Practical Research on Integration of Information Technology and Kindergarten Music Teaching

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Abstract: With the rapid development and popularization of information technology, people's life and work have been thoroughly changed. In the field of education, the mode of education has also changed from traditional education to modern education. As the starting point of education, early childhood education is the most urgent task to cultivate children's cultural literacy. Among all kinds of activities in kindergartens, music is an important part. Music enables children to intuitively feel an emotion, learn to appreciate others, and develop good personality and habits. Therefore, it is particularly necessary to integrate information technology with kindergarten music teaching. This paper takes action to study the application of information technology in kindergarten teaching and the application of information technology in kindergarten music teaching. According to the situation of the deep integration of information technology and kindergarten music teaching, combined with the mode of the deep integration of information technology and education teaching, the teaching mode suitable for this study and the corresponding teaching activity flow are designed.

1. Introduction
With the rapid development of information technology and the integration of information technology and teaching, information technology requires that the way of preschool education be changed accordingly [1]. However, in early childhood education, especially in kindergarten music teaching, there are still some traditional teaching forms or conditions that cannot meet the teaching objectives. Therefore, the study of kindergarten music teaching, as well as information technology and kindergarten music teaching in-depth integration of the specific issues of practice is of great significance. Besides, with the vigorous promotion and financial support of the state for the development of educational informatization, the hardware infrastructure and Internet access rate of kindergartens have achieved remarkable results. The hardware equipment of educational informationization will be invested and solved by network operators such as telecommunications and mobile. Taking an area in eastern China as an example, the Internet access rate of kindergartens reaches 97.3%, as shown in figure 1.
The integration of information technology into kindergarten teaching could promote the diversification of kindergarten teaching mode\textsuperscript{[2]}, and change the traditional teaching mode dominated by kindergarten teachers and passively followed by children into the teaching mode of children's self-learning by using their senses. Secondly, information technology can also enrich the content of kindergarten teaching. In traditional music teaching, voice transmission is the main way, which easily leads to children's lack of attention due to fatigue. Thirdly, modern information technology covers all kinds of network resources, such as video, audio, pictures and so on. It gives children different sensory impact and can effectively attract children's attention. The deep integration of information technology in kindergarten music education can enable children to actively participate in it and enjoy learning music, thus helping to improve children's music appreciation ability and cultivate children's basic creative ability.

2. Design of the teaching model of integrating information technology and kindergarten music teaching

The teaching mode can be a combination of various teaching methods, strategies and means. According to different teaching objectives, teaching contents and teaching objects, a suitable mode of integration of various teaching methods is finally worked out. Because kindergarten music lessons itself have the characteristics of being appreciated and created. In addition, children are in the age stage of lack of social experience and limited cultural knowledge reserve, so it is necessary to integrate vivid pictures, sounds and animations into children's classroom in order to stimulate children's multiple senses, enrich children's situational perception of things, and integrate information technology means.

2.1 The necessity of integrating information technology in kindergarten music teaching

In kindergarten teaching, information technology plays an indispensable role. Firstly, the integration of information technology into kindergarten teaching makes it possible for kindergarten teaching mode to be rich and diverse, so that the classroom is dominated by kindergarten teachers, and the teaching mode of children's passive acceptance learning transits to the teaching mode of children's active participation and independent learning in the classroom. Secondly, information technology can also enrich the content of kindergarten teaching. Traditional music teaching mainly focuses on sound transmission, which easily leads to children's lack of attention due to fatigue. The integration of information technology into multimedia resources, including video, game background music and audio, can effectively attract children's attention by impacting children's different senses. Finally, information technology can expand teaching methods. In traditional kindergarten teaching, preschool teachers mainly use chalk, blackboard and books. The introduction of information technology can make children understand the world and explore nature more intuitively through rich multimedia
resources. Therefore, the appropriate integration of information technology in kindergarten music teaching makes it possible for children to learn more effectively. In fact, the coverage rate of information equipment is also high in the areas where the music teaching in kindergartens is better \[3\], as shown in figure 2.

![Coverage Rate of Information Equipment](image)

Figure 2. Coverage rate of information equipment in develop areas

2.2 Application of information technology in kindergarten music teaching

Although information technology has been widely used in the field of education, its effect in kindergarten education is far less than that in primary and secondary schools, vocational colleges and universities. This restricts the development of information technology in kindergarten education. In the current situation of information technology integration into early childhood education, there are mainly problems as shown in figure 3.

![Problem of information technology integration](image)

Figure 3. Problem of information technology integration into early childhood education

2.3 Advantages of integration of information technology and kindergarten music teaching

According to the actual teaching situation, we know that the disparity of economic strength of different kindergartens, information technology facilities and teaching resources available are quite different. But it is undeniable that the advantages of better integration of information technology and kindergarten music teaching are more significant \[4\]. First of all, the introduction of information technology into music classes can not only attract children's attention, but also be conducive to the development of teaching. Secondly, the combination of information technology and music teaching can well meet the needs of young children in view of their curiosity about new things. Furthermore, the deep integration of information technology and kindergarten music teaching can attract children's attention to music learning and improve teaching efficiency.
3. The teaching model to integrate the information technology and kindergartens music education

3.1 Factors affecting the application effect of information technology
Children should show autonomy, initiative and creativity in music learning, and turn learning into a natural thing, rather than under the supervision of teachers or parents, only in this way can the goal of the deep integration of information technology and education and teaching be consistent [5]. In addition to students’ autonomy, that is, students' cooperation attitudes, the level of teaching design and courseware production are also important factors affecting the effect of kindergarten music informationization teaching, which can be included in teachers' informationization teaching ability, as shown in figure 4.

![Figure 4. Factors affecting the application effect of information technology](image)

3.2 Design of teaching model
In order to achieve the goal of the deep integration of information technology and kindergarten music, the situational-inquiry teaching mode is selected according to the characteristics of children's learning. Scenario-inquiry teaching mode is to set up and create a functional learning situation and environment in order to achieve a learning goal. To stimulate students' participation consciousness consciously, and to help students adapt to this way in the process of learning by means of computer network technology support tools, it can combine information technology with real life situations to achieve the goal of long-term memory.

3.3 Design of teaching evaluation
Teaching evaluation is an in-depth discussion of a teaching design and implementation. A good teaching evaluation is a summary of the realization of teaching objectives. Because of the characteristics of children in small classes, they can not accurately evaluate themselves and use formative evaluation. Formative evaluation is a kind of process evaluation. It is the evaluation of students' performance in the whole process of teaching from the beginning to the end. It includes the evaluation of their knowledge mastery and the evaluation of their abilities [6]. It is an important link to make suggestions to the teaching process and to summarize the teaching results by presupposing the process when preparing for teaching. Because it is difficult to quantify and grade the better teaching
effect in the teaching process, teachers should evaluate the rationality of the teaching design and the effectiveness of the implementation results by observing the children's language, expression and interaction in the classroom. Through process evaluation, detailed observation records are designed to analyze and compare the various performances of children in learning activities, summarize the advantages of teaching design and teaching practice and the areas needing improvement, and then constantly revise teaching activities in order to achieve better teaching effect.

3.4 Process design of teaching activities

The process design of teaching activities is as shown in table1.

| Teaching process | Teachers | Infants | Teaching contents | Teaching media |
|------------------|----------|---------|-------------------|---------------|
| Import           | Teaching materials | Could easily enter the learning state in the deep integration of information technology and music teaching. | The experience of children's life is briefly introduced into the teaching of this music lesson. | Multimedia tools can be used selectively |
| Setting scenarios | Use teaching resources to provide children with appropriate teaching scenarios. | Mobilize children's audiovisual organs and go deep into music class. | Provide specific and visual situations closely related to the course content. | Through the use of multimedia, it provides a better digital environment for teaching. |
| Picture appreciation | Teachers and children's emotional experience. | Learn music knowledge in audio-visual singing. | According to the music content to decompose the appreciation of pictures. | Explain music content and give children time and tools. |
| Course extension | Guiding children to adapt music content and action boldly according to music content. | Gradually complete the task of music adaptation. | Conduct music adaptation. | Video recordings, music recordings and photographs of children's performances are provided for children to share, evaluate and learn. |

3.5 Design of teaching reflections

In classroom teaching, there are always some shortcomings in the interaction between teachers and students. Children who have just entered the middle class have a shorter attention time and a longer time to teach new knowledge in the classroom. While using video, children should express what they have seen and heard more, so that they will be more impressed and accord with the characteristics of children's language development in the critical period. When organizing classroom discipline, children should combine work and leisure, draw and sing, dance and sing alternately, and protect their voices. In the part of music follow-up, we can organize some games to improve children's interest. Appropriate use of information technology guidance should improve the professional level of music teachers in information technology. In the use of multi-media teaching, it also needs to be more flexible and free, especially in the integration of teaching content, which should be targeted and accurate.
4. Conclusions

Through the analysis of the current situation of the deep integration of information technology and music teaching in kindergartens, a teaching model is designed for the practical teaching in middle classes in practice units. On the basis of the instructional design, the classroom situation of the implementation of teaching is analyzed. Aiming at the integration effect of information technology on teaching process, this paper makes corresponding evaluation and Reflection on children's performance in class, and puts forward some suggestions for teaching improvement in order to make the deep integration of information technology and teaching play a greater role. In short, the deep integration of information technology and kindergarten music teaching promotes children's interest in music learning, and promotes children's appreciation of art and the realization of creation.

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