile Technology*, 2023, 31(4):268-280.