Interactive College Drama Teaching Based on Internet Remote Technology

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ABSTRACT

With the rapid change of information technology and the continuous development of internet technology, more and more colleges and universities have begun to try the interactive drama teaching mode based on internet remote technology. In the process of its development, this teaching mode has increasingly reflected its far-reaching educational significance and occupies an important position in the modern education model. It not only enables students to participate in the drama teaching mode under different spatial conditions, but also shares learning resources in a wider range, so that students can better and faster integrate into learning, greatly reducing the impact caused by time or space constraints. Therefore, this paper aims to study the development needs of internet remote technology and the drama teaching mode of Chinese colleges and universities, as well as the development needs of interactive drama teaching.

KEYWORDS

Drama Teaching in Colleges and Universities, Interactive Teaching, Internet Remote Technology

1. INTRODUCTION

With the continuous progress of science and technology, internet technology has brought new experiences to people's production and lives and also brought an unprecedented new teaching mode for colleges and universities— an interactive college drama teaching mode based on internet remote technology (Simamora, 2020). Interactive teaching is a teaching method that creates a multilateral and interactive teaching environment where different perspectives collide and blend in the process of equal communication and discussion between both teaching parties, thereby stimulating their initiative and exploration and achieving the goal of enhancing teaching effectiveness. Whether it is in terms of visual effects, communication, or interaction, it brings new experiences to students (Mukhtar et al., 2020). With the support of internet remote technology, the traditional teaching mode and the modern college drama teaching mode have also been combined with each other, and on this basis, innovation and development have been obtained (Zhao et al., 2020).

The emergence of internet remote technology has brought about a new transformation in traditional teaching models (Çalik & Altay, 2021). The traditional education model involves teachers selecting

and processing information, raising questions, and then working with students to obtain, solve, and apply information. After many discussions, conclusions are drawn (Cai & Zhang, 2017). The online interactive teaching mode involves teachers and students using online materials, servers, and test monitoring to learn together (Berge, 1999).

The development of "Internet +" distance education in China is very rapid. China's education market alone will accumulate more than 100 billion yuan in the next few years, which shows that the potential of the entire global education market is limitless (McInnerney & Roberts, 2004). The characteristics of internet education, such as "high efficiency, low cost, and unlimited time and space," (page number of quote needed here) determine that the internet will become the driving force for the development of distance education (Volery & Lord, 2000). However, relevant industry report data show that China's distance education investment in 2015 is expected to grow rapidly in the next few years, from the perspective of the entire distance education market, and China's higher education will usher in an earth-shaking change in the internet tide.

This article first analyzes the relationship between network remote technology and the teaching mode of drama in Chinese universities. Then, the development needs of interactive drama teaching were explored from three aspects: teacher resources, teaching resources, and teaching methods and mechanisms, in order to deeply explore the interactive university drama teaching model based on internet remote technology. The main purpose of this study is to find a network learning model suitable for the "Internet +" background in combination with the characteristics of college drama teaching.

2. INTERNET REMOTE TECHNOLOGY

2.1 Definitions and Related Technologies

Internet remote technology refers to the use of internet technology to achieve remote communication, collaboration, management and other business activities (Dede, 1996). Common internet remote technologies include:

(1) Video conference: Connect people in different locations through the network for real-time audio and video conferencing, which can be used for business negotiation, distance education, medical diagnosis, and other scenarios. (2) Remote work: Through the internet, employees can work from home or any other place, and can collaborate in real time to improve work efficiency. (3) Cloud computing: Computing resources are provided to users through the internet, and users can access remote computing resources through the internet to achieve data processing, storage, and other operations. (4) Remote monitoring: Remote monitoring of equipment and environment through the internet can be used in industrial automation, security monitoring, and other fields. (5) Distance education: Teaching activities are realized through the internet, and students can receive education through the internet in any location. (6) Telemedicine: Medical services are realized through the internet, and patients can conduct remote consultation, diagnosis, treatment, etc., with doctors through the internet. These technologies have been developed on the basis of internet remote technology, which has greatly improved people's work efficiency and quality of life and have become an indispensable part of today's society (Maphosa, 2021).

The most indispensable thing on the internet is data. Therefore, it is necessary to know how to perform data transformations. Due to the inability of teachers and students to communicate face-to-face in remote teaching, there are problems where teachers find it difficult to understand students, teaching is less targeted, and students find it difficult to arouse interest in self-directed learning. The most commonly used applications of data are mainly reflected in precision customization and evaluation of prediction capabilities, which can greatly solve the above problems. The significance of data for distance education systems is mainly reflected here.

However, normalizing data is one of the most common forms of data transformation. Data normalization methods scale different feature values to a specific space with a small range, such

as between -1 and 1 or between 0 and 1 according to certain rules. Common data normalization methods include minimum-maximum normalization, zero-mean normalization, and decimal scaling normalization (Chen, 2021).

The formula for maximum-minimum normalization is:

$$v_i^{'} = \frac{v_i - min}{max - min}\left(new\_max - new\_min\right) + new\_min \qquad (1)$$

where [min, max] is the range of the interval before normalization, and [new_min, new_max] is the range of the interval after normalization.

The formula for zero-mean normalization is:

$$v_i^{'} = \frac{v_i - \mu}{\sigma} \qquad (2)$$

where, μ is the mean of the attribute, and the σ is the standard deviation of the attribute.

The conversion formula for decimal scaling normalization is:

$$v_i^{'} = \frac{v_i}{10^j} \qquad (3)$$

where, j is the smallest integer that satisfies the formula $\frac{max}{10^j} < 1$ (max is the maximum value of the attribute column).

The data in remote education systems is often very large and complex. The purpose of data standardization is to establish a unified data standard, ensuring that the data structure and format in the entire distance education system remain the same standard, laying the foundation for subsequent data organization and exchange.

2.2 Development Status

The development background of internet remote technology can be traced back to the computer network technology of the late 70s and early 80s of the 20th century (Lehman & Phillion, 2004). At that time, the Advanced Research Project Agency (ARPA) in the United States initiated a project called "ARPANET," aimed at connecting various computer networks to better share information (Sun & Chen, 2016). The success of this project has led to the development of the internet, making it easy for people to communicate and share information around the world. However, with the spread of the internet, remote technology has also evolved (Arkorful & Abaidoo, 2015). For example, distance education has been around for decades, but with the development of the internet, it has become more widespread and accessible (Zhang & Nunamaker, 2003). The same goes for remote work. As more companies and organizations realize the benefits of remote work, many people can easily work remotely from home or elsewhere. In addition, with the advancement of computer technology and the popularization of the internet, cloud computing and big data technology have also been developed (Etzkowitz et al.,2000). These technologies make it easier to implement remote work, distance education, etc., and also make cross regional collaboration easier. Therefore, the development background of internet remote technology is driven by multiple factors such as computer network technology, cloud computing, and big data technology. The development of these technologies has

made remote work and distance education increasingly popular and has played an important role in promoting the process of globalization and informatization (Otto, 2017).
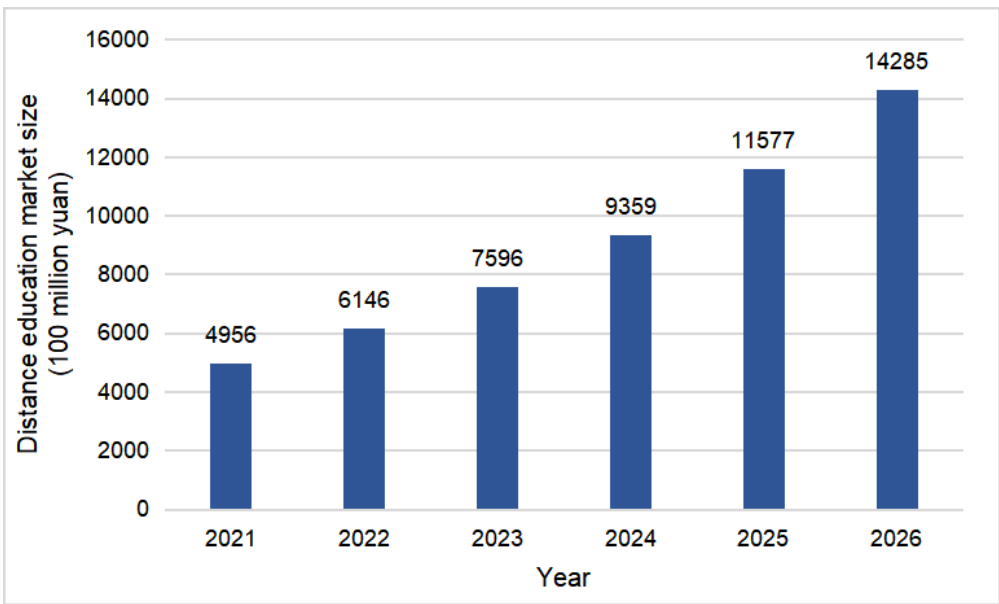
In the future, China's distance education market will grow steadily toward rational and standardized operation, and it is expected that the growth rate of market scale will remain at about 20% in the next 3–5 years, and the growth rate will continue to decrease but the growth momentum will remain stable. The increasing acceptance of distance education by users, the gradual cultivation of distance payment awareness, and the improvement of online learning experience and effect are the main reasons for the continuous growth of the distance education market. The market size of China's distance education industry will reach 1.43 trillion yuan in 2026. The market size forecast of China's distance education industry from 2021 to 2026 is shown in Figure 1:

The overall online distance education market in China is still in its infancy. With the enhancement of enterprises' ability to raise funds and the continuous growth of social education demand, the trend of diversification of education industry and internationalization of services is obvious in the future.

2.3 Important Factors Driving Its Development

In addition to the development of computer network technology, cloud computing, and big data technology, there are some other factors that have also promoted the development of internet remote technology (Terkowsky et al.,2019). Here are some important factors: (1) The popularity of mobile devices. With the popularity of mobile devices such as smartphones and tablets, people can access the internet anytime, anywhere, making the implementation of remote technology more convenient. (2) The development of video technology. With the continuous development of video technology, people can communicate more intuitively through video conferencing and other means, which also promotes the development of remote technology. (3) The rise of social media. Social media offers a whole new way for people to communicate, allowing them to communicate and share information with others anytime, anywhere. This also opens up new opportunities for remote work and distance education. (4) The acceleration of globalization and informatization. With the acceleration of globalization and informatization, enterprises and organizations need to better manage and utilize resources and information on a global scale, which also promotes the development of remote technology.

Figure 1. Market forecast of China's distance education industry from 2021 to 2026

All in all, the development of internet remote technology is inseparable from the promotion of multiple factors, which jointly promote the development of remote work, distance education, telemedicine, and other fields, providing people with more convenient ways to live and work (Webster & Hackley, 1997).

2.4 Characteristics of Remote Education Based on Internet Technology

(1) Teaching technology is more advanced. General correspondence education is only face-to-face teaching between teachers and students, and students can only learn according to the teaching information provided by teachers. However, under the education based on internet remote technology, teachers can remotely provide students with a large number of videos and audios as learning materials to assist students' learning and also provide students with help in the selection of various information. (2) Teaching is more interactive. The most obvious feature of internet-based remote technology teaching is that students and teachers are not in the same space, there is a certain geographical distance between the two, and a variety of media and means must be used to disseminate learning content. The new distance education mode of colleges and universities based on internet distance technology adopts two-way interactive communication and is closely integrated with educational diffusion theory and modern learning theory. Its main features are interactivity, network work, real-time, comprehensive, and adaptable. In this new type of education model, teachers use internet technology to transmit multimedia education information of distance education to students, fully reflecting the advantages of distance technology. Students can ask teachers about learning problems through real-time communication and get feedback from teachers. (3) Students learn more actively. The learning model based on remote network technology combines image, audio, video, and virtual display technologies to provide learning content while using multiple technologies to achieve learning objectives, which achieves interaction between teaching and learning.

3. DRAMA TEACHING MODE IN CHINESE COLLEGES AND UNIVERSITIES

3.1 Development Status

With the continuous development of the times and the continuous update and iteration of internet technology, the development of drama teaching mode in China's colleges and universities is also constantly changing. After collecting information, it can be summarized as follows:

(1) Curriculum and teaching content. With the development of society, the curriculum and teaching content of drama teaching in Chinese universities have gradually become rich and diverse, ranging from traditional performance skills and drama theory courses to related courses such as drama creation, directing, and choreography. At the same time, emphasis is placed on cultivating students' practical abilities and team cooperation abilities. (2) Teaching methods and means. With the continuous development of information technology, college drama teaching has begun to focus on the diversity and flexibility of teaching methods and means. For example, advanced technologies such as networks and mobile devices are used to assist teaching, and teaching methods such as project system and team teaching are used to improve teaching quality. As a teacher, it is not only necessary to communicate with students in the classroom, but also to have more in-depth communication with students after class. Teachers should learn to use online means to communicate with students. Smooth communication between teachers and students promotes the stable development of teaching. (3) Teachers and teaching resources. The development of drama teaching in colleges and universities cannot be separated from the support of teachers and teaching resources. Currently, the strength of teachers in drama teaching in China's colleges and universities is becoming increasingly strong, with more and more outstanding teachers and artists joining the college drama teaching team. At the same time, colleges and universities are also continuously expanding the investment in teaching resources, such as building advanced drama teaching facilities and venues, and introducing world-class drama

teaching resources. (4) Teaching quality and evaluation mechanism. The quality evaluation mechanism for drama teaching in universities has gradually improved, and relevant departments have begun to formulate relevant evaluation standards and indicators to guide universities to strengthen teaching quality management and improve teaching standards.

3.2 Drama Teaching Mode Based on Internet Remote Technology

With the development of internet technology, more and more colleges and universities have begun to try to transform the traditional drama teaching mode into an interactive teaching mode based on internet remote technology, which allows students to participate in learning at home or anywhere, providing students with more learning styles and a more flexible learning environment (Anastasiades et al., 2010). At present, the interactive college drama teaching mode based on internet remote technology mainly includes the following forms:

(1) Distance courses: In the context of the era of "Internet + education," new learning platforms such as "Learning Pass," "Chinese University MOOC," "Wisdom Tree," "Xuetang Cloud," and other similar new learning platforms have emerged in China, and colleges and universities can provide distance drama courses through the network platform, and students can watch and learn through the internet. This approach gives students more free time and flexibility, making learning easier. (2) Video live broadcast: Colleges and universities can conduct live drama teaching through the online platform, and students can watch the course content of teachers through the network and can interact with teachers in real time. This approach allows students to better grasp the content of the course and can also bring students closer to the teacher. (3) Remote exercise: Teachers need to become lifelong learners through the internet. By building channels of trust between teachers and students that are not limited to face-to-face forms, designing learning contexts, and learning guidance processes, students can actively ask questions, explore issues in multiple dimensions, and create and share diverse experiences in both real and virtual environments. Colleges and universities can use video technology to connect students and teachers for theatrical exercises. Students can practice at home or anywhere, and teachers can guide and comment on students through video technology. This approach can provide students with more practical opportunities and can make continuous progress under the guidance of teachers. (4) Virtual reality technology: As part of VR technology, AR can realize the integration of virtual objects and the real world through cameras.

Colleges and universities can use virtual reality technology to provide students with a more realistic theatrical experience. Students can participate in virtual drama scenes through virtual reality technology to experience a more realistic drama experience. This approach can stimulate students' interest and enable them to gain a deeper understanding of drama knowledge (Sakatani, 2005). Therefore, the interactive college drama teaching mode based on internet remote technology has become one of the teaching modes in more and more universities. This model can provide students with more flexible learning methods, make it easier for them to master the course content, and also provide students with more practical opportunities to make continuous progress.

3.3 Problems and Challenges

With the rapid development of social economy, the demand of the drama market is also growing, which puts forward new challenges and requirements for drama education in colleges and universities (Lihanke, 2021). Drama education in colleges and universities needs to pay more attention to cultivating students' practical ability and innovation ability, encourage students to actively participate in social practice and creative activities, and continuously improve their professional level and competitiveness (Warschauer & Meskill, 2000). In addition, with the deepening of international exchanges and cooperation, drama education in Chinese colleges and universities has gradually developed in the direction of internationalization. More and more colleges and universities have begun to cooperate and exchange with famous foreign drama academies, introduce world-class drama teaching resources and advanced teaching concepts, expand students' international vision and cultural exchanges, and

enhance students' comprehensive quality and international competitiveness (Blake, 2000). In 2023, Shanghai Theater Academy plans to enroll 403 full-time undergraduate students for the art examination major with a four-year study period. The proposed enrollment of art majors in the 2023 Shanghai Theater Academy is shown in Table 1:

All in all, the development of drama education in Chinese colleges and universities is inseparable from the support of the government and the recognition of society, and it is necessary for all parties to work together to promote college drama education to better serve the society, cultivate more outstanding theater talents, and make greater contributions to the prosperity and development of China's cultural and artistic undertakings.

4. DEVELOPMENT NEEDS OF INTERACTIVE DRAMA TEACHING

4.1 Teacher Training and Technical Support

With the rapid development of internet technology, education methods based on internet remote technology are constantly being popularized (Anderson, 2003). For college drama teaching, the interactive teaching mode through internet remote technology can not only expand the scope of teaching and improve teaching efficiency but also stimulate students' interest in learning and enhance the teaching effect. To this end, teachers need to have basic internet application skills and drama teaching knowledge in order to better use internet remote technology for teaching. Therefore, teachers can be organized to participate in relevant training courses or carry out internal training work to help teachers master relevant skills and knowledge and improve teachers' internet application skills and drama teaching knowledge. The filing and approval results of undergraduate drama-related majors in ordinary colleges and universities in 2022 are shown in Table 2:

Table 1. Proposed enrollment of art majors in the art school examination of Shanghai Theater Academy in 2023

No.	School/ Department	Major	Proposed Enrollment/ Person	Other	Campus Location
1	Department of Performance	Acting (Drama, film, and television)	37	Including 2 persons transferred from preparatory school	Huashan Road Campus
2		Performance (Musical drama)	26	Including 2 persons transferred from preparatory school	
3	Department of Directing	Drama, film, and television director	17	Including 1 persons transferred from preparatory school	
4	Department of Stage Arts	Drama, film, and television art design	65		
5		Painting	3		
6	School of Film	The art of broadcasting and hosting	40		Changlin Road Campus
7		Composition and theory of composition technology	12		
8	School of Opera	Performance (Peking opera)	35	Tuition is free	Lianhua Road Campus
9		Performance (Puppetry)	25		
10		Performance (opera music)	35	Tuition is free	
11		Drama, film, and television director (Opera)	12		
12	School of Dance	Dance performance (Ballet)	20		Hongqiao Road Campus
13		Dance performance (Chinese dance)	52		
14		Dance performance (GB dance)	14		
15		Choreographer	10		

Table 2. Filing and approval results of undergraduate drama-related majors in ordinary colleges and universities in 2022

Drama and film and television	130301	Performance	Art	Four years
	130302	Dramatics	Art	Four years
	130303	Cinematography	Art	Four years
	130304	Drama, film, and television literature	Art	Four years
	130305	Radio and television director	Art	Four years
	130306	Drama, film, and television director	Art	Four years
	130307	Drama, film, and television art design	Art	Four years
	130308	The art of recording	Art	Four years
	130309	The art of broadcasting and hosting	Art	Four years
	130310	Animation	Art	Four years
	130311T	Film and television photography and production	Art	Four years
	130312T	Film and television technology	Art	Four years
	130313T	Drama education	Art	Four years
	130314TK	Chinese folk art	Art	Four years
	130315TK	Musical drama	Art	Four years

4.2 Teaching Resources and Platform Construction

Colleges and universities should establish a drama teaching resource database, which can collect and integrate relevant teaching resources in various forms, including written materials, pictures, audio, video, and other forms, and integrate and share all kinds of drama teaching resources to facilitate students' learning and use. Through internet remote technology, these resources are presented to students to meet the different needs of students. Colleges and universities should build or choose interactive teaching platforms suitable for drama teaching and can consider using existing distance education platforms or self-developed platforms, focusing on the improvement of functions such as distance teaching, interactive discussion, homework assignment, and grading. The teaching platform should have functions such as remote teaching, interactive discussion, homework assignment, and grading, etc., so that students can learn and communicate on the internet.

4.3 Teaching Methods and Mechanisms

Colleges and universities need to explore and innovate interactive teaching methods, which can combine modern scientific and technological means, such as virtual reality, video conferencing, interactive whiteboards, and other technologies, to bring students into the virtual drama interpretation scene and increase students' participation and experience. For example, teaching is carried out through video conferencing, allowing students to participate in classes at home or elsewhere, and perform theatrical interpretations and scene restoration. Moreover, colleges and universities should establish a sound evaluation and feedback mechanism to help teachers understand the learning situation and needs of students, so as to make timely adjustments and improvements. At the same time, students also need to evaluate and provide feedback on teaching content and teaching methods to help teachers continuously improve teaching quality and obtain student satisfaction. Therefore, the development status of drama teaching mode in China's colleges and universities presents a trend of diversification, innovation, and internationalization, which will help to provide strong talent support and intellectual support for the prosperity and development of China's theater art.

5. CONCLUSION

This article first analyzes the relationship between network remote technology and the teaching mode of drama in Chinese universities. Then, the development needs of interactive drama teaching were explored from three aspects: teacher resources, teaching resources, and teaching methods and mechanisms, in order to deeply explore the interactive university drama teaching model based on internet remote technology. The purpose of the research is to find a network learning mode suitable for the "Internet +" background in combination with the characteristics of drama teaching in colleges and universities. On the one hand, universities need to organize teachers to participate in relevant training courses or carry out internal training work to help teachers master relevant skills and knowledge and improve their internet application skills and drama teaching knowledge level. On the other hand, universities should establish a library of drama teaching resources to integrate and share various drama teaching resources, in order to facilitate students' learning and use. In addition, universities need to explore and innovate interactive teaching methods that can be combined with modern technological means to increase students' participation and experience.

DATA AVAILABILITY

The figure and tables used to support the findings of this study are included in the article.

CONFLICTS OF INTEREST

The authors declare that they have no conflicts of interest.

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