Retraction

Retracted: Application of Multimedia Human-Computer Interaction Technology in Preschool Children Drama Education

Advances in Multimedia

This article has been retracted by Hindawi following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of one or more of the following indicators of systematic manipulation of the publication process:

(1) Discrepancies in scope

(2) Discrepancies in the description of the research reported

(3) Discrepancies between the availability of data and the research described

(4) Inappropriate citations

(5) Incoherent, meaningless and/or irrelevant content included in the article

(6) Peer-review manipulation

The presence of these indicators undermines our confidence in the integrity of the article's content and we cannot, therefore, vouch for its reliability. Please note that this notice is intended solely to alert readers that the content of this article is unreliable. We have not investigated whether authors were aware of or involved in the systematic manipulation of the publication process.

In addition, our investigation has also shown that one or more of the following human-subject reporting requirements has not been met in this article: ethical approval by an Institutional Review Board (IRB) committee or equivalent, patient/participant consent to participate, and/or agreement to publish patient/participant details (where relevant).

Wiley and Hindawi regrets that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our own Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

References

[1] H. Gong, "Application of Multimedia Human-Computer Interaction Technology in Preschool Children Drama Education," *Advances in Multimedia*, vol. 2022, Article ID 6388057, 11 pages, 2022.

Research Article

Application of Multimedia Human-Computer Interaction Technology in Preschool Children Drama Education

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With the continuous development of multimedia technology and children's drama education as a very important part of preschool education, the combination of the two has attracted the attention of many scholars at home and abroad. Drama education for preschool children is the initial stage of children's learning and the most important part of preschool education system. At the same time, preschool children drama education is the most basic stage of children's intellectual development. The correct and reasonable preschool children drama education plays a great role in promoting their intelligence and development. The drama education for preschool children based on multimedia human-computer interaction technology not only expands new teaching methods for the traditional drama education model but also provides a good platform for teachers to choose teaching resources and injects new vitality into preschool children's music education. This paper proposes the application of multimedia human-computer interaction technology in preschool children's drama education. We analyze the current preschool children's drama education curriculum reform that has limitations. The level of teachers' drama education needs to be improved. Young children lack awareness of drama. Drama education for children lacks strong support from parents and other problems. In order to solve the above problems, we focus on voice interaction technology, image interaction technology, and somatosensory interaction technology in multimedia human-computer interaction technology, which establishes a set of teacher-multimedia-student three-dimensional crossover multidirection learning activity modes. In the multidirection learning mode, students can quickly develop their sense of rhythm. Teachers use image interaction technology to guide students to think about the relationship between content and form, so as to gradually form their own unique style of drama. At the same time, somatosensory interaction technology can cultivate teaching tasks seamlessly connected with the environment, so that students can follow the hologram through hands-on practice. Finally, this paper sets up a questionnaire on the experience of human-computer interaction mode in preschool children's drama education, mainly to conduct a questionnaire survey on front-line drama teachers, aiming at preschool children's drama learning activities and teachers' teaching methods. In numerical experiments, we show teachers' evaluation of the teaching effect of speech synthesis technology integrated into preschool children's drama education and the classroom effect evaluation of speech synthesis technology integrated into preschool children's drama education. The evaluation results show that the application effect of multimedia human-computer interaction technology in preschool children's drama education is good, which can provide better services for preschool children's drama education.

1. Introduction

With the continuous advancement of education reform, people also pay more and more attention to the development of preschool children's comprehensive abilities [1]. Drama education is included in the preschool education system to improve preschool children's aesthetic ability, literary accomplishment, and language ability [2]. Many kindergar-

tens have realized the role of drama education in promoting children's growth and have put it into their collective activity teaching. However, the development status of drama education in the preschool education system means that it cannot achieve good results [3, 4]. It is necessary for kindergartens to improve children's drama education through various methods and means, so as to promote the development of children's comprehensive quality. There are many reasons

for the late introduction of drama to China and the lack of effective teaching programs and systems in coordination with primary school education.

Drama is the art of stage narrative performance by means of body language, props, and music. In a broad sense, both music and dance are included in drama. Drama education is the cultivation of professional drama talents through various methods as well as the popularization of drama education among educated people [5, 6]. The drama of children's education is not a simple stage performance but carries out children's education activities through the medium of drama. Through drama education, schools encourage children to participate in the process of dramatic feeling, experience, and expression, which makes children feel a sense of being on stage, so as to promote the child's all-round development [7, 8]. In recent years, the educational circle has also strengthened the importance of drama education and gradually applied drama education in preschool education. Drama education for preschool children is not aimed at learning drama and performance but at expanding children's experience as the ultimate goal [9, 10]. Therefore, drama education for preschool children has been widely recognized by the educational community. Children's drama education is a comprehensive art discipline, through various artistic shaping, let children's personality and physical and mental development. In addition to the artistic value itself, it also cultivates their imagination, teamwork ability, language skills development, body coordination, and so on, in order to liberate children's nature to the greatest extent, give play to children's infinite creativity, let children grow up better, and explore the world. However, there are still many problems in preschool children's drama education.

In drama performance, the practice process of each movement can stimulate the development of children's central nervous system, promote the development of children's coordination ability, speed up children's reaction speed, improve their eye-hand coordination ability, and enrich their expressions. Children's drama provides exercise and practice opportunities for children, so that they eliminate timidity, enhance intelligence, and courage.

First, curriculum reform has limitations. The kindergarten curriculum is the foundation of kindergarten education, but there are many problems in the curriculum reform of many kindergartens at present. For example, the operability of curriculum reform is low; the curriculum lacks characteristics; and the school fails to clarify the direction of curriculum reform [11, 12]. After investigation, we find that the art curriculum system of many kindergartens is relatively simple, and the teaching method is not reasonable enough. Moreover, some kindergartens attach importance to learning and skill training but ignore art education. The limitations of curriculum reform will lead to the kindergarten not being able to effectively penetrate drama education into children's lives.

Second, the level of teacher drama education needs to be improved. On the one hand, many kindergarten teachers do not have a clear understanding of children's drama education but equate preschool children's drama education with children's play rehearsal. On the other hand, some teachers have a clear understanding of preschool children's drama education, but they cannot integrate the core elements of drama education into teaching, so they cannot give correct guidance to children. The strategy of preschool children's drama education is not diversified and the teacher's evaluation of children is single, which is also the main problem of preschool drama education at this stage [13]. In drama education, teachers make insufficient efforts to cultivate students' creativity cannot effectively guide children to perform cooperatively, resulting in unsatisfactory effects of drama activities [14]. In addition, children's lives also contain very rich elements of drama performance. If children's lives can be mined and applied in preschool drama education, then drama performance will significantly improve children's participation. However, at present, most teachers do not pay attention to the excavation of life drama elements and resources, and they do not have rich drama knowledge and skills [15, 16]. Children's drama education is a comprehensive art course, on the one hand, children can learn a lot about children in the classroom drama skills, on the other hand, children's drama study can exercise the child in front of the power of expression, let the child no longer become not confident because of struggling to express, and do show ego to generous attitude.

Third, young children lack awareness of drama. With the continuous implementation of quality education, teachers and parents have gradually increased their attention to drama education. Some kindergartens are gradually incorporating drama education into the school system [17, 18]. However, due to the young age and limited understanding ability of children, coupled with the fact that the school's drama education does not take into account the actual situation of children, children cannot master more knowledge. In daily life, children do not have many opportunities to receive drama education, so they cannot form a correct cognition of drama knowledge.

Finally, drama education for children lacks strong support from parents. Parents have a great influence on their preschool children's drama education. Parents' drama cognition will have a certain impact on children's drama education. Although modern parents do not exclude children from acting in drama, there is also a lack of support for preschool children's drama education. Although parents recognize the artistic significance of drama, they can have a deep understanding of drama and often take children to watch the drama. Although most parents can recognize the educational significance of drama, they are relatively unfamiliar with the specific connotation and significance of drama education, and even some parents do not recognize the educational role of drama [19].

In view of the above problems in preschool children's drama education, we put forward the application of multimedia human-computer interaction technology in preschool children's drama education. We focus on voice interaction technology, image interaction technology, and somatosensory interaction technology in multimedia human-computer interaction technology to establish a set of teacher-multimedia-student three-dimensional crossover multidirection learning activity modes. Voice interaction is a new generation of

interaction mode based on voice input. Feedback results can be obtained by speaking. The typical application scenario is voice assistants. In the multidirection learning mode, students can quickly develop their sense of rhythm. Teachers use image interaction technology to guide students to think about the relationship between content and form, so as to gradually form their own unique style of drama. At the same time, somatosensory interaction technology can cultivate teaching tasks seamlessly connected with the environment, so that students can follow the hologram through hands-on practice.

2. Related Works

Soydan [19] took a six-year-old child as the research object and uses educational toys and a smart board to learn addition and subtraction. Soydan analyzed the impact of children's drama education on their operational skills. Fragkiadaki et al. [20] adopted dramatic games to track children's thinking in science and promote children's science learning experiences. Their research focuses on scientific concepts that young children are familiar with in their daily lives. The qualitative data they draw on includes recordings of children's conversations, children's drawings, field notes from early childhood teachers, and a collection of photographs. Their results showed that in dramatic games, children developed basic arguments to express their opinions about the phenomenon. The results add to research approaches to early childhood science education and provide a pedagogical framework for practice that balances play-based instruction with advanced learning outcomes for young learners in science. Kenanoglu and Duran [21] analyzed the impact of traditional play education programs on preschool children's language development. They used typical case sampling, one of the purposive sampling methods. The data of the experiment consisted of 72 children from 4 kindergartens of the National Education Bureau in the Egir region of Diyarbakir; 36 of whom were from the experimental group, and 36 were from the control group. To analyze the data, they used independent-group and independent-group t-tests. The results show that the traditional game education program has a positive effect on children's language development. Ciftci and Aykac [22] revealed the effect of children's creative drama activities on the executive function of children aged 60-72 months. They used pretest and posttest controls. In the classes identified as the experimental group, they were given 18 drama sessions based on learning outcomes that improved executive functioning. The experimental results showed that there were significant differences in forward memory executive function, backward memory executive function, inhibition function, problem-solving function, and cognitive flexibility in the experimental group. Efilti and Akmatalieva [23] discussed the influence of creative drama activities on children's confidence levels. Their study design was based on a quasi-experimental design. In their study, the independent variable was 8 sessions (8 weeks) of child-centered creative drama, and the dependent variable was the score of the Self-Esteem Observation Checklist for preschoolers in the experimental and control groups. They measured the self-confidence observation checklist and the dependent variable in the pretest. In addition, the dependent variable was remeasured with a posttest (tutor) after the creative drama activity. Chen and Huang [24] discussed how students and teachers used drama to stimulate children's thinking about science games in education in the creative design course of science activities for children in the teacher development program in southern Taiwan. They used strategies to design science-play activities and implemented the program with a group of preschoolers. According to the survey results, the strategies used by the student teachers included warming up, improvisation, and story role-playing. The results showed that teachers and students believed that drama stimulated children's motivation to participate in scientific games.

3. Modeling Methods

3.1. Multimedia Human-Computer Interaction Technology. Interactivity is the virtual environment generated by the user through the interactive interface, and the corresponding information feedback is obtained from the virtual environment [25]. Interactive devices can follow the user's physical behavior and line of sight changes, corresponding to the real-time presentation of new images on the interactive interface. Users can see the realistic three-dimensional scene through the interactive equipment, as if they are in the real picture [26, 27].

Behavioral interaction refers to the behavior issued by the user itself through interaction with objects in the virtual space created by the interactive device. During this period, the interactive device captures the data of the interaction behavior and analyzes the data transmitted by the system, so that the feedback information can be directly transmitted to the control device in real time, the user can feel the real experience brought by touching the objects in the interactive device [28]. The drama education of preschool children under the human-computer interaction mode is mainly a new teaching mode combining human-computer interaction technology and drama education discipline [29]. In the specific course implementation process, teachers create instructions for interactive equipment or create teaching situations through interactive equipment system, and expand the single-line teaching mode of traditional drama class between teachers and students into a three-dimensional and cross multidirection learning activity mode of "teacher, machine, life" to enrich the interactive sense of drama class, as shown in Figure 1.

Speech synthesis technology refers to the technology that converts text information into speech data and then plays it out in the form of speech [30]. Speech synthesis technology can be divided into three modules: text analysis, prosodic modeling and speech synthesis. The main function of speech synthesis technology is to extract the corresponding speech primitives from the original speech database according to the result of prosodic modeling, and use specific speech synthesis technology to adjust and modify the prosodic characteristics of the speech primitives, and finally synthesize the speech that meets the requirements [31, 32].
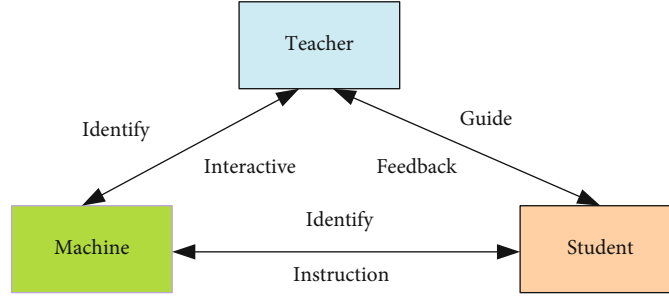
FIGURE 1: Schematic diagram of teacher, machine, and student interaction.

There are two basic ideas of speech synthesis: one is parameter simulation synthesis, the other is waveform stitching synthesis. Parametric analog synthesis: A digital signal processing method is used to treat human vocalization as an analog glottal state source to encourage a time-varying digital filter that characterizes the vocal tract resonance characteristics [33]. Waveform splicing and synthesis: The speech information to be synthesized is segmented into a large number of different speech information elements and stored in digital form. During synthesis, appropriate speech information elements are selected for splicing according to the specific content and requirements, so as to form the required speech information [34].

Speech synthesis technology can be widely used in education, communication and other businesses to provide a more humanized way of human-computer interaction [35]. At present, in the airborne environment, in order to avoid the situation that many information cannot be received due to the poor reception of a certain route, manual gating is usually adopted to solve this method. Taking four-way received speech as an example, when speech interruption occurs, multi-channel voice signal comparison is shown in Figure 2. As can be seen from the figure, the output signal will still have intermittent speech, word loss and unable to get complete information if only the gating process is done.

Assuming that each input voice signal is a pure voice signal weakened or interrupted to some degree, and coupled with noise unrelated to speech, the voice signal received by each channel at time k can be expressed as follows:

$$y_i(k) = a_i s(k - \tau_i) + v_i(k) = x_i(k) + v_i(k), \quad (1)$$

where $i = 1, 2, \cdots, n$ represents n inputs; a_i represents the ratio coefficient of each received voice signal relative to the original pure voice signal; $s(k)$ represents the original pure speech signal; τ_i represents the relative delay between the received speech signal and the original pure speech signal of each channel; $v_i(k)$ represents the noise of the received speech signal of each channel compared with the original pure speech signal [36].

If the delay between the signals received by the antenna is in the order of $0.1\,\mu$s, the impact on the human ear is negligible, and the delay problem almost does not exist. Therefore, delay is not considered here. Under this condition, Equation (1) can be changed as follows:

$$y_i(k) = a_i s(k) + v_i(k) = x_i(k) + v_i(k). \quad (2)$$

We obtain the optimal filter h of length n by solving two optimization problems,

$$h = \min h^T R_{yy} h, \quad (3)$$

$$h = \min h^T R_{vv} h, \quad (4)$$

where R_{yy} and R_{vv} represent the autocorrelation matrix of noisy speech segment and noise segment, respectively; $h^T R_{yy} h$ and $h^T R_{vv} h$ represent the output power of the whole noisy speech and noise segment, respectively. The meaning of these two optimization problems is to minimize the total power of the output noise speech and noise, so as to enhance the output signal.

Through the Lagrange multiplier method, for the noisy speech segment and the noise segment, the solution of the optimal filter h can be obtained as follows:

$$h_y = R_{yy}^{-1} W \left(W^T R_{yy}^{-1} W \right)^{-1} u, \quad (5)$$

$$h_v = R_{vv}^{-1} W \left(W^T R_{vv}^{-1} W \right)^{-1} u. \quad (6)$$

The most critical problem lies in the optimal filtering matrix W, which is composed of the optimal filtering matrix W_i of channel i. The optimal filtering matrix can be expressed as follows:

$$W_i = R_{xx} R_1^{-1}, \quad (7)$$

where R_{xx} is the cross-correlation matrix of pure speech signal, and R_1^{-1} is the autocorrelation matrix of the first channel. Therefore, speech signal C can be obtained through Equation (7),

$$W_i = \left(R_{yy} - R_v \right) \left(R_{yy} - R_v \right)^{-1}, \quad (8)$$

where R_{yy} and R_v are the correlation matrix of noisy speech or noise in channel i, respectively. If the noise is stationary, the correlation matrix of the noise can be estimated in the silent segment and used in the subsequent speech segment.

In this way, the optimal filtering matrix W can be obtained, representing the optimal matrix of all channels
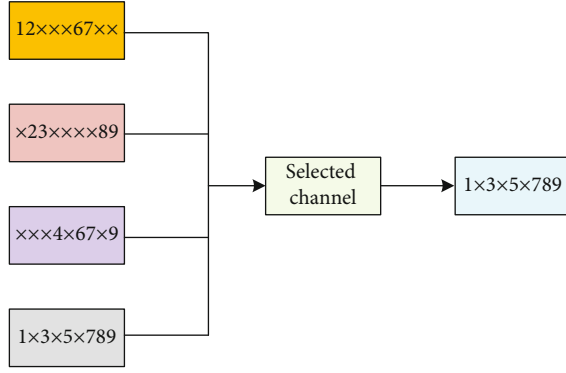
Figure 2: Multi-channel voice signal selection.

and the optimal matrix formed by I, which can be expressed as follows:

$$W = [I, W_2, \cdots, W_n]^T. \tag{9}$$

Since noise and speech are not correlated under the assumption, when the output power of the whole speech filtered is minimum, the output power of noise is also minimum. So the final output speech in the teaching condition is the following:

$$x(k) = \sum_{i=1}^n h_i^T y(k), \tag{10}$$

where h_i^T represents the optimal filter of path I. On the basis of Equation (9), the output signal results can be obtained as follows:

$$x_{\text{out}} = \sum_{i=1}^n w_i x_i, \tag{11}$$

where w_i is the merging coefficient, and x_i is the input i signal. The output result after normalization is as follows:

$$x = \frac{\sum_{i=1}^n x_i}{\max \left| \sum_{i=1}^n x_i \right|}. \tag{12}$$

3.2. Analysis of the Combination of Multimedia Human-Computer Interaction Technology and Preschool Children's Drama Education. With the development of multimedia human-computer interaction technology, we can use this technology to solve the above problems in preschool children's drama education. Man-machine interaction is a dialogue interface for man-machine information exchange. Command line interface, graphical user interface, and natural user interface have all been used in the development of human-computer interaction. Natural user interface, a new generation of human computer interaction technology, harnesses the interactive capacity of human eye, speech, touch, and scent to organically engage with machines. The two theoretical pillars of universal computing and tranquil technology,

both put out by Mark in 1991, serve as the cornerstone for the natural user interface.

The drama education of preschool children under multimedia human-computer interaction technology is mainly a new teaching model combining human-computer interaction technology and drama education discipline. In the course implementation, teachers create instructions for interactive devices, including speech recognition and device control. Teachers can also use the interactive equipment system to create teaching situations, expand the traditional drama classroom teaching single-line mode into teacher-multimedia-student three-dimensional and cross multidirection learning activities mode, enrich the sense of interaction in music classroom. Figure 3 shows the structure of the teacher-multimedia-student multidirectional learning activity mode.

The most straightforward and organic approach to communicate one's thoughts is through language. Preschool toddler's dramatic training does not just remain at the level of visual education because voice interactive technology promotes the professional growth of new media art, information architecture, recording art, animated film design, systems engineering, and so forth. Hearing has demonstrated its special benefits in the theatre education of preschoolers as a key medium of human-computer interaction. For instance, music transformer uses speech recognition software and artificial intelligence to automatically create long-form music. It may produce music that logically elaborates a certain theme using a sequencing model which is based on selfishness and greed. The use of voice interaction technology in preschool children's drama education can quickly develop students' sense of rhythm.

Image interaction technology is the use of computers to process and analyze images so as to identify different patterns of objects. Image interaction technology is a more convenient and perfect image processing system. With a computer system, the operator and the machine can communicate through a dialogue processing system. In recent years, with the continuous maturation of computer vision technology, the relevant image segmentation and image calculation methods have been constantly updated, which not only ensure the accuracy of recognition but also explore and innovate in preschool children's drama education. With the development of image style transfer technology, computers have mastered a large number of drama styles through deep learning, which can quickly make children's plays artistic. In the appreciation of drama works in preschool children's drama education, we use image interactive technology not only to help students master the artistic style of drama of various periods but also to enrich the interest and interaction of art history teaching. The use of multimedia human-computer interaction technology can aid students in more effectively comprehending and mastering a variety of dramatic genres as well as guiding them as they consider the connection between form and content in order to gradually develop their own distinctive dramatic idiom.

Somatosensory interaction technology in multimedia human-computer interaction technology uses body movements, eye movements, and facial expressions to interact
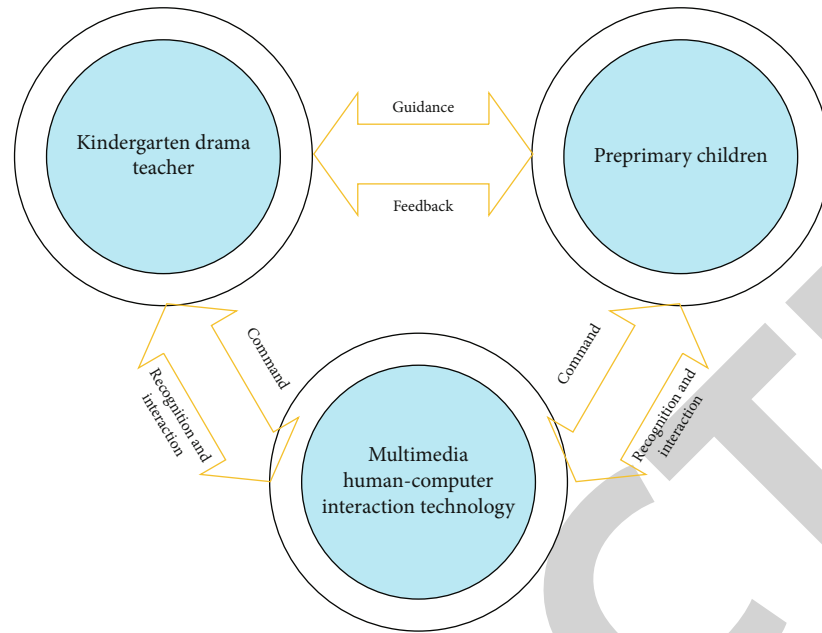
FIGURE 3: Schematic diagram of interaction.

with the device. The computer recognizes these actions and determines whether the user's actions are up to par. The application of somatosensory interaction technology in preschool children's drama education is an intelligent tool for drama creation. Somatosensory interaction technology can record the user's movements and match them with the drama of the database to get the most similar images, which provides rich materials for the conception and imagination of the character's body movements and also provides artistic teaching aids for the teaching of the structure and generation principle of body movements. Somatosensory interaction technology has not only become a creative tool for prechildhood drama education but also makes hands-on skills training and practice more efficient. In order for students to follow the holographic hands-on practice, somatosensory interaction technology employs holographic instructions to smoothly integrate the teaching duties of sophisticated hands-on skills training with the surroundings. Figure 4 shows the application of multimedia human-computer interaction technology in preschool children's drama education.

4. Discussion and Analysis of Results

From the perspective of preschool children's learning ability, 3-6 preschool children's cognition of things has certain limitations, mainly on the appearance of understanding of objective things, the main learning activities need to be carried out under the guidance of teachers. In the process of preschool children's drama education, it is found that when preschool children learn with the help of interactive devices, the rich sense of picture can make preschool children quickly enter the learning situation. In the interactive link of the game, if the teacher does not guide properly, preschool children are easy to be immersed in the "game", ignore the

knowledge learning in the classroom, and eventually lead to low scores in the knowledge assessment link, and then reduce the enthusiasm of preschool children to learn. Childhood is a critical time for learning, and much learning must be done through perception, after seeing, hearing, and sensorial awareness in person, in order to leave a deep impression. The material of children's drama is multifaceted, and in children's literature, all story works can be selected.

This paper sets up a questionnaire on the experience of human-computer interaction mode in preschool children's drama education, mainly to conduct a questionnaire survey on front-line drama teachers, aiming at preschool children's drama learning activities and teachers' teaching methods. Through the analysis of the questionnaire data, there are four main advantages of preschool children's learning drama in the human-computer interaction mode, as shown in Figure 5.

After the questionnaire survey, it was found that the art curriculum system of many kindergartens was relatively simple, and the teaching method was not reasonable enough. In addition, some kindergartens attach importance to learning and skill training but ignore art education. The limitation of curriculum reform will lead to the kindergarten cannot effectively penetrate drama education into children's life. According to the connotation and characteristics of quality-oriented education, drama teachers enrich the way of quality-oriented education through the implementation of speech synthesis technology in human-computer interaction. In the process of teaching, it improves teachers' cognition of students' consciousness as subjects of learning and students' aesthetic ability of drama. Figure 6 shows teachers' overall experience evaluation of the integration of speech synthesis technology into preschool children's drama education. The experimental results showed that 75% of the teachers were very satisfied with the teaching effect, which
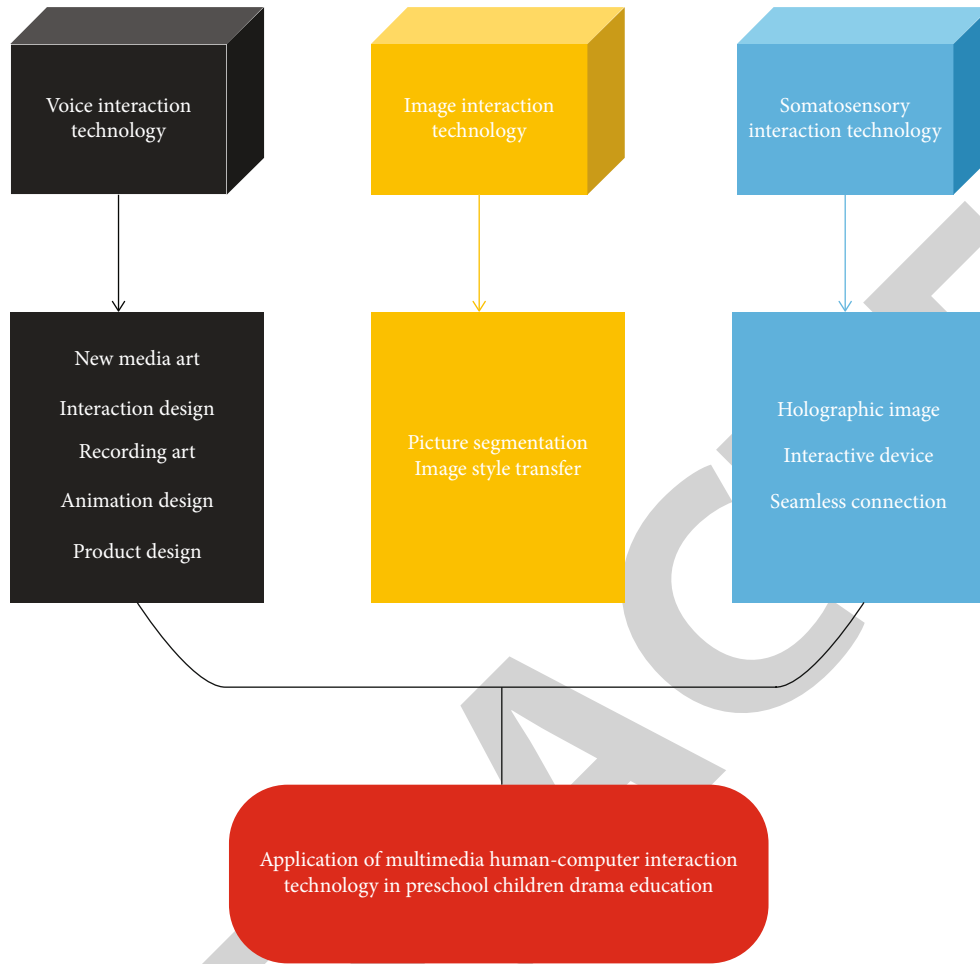
Figure 4: Application of multimedia human-computer interaction technology in preschool children drama education.
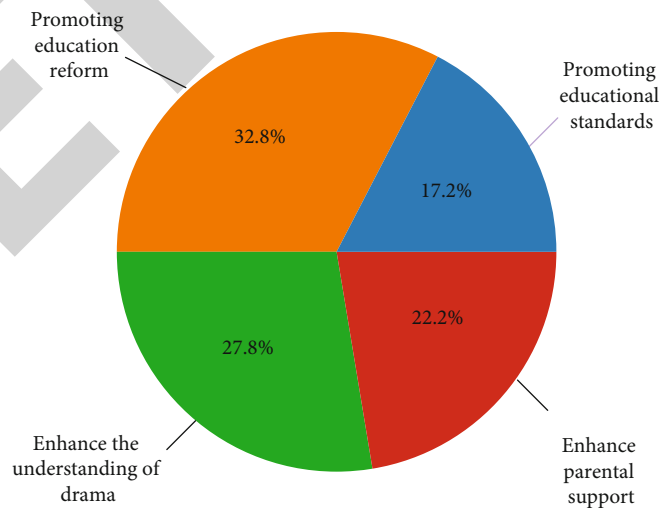

Figure 5: Advantages of learning drama in human-computer interaction mode.

expanded the creative space of students, and only a small number of teachers were not satisfied with the teaching effect. From the perspective of language education, participating in drama can train children's speaking and courage.

In drama education, teachers have insufficient efforts to cultivate students' creativity and expressiveness and cannot effectively guide children to perform cooperatively, resulting in unsatisfactory effects of drama activities. However, at
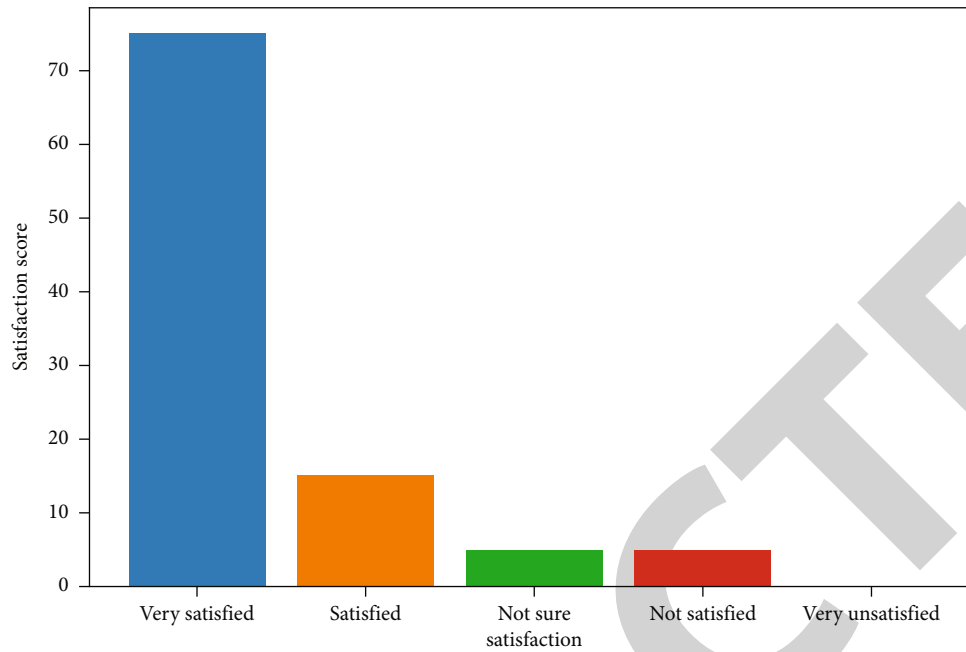
FIGURE 6: Overall experience evaluation of speech synthesis technology integrated into preschool children's drama education.
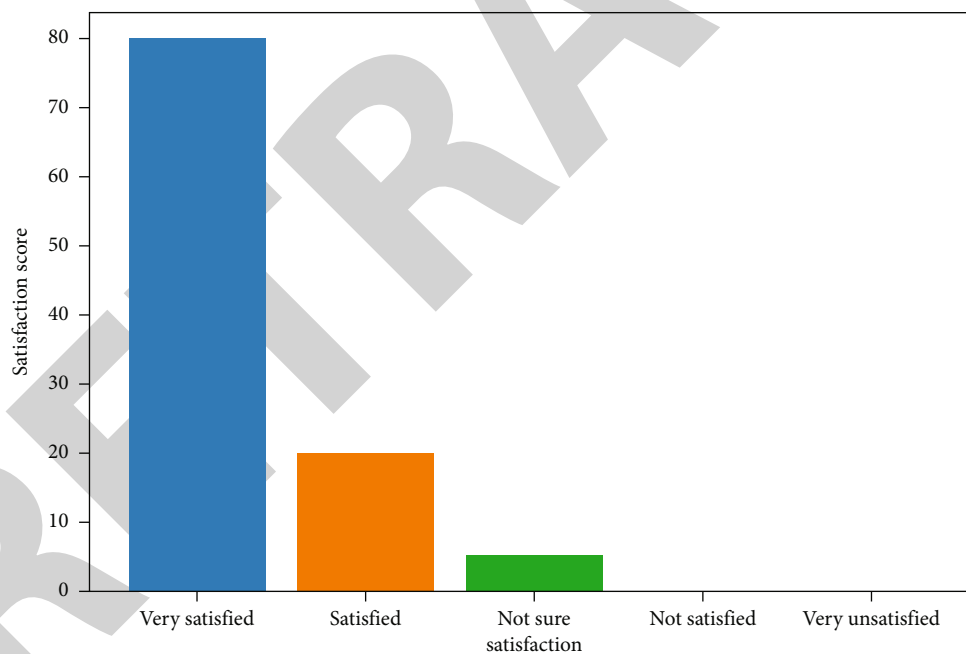

FIGURE 7: Teaching effect evaluation of speech synthesis technology integrated into preschool children's drama education.

present, most teachers do not pay attention to the excavation of life drama elements and resources, and they do not have rich drama knowledge and skills. The change and progress of science and technology are constantly affecting the development of art, and the drama discipline is also changing with the development of science and technology. Through the application of multimedia speech synthesis technology, drama knowledge is more visualized and situational, which subtly improves students' enthusiasm for practical participation in classroom learning. Figure 7 shows teachers' evalua-

tion of the teaching effect of speech synthesis technology integrated into preschool children's drama education. The experimental results show that 80% of the teachers are very satisfied with the integration of drama art and human-computer interaction technology, which makes the drama class more dynamic; only a small number of teachers do not comment on this.

In daily life, there are not many opportunities for young children to receive drama education, and they are unable to form a proper knowledge of drama. As we all know, drama
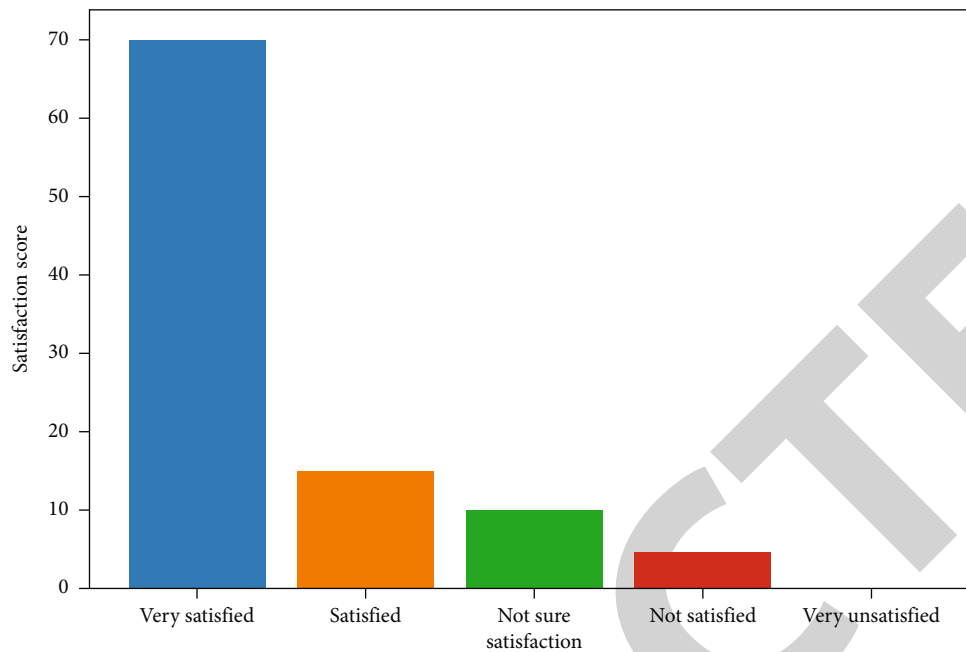
FIGURE 8: Evaluation of classroom effects of integrating speech synthesis technology into drama education for preschool children.

itself is a kind of interactive art with vitality and charm, and the performers in drama are the participating interactors. However, in drama teaching activities, rich teaching resources can also provide powerful supporting functions for teachers' lesson preparation and teaching activities. Figure 8 illustrates teachers' evaluation of the classroom effectiveness of integrating speech synthesis technology into drama education for preschool children. The results show that 70% of the teachers are very satisfied with the integration of drama arts and human-computer interaction technology, which will add color to the drama classroom, and only a very small number of teachers do not comment on it.

5. Conclusions

This paper first analyzes the problems existing in preschool children's drama education. In view of these problems, this paper proposes the application of multimedia human-computer interaction technology in preschool children's drama education, which enriches the teaching horizon of new media art, interaction design, information design, and other majors. Specifically, we use voice interaction technology, image interaction technology, and somatosensory interaction technology in multimedia human-computer interaction technology. In numerical experiments, we show teachers' evaluation of the teaching effect of speech synthesis technology integrated into preschool children's drama education and the classroom effect evaluation of speech synthesis technology integrated into preschool children's drama education. The evaluation results show that the application effect of multimedia human-computer interaction technology in preschool children's drama education is good, which can provide better services for preschool children's drama education. Through the analysis of the questionnaire data, there are four

main advantages for preschool children in the process of learning drama under the human-computer interaction mode. Therefore, human-computer interaction technology greatly increases the fun of art students' hands-on operations and enhances their convenience. With the help of multimedia human-computer interaction technology, we can also create a lot of art forms in the age of intelligence.

Data Availability

The labeled data set used to support the findings of this work is available from the corresponding author upon request.

Conflicts of Interest

The author declares that there are no conflicts of interest.

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