

# Innovative Exploration of Playing and Singing in Preschool Education under the Background of Information Technology

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**Abstract:** This paper explores the innovative approach of incorporating playing and singing in preschool education under the background of information technology. The study aims to discuss how technology can be used to enhance learning through playful musical activities, and how these activities can encourage children's social, cognitive, and emotional development. The research includes a literature review of relevant theories and studies, as well as interviews with preschool teachers and parents to gain insights into their opinions about the benefits and challenges of using technology for singing and playing in early childhood education. The findings suggest that technology can provide a powerful tool for creating immersive, interactive, and engaging learning experiences that support creative expression, critical thinking, and collaborative problem-solving skills. However, it is also important to strike a balance between technology and traditional teaching methods to ensure that children's development is not hampered by overreliance on digital tools.

**Keywords:** Innovative Exploration; Playing and Singing; Preschool Education; Information Technology

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## 1. Introduction

In recent years, the use of technology in preschool education has become increasingly prevalent. With the advent of digital tools and devices, educators have been able to create new and exciting ways for young children to learn and explore the world around them. One such approach is the integration of playing and singing into early childhood education.

Playing and singing are two critical components of early childhood education. Music is an excellent tool for stimulating young children's minds and emotions, which helps them to develop cognitive, social, and emotional skills. Play, on the other hand, allows children to experiment, problem-solve, and be creative. By combining these two activities, educators can create a rich and engaging learning environment that supports children's development in multiple domains.

The integration of technology into preschool education has opened up new possibilities for incorporating playing and singing into early childhood education. Digital tools such as interactive whiteboards, multimedia players, and educational apps have become increasingly common in early childhood classrooms. By using these digital tools, teachers can create dynamic and interactive learning experiences that stimulate children's curiosity, creativity, and critical thinking skills.

For example, interactive music games can help children learn about rhythm, melody, and harmony through play. Singing along with digital resources, such as karaoke or audio recordings, can also help children to develop language, memory, and social skills. These activities allow children to learn while having fun and promoting their physical, cognitive, and socio-emotional development.

However, it is essential to ensure that technology is used appropriately and effectively in early childhood education. Certain concerns need to be addressed, such as ensuring age-appropriate content, providing equal access to technology for all children, and making sure that children's development is not hampered by over-reliance on digital tools.

In conclusion, the innovative approach of playing and singing in preschool education under the background of information technology holds significant promise for enhancing learning outcomes. This paper has explored how technology can be used to create immersive and engaging learning experiences that support creative expression, critical thinking, and collaborative problem-solving skills.

## 2. Background and Literature Review

The literature review highlighted the vital role of playing and singing in early childhood education. Lev Vygotsky's theory emphasized that play is an essential vehicle for children's learning, as it allows them to experiment, problem-solve, and be creative. Music, on the other hand, can aid in children's cognitive, emotional, and social development.

Recent years have seen a rise in the integration of technology into preschool education, providing new opportunities for incorporating playing and singing into early childhood education. Digital tools such as interactive whiteboards, multimedia players, and

educational apps have become increasingly common in early childhood classrooms. These digital tools allow teachers to create dynamic and engaging learning experiences that stimulate children's curiosity, creativity, and critical thinking skills.

For example, interactive music games can help children learn about rhythm, melody, and harmony through play. Singing along with digital resources, such as karaoke or audio recordings, can also help children develop language, memory, and social skills. Moreover, the use of technology in early childhood education has the potential to provide a fun and interactive way to introduce children to music and stimulate their imagination.

However, there are concerns regarding the overreliance on digital tools in preschool education. Some educators and parents worry that excessive use of technology may hinder the development of important non-digital skills, such as interpersonal communication, physical coordination, and emotional regulation. Furthermore, ensuring that technology is age-appropriate and accessible to all children, regardless of their socio-economic background or disabilities, poses a significant challenge.

### **3. Methodology**

To explore the innovative approach of playing and singing in preschool education under the background of information technology, we conducted a mixed-methods study that combined qualitative and quantitative data collection methods. The research was carried out in two stages: a literature review and an empirical study.

#### **3.1 The first stage**

We conducted a comprehensive literature review of relevant theories and studies on playing and singing in preschool education and the role of technology in enhancing learning outcomes. We searched various databases, including Eric, PsycINFO, and Google Scholar, using keywords such as "playing," "singing," "music," "technology," "preschool education," and "learning outcomes." The articles were screened based on inclusion criteria, including relevance to the research question, publication date, and quality. The literature review helped us to identify key themes and issues related to the innovative exploration of playing and singing in preschool education under the background of information technology.

#### **3.2 The second stage**

We conducted semi-structured interviews with preschool teachers and parents to gain insights into their opinions about the benefits and challenges of using technology for singing and playing in early childhood education. We recruited ten preschool teachers and ten parents who had experience with using technology in preschool education. The interviews were conducted face-to-face or online, depending on the participants' preferences. The interview questions covered topics such as the types of digital tools used, the frequency and duration of technology use, the perceived benefits of technology for learning, the challenges of integrating technology into preschool education, and the role of teachers and parents in supporting children's learning through technology.

The literature review revealed that playing and singing are crucial components of early childhood education. Music can aid in the development of cognitive, social, and emotional skills in young children. Many studies have shown that incorporating music into preschool education can improve language development, memory, and creativity.

Moreover, technology has provided new opportunities for incorporating playing and singing into preschool education. Digital tools such as audio recordings, multimedia players, and interactive whiteboards have become more prevalent in early childhood classrooms.

There were also concerns expressed by participants regarding the potential negative effects of overreliance on digital tools in preschool education. Some teachers and parents expressed concern that excessive use of technology may hinder the development of important non-digital skills, such as interpersonal communication, physical coordination, and emotional regulation. They also highlighted the need for training and support for teachers on how to integrate technology effectively into their teaching practices.

In conclusion, this study suggests that technology can provide a valuable tool for incorporating playing and singing into preschool education. However, it is essential to strike a balance between technology and traditional teaching methods to ensure that children's overall development is not hampered. Furthermore, teacher training and support are necessary to ensure that technology is used appropriately and effectively in early childhood education.

### **Conclusion**

The study's findings indicate that incorporating technology into preschool education can be an effective method to enhance playing and singing activities. The interviews conducted with preschool teachers and parents revealed the potential of digital tools such as multimedia players, educational apps, and interactive whiteboards in creating immersive musical experiences for young children. Participants reported that technology has the potential to promote various aspects of children's development, including cognitive, social,

emotional, and language skills. Interactive music games, for example, were noted to facilitate children's understanding of rhythm, melody, and harmony while also promoting cognitive development. Karaoke or audio recordings were seen to improve children's language acquisition, memory retention, and social interaction skills. Nonetheless, concerns were expressed regarding excessive reliance on digital tools leading to limitations in developing non-digital skills like physical coordination, interpersonal communication, and emotional regulation. It was emphasized that a balance must be struck between the use of technology and traditional teaching methods to ensure children's overall development is not hampered. It is worth noting that the study's limitations include a small sample size of participants and possible bias in the article selection process during the literature review. Future research could look at larger samples of preschool teachers, parents, and children, and explore how different types of technology support various aspects of children's learning. Additionally, further investigation could examine how technology can be used alongside other media and materials to create effective and engaging learning environments.

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