

Research on the Path of Integrating Orff Music and Digital Aesthetic Education to Empower Rural Preschool Education

Xuena Zhang*, Yongsheng Huang

Guangdong University of Petrochemical Technology, Maoming 525000, Guangdong, China

**Author to whom correspondence should be addressed.*

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Abstract: Rural preschool education is the cornerstone of promoting educational equity and rural revitalization. In the current context of promoting the high-quality development of rural education, aesthetic education, as a core force for promoting the harmonious physical and mental development of young children, still faces practical difficulties in rural areas, such as a shortage of teachers and an uneven distribution of high-quality resources. The popularization of digital technology provides a new path to bridging the educational gap between urban and rural areas. Based on the laws of children's physical and mental development, this study explores the feasibility of integrating the elemental concept of Orff music with digital aesthetic education. Combining an empirical investigation of several rural kindergartens in western regions, it analyzes the main problems faced by rural preschool aesthetic education in its digital transformation, such as low equipment utilization and content that does not align with rural life. On this basis, this paper proposes countermeasures such as building a localized digital aesthetic education resource database, conducting dual-track teacher training, designing interactive music classrooms, and establishing home-kindergarten cooperation mechanisms, with a view to providing useful references for improving the quality of rural preschool aesthetic education.

Keywords: Orff music; Digital aesthetic education; Rural preschool education; Teaching path

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1. Introduction

Preschool education is the starting point of lifelong education. In recent years, with the steady advancement of China's rural revitalization strategy, rural preschool education has achieved remarkable results in infrastructure construction and enrollment rates of preschool-aged children. However, after achieving universal access, improving the quality of care and education, especially addressing the weak link of aesthetic education, has become a new task for the development of rural education. The Notice on Comprehensively Implementing the Action of Aesthetic Education Infiltration in Schools issued by the Ministry of Education clearly points out that digital technology should be used to promote the development of school aesthetic education, with a particular focus on strengthening the quality of aesthetic education in rural schools ^[1]. As an important component of aesthetic education, music plays an irreplaceable role in developing children's perception,

creativity, and emotional expression.

The Orff music pedagogy (Orff Schulwerk) emphasizes the natural integration of music with language and body movement, advocating for children to perceive music and express themselves through improvised rhythm and bodily movement. This concept highly aligns with the cognitive style of preschool children, who understand the world through physical contact. With the rapid development of digital technology today, digital aesthetic education—characterized by its ability to transcend spatial-temporal constraints, its diverse information formats, and its ease of sharing—presents a viable solution to the shortage of musical instruments and professional music teachers in rural kindergartens^[2]. However, in practical teaching, how to prevent digital screens from monopolizing children's physical activities and how to unleash the vitality of Orff music through digital tools remain practical challenges that frontline teachers urgently need to resolve. Therefore, researching the integration path of Orff music and digital aesthetic education holds positive practical significance for improving the quality of rural preschool education.

2. Theoretical basis for the integration of Orff music and digital aesthetic education

2.1. The integration of elemental music and digital technology

“Elementality” (elemental music) is the core concept of Orff music pedagogy. It emphasizes that music education should return to human nature, allowing children to directly experience rhythm through vocalizations and body percussion such as clapping, stomping, and patting. Traditional Orff music teaching relies heavily on the teacher's live playing of keyboard instruments, drums, and physical guidance. Following the introduction of digital interactive technology, this elemental physical experience can interact interestingly with multimedia visuals.

For instance, through gesture recognition software or simple interactive large screens, the rhythm and sound of children clapping and stomping can be captured by the device and converted in real-time into corresponding falling leaves, raindrops, or swimming fish on the screen. This approach closely links children's physical movements with visual feedback on the screen. Children can not only hear the rhythm they generate but also see the visual changes brought about by that rhythm. This significantly enhances children's engagement and interest, rendering traditional movement teaching much richer and more intuitive^[3].

2.2. The role of digital technology in solving the shortage of teaching resources

Due to geographical locations and economic constraints, most rural kindergartens face resource deficits in two aspects: first, a lack of expensive and diverse percussion instruments; second, a lack of systematically trained, dedicated music teachers. The promotion of digital aesthetic education can alleviate this problem to a large extent.

By using instrument simulation software on tablets or smart all-in-one interactive screens, rural kindergartens can introduce children to and let them play marimbas, djembe drums, and various wonderful percussion instruments without purchasing a large volume of physical instruments. Furthermore, teaching videos, outstanding lesson plans, and demonstration courseware provided by national and local educational platforms can be delivered to rural teachers anytime and anywhere. This not only reduces the cost of implementing high-quality aesthetic education in rural schools but also enables general classroom teachers to master Orff music teaching methods more easily, achieving the widespread popularization of teaching resources.

2.3. The integration of rural cultural resources and digital media

Orff music teaching strongly advocates that teaching content should be integrated with local language, culture, and folklore. Although rural areas lack the rich museums and professional concert halls found in cities, they possess agricultural culture, natural sounds, and oral local nursery rhymes and folk stories.

Digital recording equipment and simple audio editing software can convert these ecological, raw rural resources into aesthetic education materials. Teachers can record rural morning birdsong, flowing stream water, and the sound of wind

blowing through wheat fields, playing them to children in class to guide them to find patterns and use simple rhythms to imitate these natural sounds. Meanwhile, recording distinctive rural folk nursery rhymes into digital courseware paired with simple graphic notation allows children to learn music within familiar life contexts. This not only enhances their affection for home culture but also injects continuous rural vitality into Orff music teaching.

3. Current status of rural kindergarten aesthetic education and digital technology application issues

To deeply understand the true state of rural preschool aesthetic education, this study conducted a field survey of 18 public and private rural kindergartens in parts of western China. By distributing questionnaires to frontline teachers, 142 valid questionnaires were collected, and in-depth interviews were conducted with several kindergarten principals and backbone teachers. The survey results show that although hardware conditions have been greatly improved, several issues remain in practical teaching and technology application.

3.1. The pervasiveness of non-professional aesthetic education teachers

Survey data indicate a prominent lack of professional artistic backgrounds among rural preschool teachers. Among the 142 surveyed rural kindergarten teachers, 92 (64.8%) had a background in preschool education; 30 (21.1%) came from non-art and non-preschool majors; and only 20 (14.1%) had systematically studied art majors such as music or fine arts.

In terms of curriculum delivery, music classes in as many as 112 kindergartens (representing classes of the surveyed teachers) were taught concurrently by general classroom teachers, accounting for 78.9%, and only 30 classes were taught by full-time art teachers. In interviews, many classroom teachers expressed that due to their lack of basic music theory and inability to play the piano, let alone their unfamiliarity with the basic steps of the Orff pedagogy, music classes often degenerated into the outdated routine of “teachers playing mobile phone music while children mechanically sing along.” The improvisation and physical movement games advocated by Orff pedagogy are difficult to implement in classrooms lacking professional backgrounds.

3.2. Single-use methods of digital equipment

Thanks to national investment in basic construction for weak rural schools, all 18 surveyed rural kindergartens were equipped with smart multimedia screens or internet TVs, achieving a 100% popularization rate. This indicates that the gap between rural and urban schools at the hardware level is gradually narrowing. However, the utilization efficiency of these devices in actual aesthetic education is not high ^[4].

The survey shows that among the 142 teachers, 105 (73.9%) stated that their main method of using large screens was “playing pre-made cartoon videos or background children’s songs.” In these classes, digital devices merely served as substitutes for blackboards and tape recorders.

Some teachers reported that if they used complex interactive software, they would need to operate the screen frequently during class, making it impossible to engage with children in dancing and games actively. If the large screen is turned on, children’s attention is drawn to the bright images, causing them to sit quietly and watch the screen, and they become unwilling to stand up and move their bodies and limbs to the rhythm. This limitation in technology use results in digital devices restricting young children’s physical activity to some extent, running counter to the original intention of preschool aesthetic education, which requires physical participation and teacher-student interaction.

3.3. A lack of localized, distinctive digital aesthetic education content

Although a massive amount of teaching courseware and early childhood music apps can be downloaded from the internet, most of these resources are designed for urban life environments. The images in the courseware mostly show urban skyscrapers, science and technology museums, or scenes of Western classical music, which are far removed from the life

experiences of rural children.

Among the interviewed teachers, 120 (84.5%) believed that there is currently a lack of digital aesthetic education content in the market that integrates rural natural life, local nursery rhymes, and traditional intangible cultural heritage^[5]. Since rural teachers generally do not possess the technical ability to develop multimedia courseware independently, they cannot package the abundant natural sounds and local folk nursery rhymes around them into instructional packages that can be displayed and interacted with on multimedia screens. This leaves the rich ecological resources and cultural treasures of rural areas idle, while the aesthetic education content in classrooms is disconnected from the actual living environment of children, weakening the intimacy and educational effect of aesthetic education.

4. Practical countermeasures for the integrated development of Orff music and digital aesthetic education

In response to the practical difficulties faced by rural preschool education in teachers, equipment utilization, and teaching resources, the auxiliary role of digital technology should be leveraged to implement the elemental concept of Orff music into every link of teaching.

4.1. Constructing a shared localized digital aesthetic education resource database

To address the issue of rural kindergarten teaching materials being out of touch with local realities, local education departments can collaborate with preschool education experts from universities and information technology professionals to jointly develop digital aesthetic education resources suitable for rural children.

On the one hand, widely circulated local dialect children's songs, local folk songs, and folk tales can be collected and compiled, recorded into high-quality audio, and designed into digital courseware suitable for rhythm exercises in Orff pedagogy. This courseware can be equipped with graphic notation that represents rhythm through simple graphics, enabling general rural teachers who cannot read sheet music to understand and use it.

On the other hand, natural soundscape digital resources can be created. For example, recordings of livestock calls, tractor rumbles, and rain hitting roof tiles can be compiled and classified into a digital platform. During teaching, teachers can play these sounds through the screen to guide children in using different parts of their bodies to clap or tap out the rhythm to imitate these sounds. This not only makes aesthetic education fun but also greatly bridges the gap between music and children's daily lives, helping them build a sense of pride in their local culture.

4.2. Developing dual-track teacher training combining online and offline methods

To solve the current situation where rural teachers cannot use technology and are hesitant to teach music, a more practical teacher training method must be established.

First, an online master teacher guidance platform can be established. Outstanding teachers with rich experience in Orff music teaching can periodically conduct online practical demonstration classes. The training does not need to pursue complex music theory and highly difficult instrument playing, but should instead focus on teaching rural teachers how to use simple mobile music software to play different styles of rhythm and how to lead children through their own physical movements.

Second, offline practical exchange activities should be conducted. Teaching researchers and experts should go deep into rural kindergartens to provide hands-on guidance to classroom teachers on how to keep the focus of teaching on children's physical activities while utilizing digital screens and for example, guiding teachers to use small tablets to remotely control music, freeing themselves from the front of screens to walk among children and play games in a circle together. Through this combination of online learning and offline imitation, rural teachers' concerns about using digital devices can be gradually eliminated, and their confidence in actual teaching can be enhanced.

4.3. Designing interactive multidimensional music classrooms

In the organization of classroom teaching, teachers should make rational use of digital technology, letting technology serve children's physical movements rather than turning children into passive viewers of screens.

During actual lessons, animated graphics on smart whiteboards can be used instead of dry numbered musical notation. For example, sunflower icons of different sizes can represent the strength and weakness of rhythms, while clouds at different heights can represent the pitch of tones. Children can observe the graphic changes on the screen and respond to the screen visuals by clapping, stomping, or tapping simple percussion instruments like bamboo tubes and wooden sticks.

Meanwhile, teachers can try to use simple tablet software to carry out music activities combining virtuality and reality. For instance, teachers can have one group of children play physical, simple instruments in the classroom while another group plays virtual xylophones on tablet screens, performing a complete piece of music together. This design not only makes up for the shortage of physical instruments in rural schools but also avoids the restriction of children's physical movement by a single large-screen display, re-energizing the classroom with interactive vitality.

4.4. Establishing a home-school digital aesthetic education cooperation mechanism

A considerable proportion of children in rural areas are left-behind children cared for by grandparents, resulting in a relatively weak home aesthetic education environment. Leveraging portable digital communication tools can effectively promote home-school interaction, extending aesthetic education from kindergartens to home life.

Schools can push simple, easy-to-learn short videos of parent-child interactive games to families through parent WeChat groups or simple check-in mini-programs. The content of these videos should be highly down-to-earth, such as instructing parents and children to clap or tap spoons on plates or chopsticks on plastic basins in the kitchen to match the rhythms learned in school music classes.

Parents or grandparents can record happy moments of children's interaction at home as short videos and share them in the class group. Teachers can play and encourage these home performances in class. This approach does not require purchasing expensive toys or instruments; it only needs easily accessible daily objects and a convenient mobile network to make the home a second classroom for children to perceive rhythm and experience art, thereby fostering a warm and healthy atmosphere for aesthetic growth.

5. Conclusion

The integration of Orff music pedagogy and digital aesthetic education is a practical attempt to improve the quality of rural preschool aesthetic education and achieve balanced educational development between urban and rural areas. Through an empirical survey of Western rural kindergartens, this study reveals the bottlenecks currently faced by rural schools in equipment utilization, content design, and teachers' professional skills. Digital technology should not dominate aesthetic education classrooms but should serve as a flexible auxiliary tool to stimulate the vitality and bodily perception that inherently belong to rural children. By constructing digital resources that better fit rural life, conducting more practice-oriented teacher training, creating highly interactive classrooms, and establishing convenient channels for home-kindergarten communication, we can make digital screens in rural schools truly serve children's happy growth. This requires not only continuous practice by schools and teachers but also joint efforts and long-term attention from multiple social sectors, thereby allowing every rural child to grow healthily and happily under the nourishment of art and music.

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The author declares no conflict of interest.

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